

Spinal and Pelvic Conditions in Arthritis

a practitioners' guide

by John Wedlake Griffiths



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Foreword

All Remedial Massage and Manipulative Practitioners meet patients with arthritic conditions, usually very early on in their clinical careers. With so many millions of sufferers in the UK, there is no shortage of people on whom to practise one's skills. Thirty years ago the picture was a little different; there were many fewer Practitioners and much of mainstream medicine tended to ignore or deride the use of massage, exercise and dietary advice as treatments for arthritis. The perceived treatments were rest and pharmaceutical drugs, which often had long-term complications for the patient.

Years ago, I discovered a book with an interesting title, '*A Doctor's Proven Home Cure for Arthritis*' in which the author offered patients with arthritis a stark choice of treatments for their condition – surgery and drugs on the one hand or massage, exercise and nutrition on the other. He advocated the latter. Then, not long afterwards, I was privileged to meet John Meek of The Arthritic Association who had such an important influence, not only on my treatments, but also on the treatments of thousands of other Practitioners. John Meek's important work for The Arthritic Association has been carried on by Bruce Hester, John Wedlake Griffiths and many other dedicated therapists.

Massage can make a huge difference to patients with arthritis; many Practitioners experience this in their clinics. Add to this success the nutritional support of the de Coti-Marsh regime and the rate of successful treatments increases and patients feel the difference and begin to lead lives that are not so dominated by pain and the loss of mobility.

I have treated many patients with arthritis in clinics over the years. Additionally, I have helped train Practitioners in my work at the Northern Institute of Massage and, in recent years, I have been involved in several studies and research projects about arthritis in collaboration with the Northern Institute of Massage and the University of Central Lancashire. There is good, scientific evidence available in recent times of the benefits to patients with arthritis who receive the treatments that are advocated in this book.

I was delighted when John Wedlake Griffiths sent me the draft of his book, which I read in one long sitting as his expert and sympathetic understanding of the theory, philosophy and practical implications of the treatment of arthritis captivated my attention. So much of what we have learned and experienced has been enshrined in this book. Not only do I recommend all Practitioners

acquire the book, but I will treasure and use my own copy. John has provided the opportunity to help Practitioners provide better and more successful treatments for their patients.

Eddie Caldwell, BEd (Hons), NAMMT (ManipTh), ACP

Honorary Member of the Society of Sports Therapists

Principle of the Northern Institute of Massage, 1995–2005.

Acknowledgements

This book has been written as a gift to The Arthritic Association and it is my contribution to the momentous work that it carries out to promote the teachings of the late Charles de Coti-Marsh, which help people to overcome the potentially crippling disease of arthritis. The Arthritic Association has kindly met all production costs.

I would also like to thank the following people. My wife, Jan, for providing the illustrations for this book and for her tolerance and understanding. Ian Sketchley for his encouragement and his facilitating expertise. Dr Hannah Lewis for her expertise in converting my ramblings into presentable text. My thanks are extended to all those who helped me to complete this book.

John Wedlake Griffiths

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Introduction

By John Wedlake Griffiths, LCSP (Phys)

I have been treating patients with arthritis for approximately 16 years. Prior to working with these patients I trained as a Remedial Massage and Manipulative Therapist. For many years I ran my own practice and treated patients with a vast array of arthritic symptoms, which furthered my understanding of this complex disease. To date, I have treated hundreds of patients as a Practitioner with The Arthritic Association when running their London Clinic, on Seymour Street in London, UK.

Arthritis is a complex disease that manifests in a variety of different ways. Technically, *arthritis* means *inflammation of the joint* (where 'arthro' means joint and 'itis' means inflammation) and, as a result, it can cover numerous different conditions. In fact, it is estimated that there are approximately 200 different types of arthritis. If a patient damages a joint in an accident (for example, twisting their ankle) this could be described as arthritis even though a single event has caused the problem that will probably clear up within a short timeframe. In addition, straining a limb can result in pains and symptoms that are similar to arthritis, which may further confuse the diagnosis. As arthritis is often considered to be a disease that occurs more frequently in elderly patients, any joint problems in these patients are more likely to be diagnosed as arthritis. In reality, rather than being caused by a single event, arthritis is a much more progressive disease.

I believe that two main factors are responsible for the majority of health problems in the general population, barring accidents and other factors like genetic disorders. The first factor is nutrition. Nutrition not only refers to the foods we eat and the liquids we drink, but to everything that enters our bodies, including the air we breathe, the creams we rub on our skin, the soaps we use to wash, the radiation to which we are exposed and the effects of the sun. The second factor is muscle problems. By this I mean the problems that muscle malfunction can cause. Approximately two-thirds of the body is made up of muscle and the effect that it has on our general health is greatly underestimated. Muscle malfunction can affect the nerves and their function, sinuses, the whole endocrine system and hormone production, as well as distorting the skeletal frame causing associated 'knock on' effects (for example, joint and metabolism problems). By investigating the root cause of medical problems,

rather than just the symptoms, a great number of complaints can be traced back to muscle malfunction.

Nutrition and muscle malfunction are responsible for an enormous number of health problems, although these two areas are considered to be less important in current medical training. Now, more than ever, there is evidence that nutrition is given more credence in conventional medical training, but many patients are still told that nutrition does not play a role in their arthritic condition. There is less evidence, however, that the medical profession considers muscle problems in aspects of ill health.

I have studied nutrition at the Plaskett School of Nutritional Medicine in Launceston, Cornwall, but I am not a qualified nutritionist and, as a result, I leave it to those who are qualified to verify the nutritional advice that is advocated by the late Charles de Coti-Marsh to alleviate arthritic conditions. I do believe that good nutrition is essential to regain and maintain good health. I am, however, qualified in remedial massage and manipulative therapy and have extensively studied muscles, muscle malfunction, anatomy and physiology. In addition, I have many years of full-time, hands-on experience of dealing with a whole range of health problems. From these experiences, I have witnessed the extent of general health problems that can be directly attributed to muscle malfunction, and arthritis is a prime example. I believe passionately that muscle problems play a greater part in the cause of arthritis than is generally recognised and aim to illustrate this reasoning in the following book chapters. In Chapter 9 I present some case histories to illustrate how the correction of malfunctioning muscles alleviated problems that were thought by both the patient and their doctor to be related to something quite different. In addition, I will:

- Describe my theories and findings in relation to problems that were presented to me
- Explain how arthritis can be caused by a variety of muscle problems that affect patients with arthritis without them being aware of any muscle problems.

As a Practitioner, when presented with problems by a patient, it is important to perform a thorough consultation and careful examination. In many instances, muscle malfunction is determined as the root cause of the problem and, once rectified, relieves the patient's symptoms. In the majority of cases, the patient is delighted to be free of their debilitating condition and may relate their treatment to fellow sufferers who, in turn, seek similar treatments. Not everyone can appreciate that muscle spasms can cause such a variety of problems knowing

the complexity of body systems and biochemistry. If, however, you consider the power that muscles are capable of exerting, this power can be turned against the body when they malfunction. As a Practitioner with a reputation for successful treatments, it gives me confidence in my theories. I often recall my grandmother's phrase "The proof of the pudding is in the eating". I do, however, welcome the results of any research in this arena.

This book is directed to qualified remedial masseurs and manipulative therapists. I assume, therefore, that the reader will be well versed in anatomy and physiology and able to understand the intricacies of theories and factors that are described. Further reading, however, is recommended at the end of the book. It is not the aim of this book to teach massage – as this depends on the sensitivity that you develop in your fingers, which over time will allow you to detect things that you may never have detected before.

My approach

de Coti-Marsh performed outstanding work and revolutionised the treatment and management of arthritis. He considered both spinal and pelvic deviations to be key factors in the development of this disease. My intention was to investigate this as thoroughly as possible in order to find the root cause of the patient's distortion. From my experience, these deviations have almost always been due to a muscle problem. As the body is always attempting to realign properly, if the primary cause of the misalignment is removed (i.e. by treating the offending muscles or groups of muscles) then realignment of the spine and pelvis will occur naturally – sometimes with dramatic results. If the body is unable to realign naturally, because of severe joint calcification, then forceful realignment should not be applied. In these cases, it is essential to allow sufficient time for the calcification to disperse. On subsequent treatments, gentle passive osteopathic manipulative techniques can be used to rectify these distortions.

My experience with arthritic sufferers who have begun the de Coti-Marsh dietary regime, and followed it vigorously, is that they may experience great improvement and mobility in the first few weeks, which is often followed by a plateau. During this time, further improvement may not occur even if the patient follows all the recommendations precisely. On seeking advice at The Arthritic Association's London Clinic, it is often revealed that the patient has a distortion of their spine and/or pelvis. After treatment with remedial massage and soft tissue manipulation, the misalignment is corrected allowing

the patient's progress against their arthritis to resume. Eventually the patient will reach Stage 3 of the treatment routine, where they can overcome their arthritic condition completely.

There are several possible reasons why the health of a patient with arthritis may improve after realignment of the spine and pelvis because:

- It may have removed any impingement or interference with nerves that supply internal organs – liver, kidneys, spleen, pancreas and most of the intestines. Not only is the function of these organs improved, but realignment also allows proper digestion and absorption of the nutrients and supplements that are being supplied in the patient's improved diet.
- The muscle groups that were involved in spinal/pelvic misalignment were causing the body to distort. This type of distortion often affects the extremities – the arms, hands, feet and legs may be painful because spasming muscles cause distortions across the whole body.
- The sub-occipital muscles that were in spasm (as a result of compensating for a scoliosis of the spine) interfere with cranial nerves and sinuses that affect the pituitary gland. This, in turn, affects the whole endocrine system and contributes to the state of arthritis.

When realignment of the spine and pelvis occurs, many of the affected muscles are also released from a state of tension. Although the root cause of the problem is always treated first, other muscles that are compensating for the distortion are also in a state of tightness and will need to be treated. This approach to treatment enables the body to relax and function normally and can alleviate pains that were symptoms of the distortions. This may explain why the patient feels that their arthritic condition is in remission. Whatever the reason for the patient's improvement after the misalignment is corrected, the fact is that realignment allows the patient to overcome their arthritic condition. This has occurred with a great many patients who have attended our London Clinic.

I am certain that de Coti-Marsh was fully aware of the above facts. de Coti-Marsh was familiar with the effects of deviations of pelvis and spine and their impact on arthritis. Being an osteopath, de Coti-Marsh knew that forceful osteopathic manipulations could be dangerous in cases where the spine was calcified and categorically stated that forceful manipulations should not be attempted until the calcifications had dispersed. It is possible, however, to align the body if the primary cause of the misalignment is muscle-related. Alleviating the muscle spasm that causes the distortion allows realignment to occur

naturally. If de Coti-Marsh had realised this possibility then I am convinced he would have endorsed this approach.

I have found that, with my methods, I can realign spine and pelvis much earlier in the process of recovery than de Coti-Marsh. This realignment helps the whole healing process including absorption of nutrients, which is far more efficient when there are no distortions in their skeletal frame. This is the essence of my approach to arthritic conditions. I have always ensured that patients begin their treatment by improving their diet through adherence to the de Coti-Marsh regime and the use of supplements. Patients are also examined very thoroughly to ensure that any spinal/pelvic distortions are found and treated as early as possible to enable the healing process to be more effective.

All Practitioners of The Arthritic Association should adopt the holistic approach to treating patients if they don't do so already. Practitioners are all very well trained in remedial massage and manipulative techniques and I am sure that when they examine their patients with arthritis they rectify any spinal or pelvic distortions as quickly as possible. I do believe, however, that we need to establish an approach to ensure that patients with arthritis are treated correctly and that all aspects of their arthritic condition are considered.

Finally, I hope that you enjoy reading this book and that the contents are both interesting and helpful to the way that you manage your patients. My wish is that the adoption of similar approaches to those outlined here will change the way that arthritis is viewed by both the medical profession and patients alike. With the support of The Arthritic Association I hope that arthritis will no longer be considered as an incurable disease.

Chapter I: Understanding the power and force of muscles

Muscle effects and malfunctions

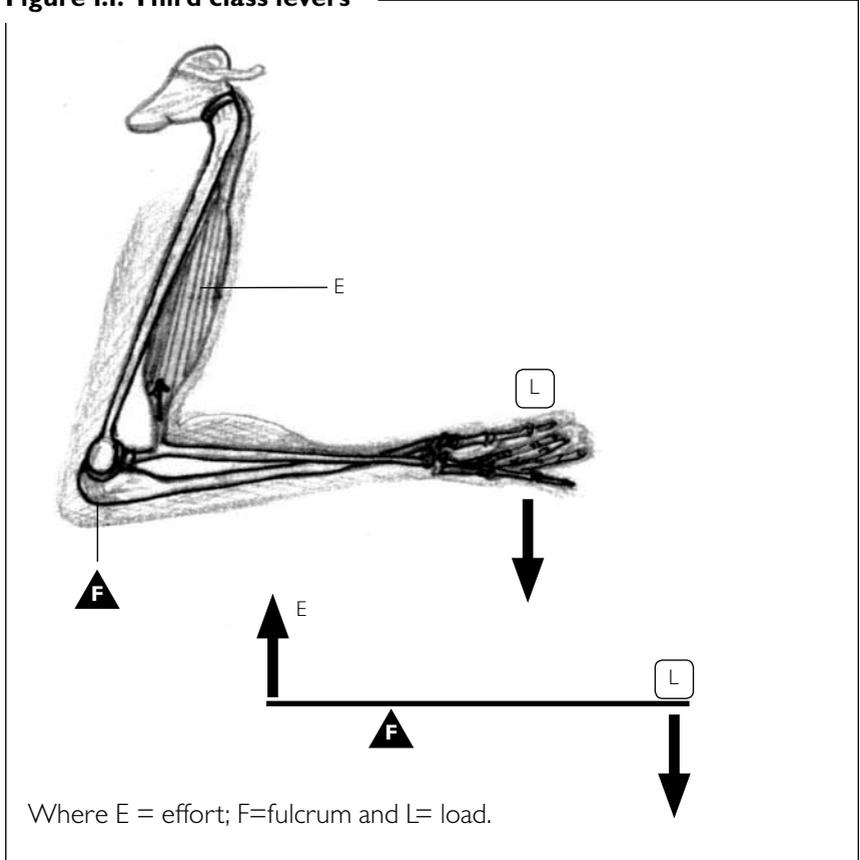
Muscles are the life force of the human body and without them the body is unable to perform even the simplest of tasks, such as smiling, blinking or running. Different types of muscles exist, including:

- Skeletal muscles, which are responsible for allowing the bones (skeleton) to move.
- Cardiac (heart) muscle.
- Smooth muscle, which is found in the walls of blood vessels and the alimentary canal.

This book predominantly focuses on the effects of skeletal muscles. Skeletal muscles are controlled by the voluntary and involuntary (automatic) nervous systems. As a result, these muscles allow conscious movement (for example, walking) and automatic responses (for example, the maintenance of posture). In addition to skeletal muscles, reflex nerves also play an important role in controlling movement.

Muscle force

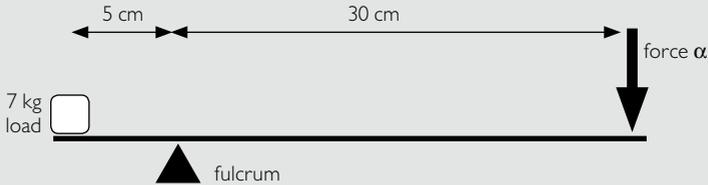
The capabilities of muscles are frequently underestimated. The power and force generated by skeletal muscle is phenomenal. The levers of the body's skeletal framework require an immense force in relation to the load being moved. Skeletal muscle is capable of generating great forces because it has to move skeletal levers arranged around the pivots of joints in the body. Different classes of levers exist, including first, second and third class levers. Skeletal muscle uses skeletal levers, which are predominantly third class levers – the force is at the end of the lever arm nearest to the fulcrum while the load (or movement required) is at the end of the lever arm furthest from the fulcrum (see Figure I.1). The reason that there are third class levers in the body is because without them muscles would not be able to move the distance required to gain a mechanical advantage. The body's muscles are designed to move short distances while being capable of enormous force. Relating the human body's lever system with that of simple mechanical levers is not an easy thing to do because the load is variable and the resulting movement often involves more than one muscle in more than one part of the lever.

Figure I.I: Third class levers

Levers devised by man produce a mechanical advantage – i.e. a large load can be moved by applying a small force because of the advantage gained by the position of the fulcrum of the lever. To gain such an advantage, the force is applied at the end of the lever arm furthest away from the fulcrum and the load to be moved is at the end of the lever arm and closest to the fulcrum. The human body's levers are often arranged the opposite way round so that the force applied (the muscle) is at the end of the lever nearest to the fulcrum and the load (the part of the body/extremity) is at the end of the lever furthest away from the fulcrum (see Figure I.I). The net result is that the body is mechanically disadvantaged and the force required to move the load is far greater than would otherwise be needed.

Another simple way to appreciate the force that muscles are capable of producing is to consider the following calculation in relation to levers.

A lever is designed to achieve a mechanical advantage (i.e. a first class lever as shown below).



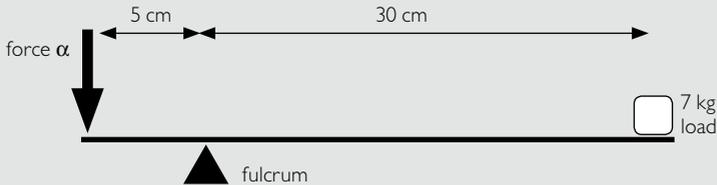
The calculation below shows the force that is required to keep this lever in equilibrium, where α is the required force:

$$7 \times 5 = 30 \times \alpha$$

By rearranging the equation, we show that $\alpha = 1.17$.

The force that is required to move the 7 kg load is, therefore, only marginally more than 1.17 kg.

If, however, this same lever was arranged as a third class lever (i.e. the load to be moved is at a greater distance from the fulcrum, as shown below) then a greater force would be required.



The calculation below shows the force that is required to keep this lever in equilibrium, where α is the required force:

$$30 \times 7 = 5 \times \alpha$$

By rearranging the equation, we show that $\alpha = 42$.

Using the third class lever, a force greater than 42 kg would be required to move the 7 kg load (i.e. the force is six times greater than the load than needs to be moved).

The so-often-underestimated force that muscle is capable of producing, and has to produce to overcome the poor levers that are inherent in the human body, is responsible for most of the distortions in the skeletal frame. The force that a muscle can generate to achieve a powerful movement in an extremity, such as the foot, shows what a spasming muscle can do when it applies the same force to distort the body. The force that a spasmed muscle can turn against the body's normal function may result in a myriad of problems. Without a true appreciation of the power of muscles, it is easy for muscle problems to be misdiagnosed. Muscle spasm is often responsible for distortions of the spine and pelvis, as well as all the associated disorders and knock-on effects.

Muscle pain

Muscle problems, usually as a result of muscle malfunction, are often overlooked in cases of spinal and pelvic problems and may result in patients receiving inappropriate treatment. Muscle malfunction usually occurs when a muscle is over used or misused, causing it to strain. In such situations, a muscle often becomes tight and unable to relax or lengthen as it would normally do. The muscle literally remains in its shortened, contracted state. Initially, this contracted state can cause pain at the site of the muscle, but this is normally short lived. When the pain fades, it is often perceived that the muscle has returned to its normal function. Unfortunately, however, this is often not the case. Muscles can remain in shortened states for months or even years pulling their insertion points (bone attachments) together with all the force they are capable of exerting. As a result, the patient may then feel pains near the muscle insertion points rather than in the belly of the offending muscle. Muscle insertion points are often at a further distance from the belly of the muscle than the patient may realise because some muscles have very long tendons.

In addition, pains may also be felt in other areas of the body that are being affected by the same muscle malfunction. This type of pain is often called 'referred pain' and can be attributed to other muscles that are in a state of over use as they try to compensate for the skeletal distortions.

Pain may also be experienced when nerves are under pressure – either being pressed on by spasmed muscle or, in the case of the spine, by discs herniating between vertebrae due to distortion of the spine (causing vertebral bodies to put uneven pressure on the discs that separate them). The sciatic nerve, which emanates from between the lumbar vertebrae, is particularly susceptible to this kind of pressure, either because of herniation of the vertebral discs in the

lumbar area or from muscles in the pelvic area. The sciatic nerve passes close to muscle in the pelvic area and, in some people, part of the nerve passes through the piriformis muscle, which if in spasm, will put pressure on that nerve. This is often referred to as 'piriformis syndrome'. The sciatic nerve provides nerve function to the pelvic area and the lower limbs and its impingement can cause adverse effects in these parts of the body. Typical symptoms include pain, loss of function and/or numbness. The condition, which is often described as sciatica, can give rise to a number of progressive symptoms.

Supplying energy to muscles

Skeletal muscle, whether under voluntary control or involuntary control, needs oxygen, nutrients and minerals and can spasm in their absence. In response to nerve or hormonal stimulation, a muscle can shorten by approximately one third of its resting length in normal function. Upon activation, calcium ions that are stored in the muscle are released. Resting muscle accumulates stores of glycogen from which glucose (the energy source) can be made as required. The energy of muscle contraction is provided by the conversion of adenosine triphosphate (ATP) into adenosine diphosphate (ADP). Adenosine diphosphate is then immediately converted back into ATP by a breakdown of glycogen. This aerobic process needs oxygen and produces carbon dioxide and water as waste products.

Muscles are predominantly made up of fibres, which can be grouped as follows:

- Type I muscle fibres. Type I muscle fibres (also called slow-oxidative fibres) are primarily used for cellular respiration and, therefore, have relatively high endurance. These fibres contain large numbers of both mitochondria and myoglobin to support the high-oxidative metabolism and appear to be red in colour.
- Type II fibres. Type II muscle fibres are essentially for anaerobic metabolism and have fairly low endurance. As a result, these muscle fibres are used during short bursts of physical activity (e.g. a short sprint). Type II muscle fibres are unable to sustain contractions for long periods of time. Type II muscles can be further divided into two subgroups. Briefly, type IIa muscle fibres (also called fast-oxidative fibres) also contain large amounts of mitochondria and myoglobin and are red in colour. Type IIb muscle fibres (also called fast-glycolytic fibres) are the most powerful muscle fibres. These fibres are capable of twitching up to 120 times per second. Because these fibres have a low oxidative demand, they typically lack both mitochondria

and myoglobin and have a white colour. These muscle fibres tend to get tired more quickly than either type I or type IIa.

Muscles have a mixture of both types of fibres, although the fibre ratio is dependent on muscle function. In addition, this ratio of fibres can be changed with training (e.g. endurance training results in an increase in type I fibres).

When oxygen supplies are low glycogen is broken down to lactic acid – a process referred to as glycolysis. Anaerobic glycolysis, which increases the content of lactic acid in the blood, is a normal occurrence and varies according to the blood and oxygen supply. Briefly, glucose is broken down to pyruvic acid, resulting in the production of ATP. Most of the pyruvic acid is then converted into lactic acid and transported to the liver for processing. The anaerobic glycolysis mechanism can be a rapid source of energy in the absence of oxygen allowing up to one and a half minutes of maximal muscle activity. This activity, however, further increases the amount of lactic acid that is present in muscles. Any lactic acid that remains in the body fluids can cause extreme fatigue. While a small amount of lactic acid is converted back into pyruvic acid in the cells, the majority is converted back into glucose in the liver. The heart muscle is also capable of converting lactic acid into pyruvic acid and using it for energy, particularly during heavy exercise. A build up of the end-products of glycolysis will stop the production of ATP and ultimately stop muscle action. The above observations (as outlined by Guyton and Hall) could be significant factors in the consideration of muscle malfunction, particularly muscle spasm.

Muscle malfunction

The most obvious muscle malfunction is atrophy (wasting). Atrophy can occur as a result of:

- Lack of use. This occurs when the body shuts down its mechanisms because muscle use is impaired. For example, a bone breakage would cause the limb to be held in one position for a long period of time in order to allow healing.
- Loss of innervation. This can occur during spinal cord injury. In these circumstances the muscles in the limb would waste considerably.
- General wasting (e.g. from continual bed-rest or lack of use).

Other muscle malfunctions are associated with the nerves that innervate muscles and, in particular, when those nerves are impinged or damaged. This can be seen in people who have suffered from a stroke, resulting in nerve damage and impairing the function of the muscle. For those patients who have

suffered unilateral strokes, the damage is apparent down one side of the body. Nerve damage may also occur in people who have suffered injuries to their spine and are paralysed. In all these conditions it is evident where the problems are and why the muscles are malfunctioning. In the case of muscle spasm, the effects and problems this causes are much more insidious.

Cramp is an involuntary localised contraction of muscle and may occur after vigorous exercise, when resting or in specific metabolic disorders (e.g. sodium depletion or diseases affecting the nerve supply of motor neurones). According to Guyton and Hall, the cause of cramp is severe cold, lack of blood flow to a muscle or over exercise. Cramp can elicit pain or other sensory impulses from the muscle spindles to the spinal cord, causing reflex muscle contraction. The contraction further stimulates the same sensory receptors, which causes the spinal cord to increase the intensity of contraction. This results in positive feedback so the initial irritation causes stronger contractions and a complete muscle cramp ensues. This description of cramp is believed to be the way that muscle spasm develops.

The incidence of muscle spasm is certainly underestimated. Muscle, when it contracts and shortens, can squeeze tightly round its own blood vessels and constrict them. This causes a decrease in the flow of blood, thereby decreasing the supply of oxygen. A very strong contraction can stop the blood supply altogether. Under normal conditions, lactic acid and carbon dioxide leave the muscle via the venous blood vessels. This cannot happen, however, while the muscle is contracted. During a long contraction a build up of lactic acid in the muscle affects the feedback nerves and the nerve reflex action. As the nerve signals become weaker, the cerebellum interprets this to mean that the muscle is relaxing so it sends signals for it to contract more strongly. This traps more lactic acid thus further weakening the nerve signal. The positive feedback results in a vicious cycle of sustained contraction that continues and intensifies. The resulting spasm can remain indefinitely.

People are often unaware of their muscle spasm – meanwhile the muscle remains in a state of continuous contraction, pulling its insertion points towards each other with all its force. While the muscle spasm may initially be associated with some pain, the reason that they are unaware of their spasm can be two-fold:

- Firstly, some of the deeper muscles of the body do not have the same sensory nerves that register pain in the brain.

- Secondly, the body is capable of releasing endorphins. Endorphins, which are natural painkillers, are created by the pituitary gland and distributed to the receptors that block pain transmission. The effect of endorphins is similar to morphine, but without any side effects. Endorphins are released in response to the detection of irritants in the body. Trapped lactic acid is a powerful irritant causing the pituitary gland to release endorphins thereby numbing any pain.

Often the pains that patients feel are those that are being caused in other parts of the body by spasmed muscles pulling and distorting the skeletal frame. This causes other muscle groups to contract to compensate for the skeletal distortions. In addition, the spasmed muscle may press on other organs or nerves causing pain. This configuration of problems often causes confusion for the patient who often believes that the problem is where their pain is. When, after careful examination, the cause of their problem is diagnosed to another part of the body where the patient has no pain it is often difficult for them to believe. This may also cause some scepticism about the proposed treatment plan.

The reflex nerve activity of motor neurons is thought to be a major factor in muscle spasm. The nervous system has to control and maintain muscle tone. An increase in muscle tone that is maintained for a long period can impair the blood supply to that muscle. The nervous system is then required to maintain this state in ischaemic conditions. The pain from the muscles will cause afferent and efferent nerve fibres to react, sending signals to the spinal cord causing a vicious cycle of positive feedback in which a pathological input from the system maintains an increased muscle tone that can then develop into a spasm.

Spasm is very unlikely to occur in flat muscles, such as gluteus maximus or trapezius, because these muscles are very unlikely to restrict their own blood supply. Round muscles (e.g. the gastrocnemius, semitendinosus and the entire hamstring group), however, are susceptible to spasm. Although there are differences between flat and round muscles, there are some muscles that have both flat and round muscle characteristics. The piriformis, for example, is predominantly a round muscle and is definitely prone to spasm.

Some muscles are especially adapted to cope with continuous contraction, such as the sphincter muscles in the anus. Lactic acids are continually produced in the sphincter muscles and must be flushed out during contraction. The lactic acid is removed by the blood and processed in the liver.

There is very little published information on the subject of muscle spasm. More research is required on this phenomenon because it is most likely responsible for a greater number of health problems than is generally recognised. The Arthritic Association would be interested to hear of any ongoing studies on muscle spasm (for contact details please refer to www.arthriticassociation.org.uk).

The pelvis

The group of muscles that are responsible for stabilising the pelvis and hip joints are the piriformis (the most prominent muscle), obturator externus and internus, quadratus femoris and gemellus superior and inferior. Other muscles, including the psoas, iliacus, gluteal group of muscles (gluteus maximus, medius and minimus) and hamstring group, are responsible for the movement of the hip joint. In addition to stabilising the pelvis, the piriformis is responsible for lateral rotation of the femur. The piriformis appears to be more susceptible to spasm than the other muscles in this area. When the piriformis is in spasm the lateral rotation remains, causing the leg on the same side as the spasm to appear longer when the patient is lying supine.

When the piriformis muscle is in spasm and pulling on its insertion points (the greater trochanter of the femur and the sacrum) it is applying a tremendous force on the hip joint. While under this pressure the hip joint, and in particular the cartilage, will appear to deteriorate. Deterioration of the cartilage in the hip joint can be seen with X-rays and is often considered to be due to an arthritic condition. A poor diet and lack of minerals can also cause deterioration of cartilage. The pressure applied by the piriformis over long periods of time (many years in some cases) can accelerate the apparent deterioration of the cartilage and eventually cause the condition where patients are considered to be ready for a hip replacement. If diagnosed and treated early, the deterioration of the cartilage in the hip joint, and the need for hip replacement, could probably be avoided.

Cartilage deterioration and theories

The pressure exerted on the hip joint by muscles in spasm can give the perception of cartilage deterioration and may result in hip replacement operations being performed unnecessarily. Proactive management of the affected muscles, combined with a suitable diet, may avert the need for surgery.

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Cartilage deterioration

Deterioration of the joint cartilage, particularly the hip joint, in a patient with an arthritic condition is caused by nutritional deficiency and can be greatly accelerated by the pressure applied to the joint by muscle spasm. As already mentioned, the power of muscle is very often underestimated – when a muscle is in spasm all of its power and force is being applied to pull the joint together. In the hip joint, not only is the weight of the body on the joint, but the ball and socket is also under tremendous pressure due to the muscle spasm. Muscle spasms can last for years, which means that the pressure on the joint can be continuous for years, day and night. Even when the patient is lying in bed, and the pressure applied by weight bearing is removed, the joint is still under pressure from the muscle spasm. The pressure applied during movement (normal activity), is grinding the ball and socket joint together continuously, thus accelerating the deterioration that might have otherwise occurred very slowly due to a nutritional deficiency.

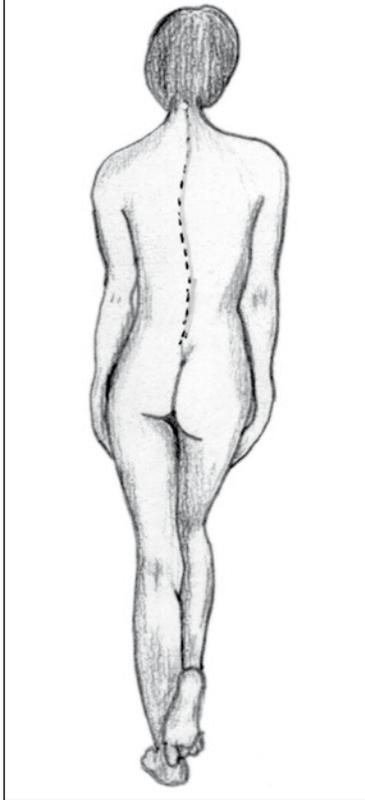
The effect of evolution on body positioning

Observations by Kapanji show that, not only can the hip joint be affected by disease, but it is also affected by evolution and the transition from quadruped to biped. The hip joint in its resting form (i.e. its natural stable angle) is more relevant to humans as a quadruped than as a biped. When standing upright the angle of the hip has moved beyond the easy centre range of the joint, which is an indication that in evolution the angle of the hip has changed. Kapanji refers to this as “the loss of coincidence of articular surfaces of the hip joint”. This means

the angle of the hip joint, when the head of the femur reaches the end of its range through the acetabulum (the socket), reaches a point at which it cannot be allowed to go any further without dislocating. As a result, this evolutionary change from quadruped to biped has caused the joint to be permanently beyond a range at which it is expected to be comfortable. Logically, it follows that the muscles that are responsible for movement of this joint have also had to adapt in the same way. Many of hip joint muscles, therefore, would be in a constant state of attempting to stabilise the joint. The automatic nervous system needs to induce greater muscle tone all the time when standing upright and the nervous system would have to keep the muscle tone greater to overcome this evolutionary change. Assuming this theory is correct, it would make these muscles more susceptible to spasm because the muscles stabilising the hip are always in a state of greater tone to maintain posture.

The key muscle that stabilises the hip joint is the piriformis muscle. The effect of evolution on the piriformis (increased muscle tone) makes this muscle very susceptible to any strain, especially when lifting any weights. The piriformis muscle is particularly susceptible to strain and spasm when lifting on one side only (i.e. causing the muscles on the lifting side of the body to be working harder than those on the non-lifting side) compared to lifting an object from the front (i.e. the stabilising muscles on both sides of the hip are working together). Muscles often go into spasm to protect themselves against further use. The piriformis muscle often goes into spasm when pressure is applied to the hip joint, and may result in scoliosis of the spine (see Figure 1.2). In many of these cases the patient may be completely unaware of any problems.

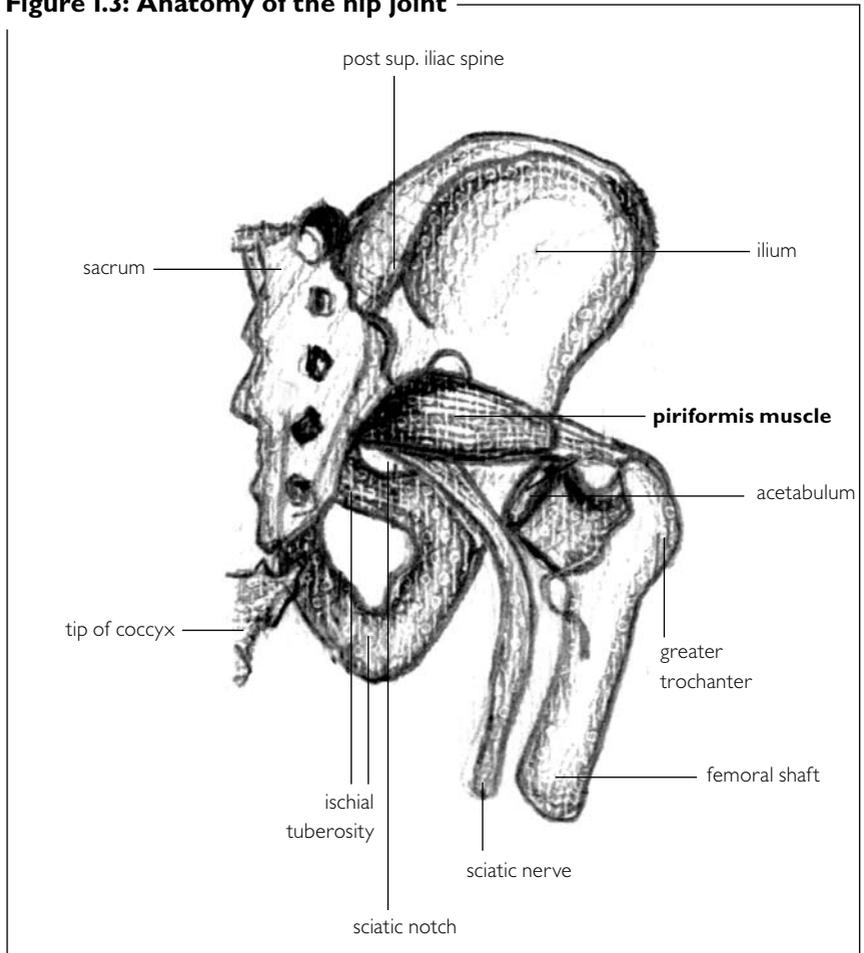
Figure 1.2: Induced scoliosis of the spine



Hip replacement surgery

The muscles that stabilise the hip joint (which include the obturator externus, gluteus medius, gemellus and piriformis) run roughly parallel with the femoral neck (the part of the femur between the great and lesser trochanters) and the head of the femur (the ball joint) – see Figure I.3. These muscles, and in particular the piriformis muscle, are also the muscles most likely to pull the hip joint together. Other muscles allow the hip joint to move at different angles and if tight or spasmed have a tendency to dislocate the joint. An example of these muscles includes the adductor longus that runs from the inside of the thigh to the ischium of the pelvis.

Figure I.3: Anatomy of the hip joint



Hip replacements are often considered when there is no or limited gap between the ball and socket joints when viewed by X-ray. Hip replacements, however, should not be assumed to be the only answer when apparent deterioration of the cartilage is visible. Muscle spasm plays an enormous part in putting pressure on joints – not only the hip joint but on a number of joints; for example, the knee joint can have many difficulties because of muscle problems. A great number of ailments, including arthritis, are due to muscle problems although the effects of muscles are rarely considered in these instances.

Hip replacement surgery can be very damaging to the hip stabilising muscles. In addition, the femur (which is cut and has a pin driven through it) is also damaged and may even split during the hip replacement procedure. Further developments in hip replacement surgery have eliminated some of these problems, but after this type of operation the joint is less stable than it was and more susceptible to dislocation. As a result, various stances or positions, for example crouching, should not be attempted after surgery.

Using leg length to determine the health of the muscles in the pelvic area

Leg length is an important factor in determining how the pelvis sits, as well as the posture of the spine. For example, a leg length discrepancy can cause scoliosis of the spine. Simply standing on one leg can induce scoliosis. If, however, the scoliosis remains for a long period of time then muscles have to work harder to stabilise the situation. Some people who have had hip replacement surgery acquire a leg length discrepancy. It is important, however, to determine if the difference in leg length is:

- Actual – where the bones are different lengths. Broken bones, such as the femur in adolescents, may result in a leg length difference that the person has to live with. Problems caused by this type of leg length discrepancy can be rectified with a prosthesis (for example, a shoe insert).
- Apparent – where muscle spasm (in particular the piriformis) causes the legs to appear as if they are different lengths. This problem can be rectified through diet and remedial massage. If the muscle spasm is not corrected it can result in a tremendous number of health problems, including arthritis, in later years.

Injury and the development of arthritis

In de Coti-Marsh's book on 'Rheumatism and Arthritis – The Conquest' he states that spinal injury is the route cause of arthritis. de Coti-Marsh further elaborates that *"Any undue pressure at the root spinal source of the nerve e.g. where it emerges from the spinal column into the tissues of the body to join up with the limb or organ, would lead to a distress call to the brain and the body chemistry, a distress call that is equal to and exactly like the signal emitted by the nerves in the case of a bone fracture. In the case of a bone fracture this distress signal results in the body chemistry becoming activated and surrounding the fractured bone with calcium. This creates a natural splint and enables the fracture to heal. When the fracture has healed, the distress call from the nerve ceases, so the calcification process stops. However in the case of a nerve that is being subjected to pressure of a constant nature, the distress call for more calcium goes on and on until the nerve pressure is released. The constant distress signal results in more and more calcium being rushed by the body processes to the joints or muscles at the source of the trouble. Whilst this process of more and more calcium being produced goes on, the joint becomes more and more calcified. In other words arthritic, unless pressure upon the nerves is released, so ending the distress call"*. de Coti-Marsh suggests that the formation of calcium in joints causes arthritis, but it is also important to remember that the root of spinal nerves, which emanate from the spinal cord, can be interfered with when vertebral discs herniate. One reason the disc will herniate is if the pressure on that disc is on one side for a long period of time, such as in a condition of sustained scoliosis. This can be caused by muscle spasm putting pressure on the joint between the two vertebral bodies, which then puts pressure on the disc causing it to herniate. The herniation can put pressure on the nerve and subsequently cause the problem that de Coti-Marsh refers to.

Osteoarthritis

Essentially, there are two main types of arthritis – osteoarthritis and rheumatoid arthritis. In osteoarthritis, the body will send calcium to the site of any injury (e.g. a bone fracture or a ligament tear) because calcium is required to heal and repair it. Other injuries, such as muscle spasm, can cause that same process to occur. In these instances, the joints (and in particular the tendons) become calcified because the muscle is in a state of spasm (i.e. injured). de Coti-Marsh's dietary regime removes calcium-depositing foods from the diet and introduces potassium salts ('K' compound and Decalcine tablets [Hursdrex Ltd*]) to disintegrate the calcium deposits in these joints. Once the calcium in

* Hursdrex Ltd can be contacted through The Arthritic Association (www.arthriticassociation.org.uk).

these joints has reduced then manipulative therapy can be introduced into the treatment regimen.

Rheumatoid arthritis

Unlike osteoarthritis, rheumatoid arthritis is nearly always due to inflammation. As a result, the medical profession may overlook the role of skeletal distortions and muscle problems and their impact on this disease. Evidence from treating patients has shown that rectifying skeletal distortions in patients with rheumatoid arthritis has resulted in a considerable reduction in inflammation over a fairly short timeframe.

Typically, the inflammation process is driven by the endocrine system – in particular the pituitary gland and the hypothalamus – which is responsible for the production of histamines (i.e. inflammation). The pituitary gland and hypothalamus are located at the base of the skull, within the third ventricle, where they are bathed in cerebrospinal fluid. As well as bathing these glands, the cerebrospinal fluid also bathes the brain and spinal cord. A skeletal distortion may interfere with both the pituitary gland and hypothalamus if the occipital bone (located at the base of the skull) moves, resulting in an inhibited flow of cerebrospinal fluid. This in turn might interfere with the function of these glands by, for example, changing their constant temperature. For the occipital bone to move, however, the sub occipital muscles must be in a constant state to spasm, thus putting pressure on the bone.

The inferior muscles of the obliquus capitis and the rectus capitis can cause misalignment of the atlanto-axial joint when they are in spasm, resulting in neuropathic disturbances. Ligament and tendon attachments and the muscles of the body rely on pre-reflex feedback from neuron impulses to enable the 'P' factor to work and create dilations, thus bringing oxygen, nutrients, hormones, enzymes and chemicals and, at the same time, ridding the body of noxious waste. An imbalance of this system will cause over-stimulation, noxious dilations and a breakdown of its pre-synaptic reflex. The obliquus capitis muscle, which attaches to the dura mater, can cause problems in the eyes and respiratory system, as well as upsetting the cranio-sacral balance.

Various muscles are involved in scoliosis of the spine. The sub occipital muscles may become tight on one side of the body to correct the angle of the head on the tilted shoulder girdle. When treating patients with scoliosis, it is essential that all the muscles in the neck area, including the sub occipital muscles, are treated to remove any spasms. Experience has shown that treating patients

in this manner reduces inflammatory conditions. It is possible to conclude, therefore, that the cause of rheumatoid arthritis could be the result of muscle problems. Further research is needed and encouraged to verify this theory.

When the head is tilted to one side the muscle structure has to prevent this because it can be very painful. Prior to treating scoliosis of the spine, it is essential to determine the root cause of the problem. For the majority of patients, the piriformis muscle is the cause of their problems. Once the piriformis muscle is released from spasm, it is possible to see changes occur up the length of the spine – the scoliosis disappears within minutes of releasing this one muscle, thus reaffirming the diagnosis. Many therapists may argue that the piriformis is not the primary cause of a scoliosis, but that it is caused by the quadratus lumborum on the opposite side or the erector spinae muscles. In reality, it is not important whether the primary problem is with the piriformis, quadratus lumborum or erector spinae because all these muscles will need to be released. The key message is that when all these muscles are treated the scoliosis and the associated problems will disappear.

Essentially, a holistic approach is needed to treat muscle spasm. For example, treating only the neck area of patients suffering from whiplash is rarely successful on its own. Experience has shown that people may have received numerous treatments for whiplash injuries without the root cause of the problem being cured. Further examination of these patients, using a holistic approach, has shown that the pelvic area is the root cause of the problem. Once the problem in the pelvic area is corrected, then treating the muscles in the neck area, which may have been compensating for a very long time and may be in a state of spasm themselves, addresses the remaining muscle problems.

The gluteus medius on the opposite side of the body from the spasmed piriformis muscle work to try to stabilise the pelvic tilt that is caused by the piriformis muscle. The quadratus lumborum and other erecta spinae muscles, including the iliocostalis, become tight in an effort to straighten the spine to counter the pelvic tilt. Subsequently, the shoulder girdle will become tilted, causing the levator scapulae and many other muscles in the neck area to tighten in an attempt to bring the cervical spine upright on the tilted shoulder girdle. When in a state of scoliosis, many sub-occipital muscles become tight to keep the head upright, which puts pressure on the occipital bone. All affected muscles need to be treated to remove both primary and secondary problems. The extent of the scoliosis often depends on how long the muscles have been in spasm. If the problem has been there for years, which is often the case, some

of the smaller muscles in the sub-occipital can be in spasm. If these muscles are in spasm then they can affect some of the cranial nerves, sinuses, hypothalamus and the pituitary gland.

The far-reaching effect of muscle spasm can be seen in the following examples:

- A patient presented with eyesight problems and tunnel vision, although their initial complaint was a back problem. Their back problem was treated, their pelvic area was stabilised and the scoliosis of their spine was addressed. Subsequent work on the patient's occipital area removed the problem with their eyesight.
- A middle-aged patient presented with gnarled and curled fingers that, on face value, appeared to be osteoarthritis. On examination, the patient was found to have scoliosis of the spine and a pelvic tilt. Although the patient was unaware that they had these muscle problems, each was treated and within two treatments the patient's fingers had changed from gnarled and curled to normal. In this case, it was assumed that nerve interference was the cause of the patient's hand and finger problems. Over a ten-year period the patient visited the London Clinic on several occasions. On one occasion it became apparent that the patient had been shovelling snow, which resulted in muscle strain, scoliosis of the spine and a remanifestation of the problems in their hands. Repeating the initial treatment programme addressed all of the patient's problems.

In addition to the above examples, removing muscle spasms has significantly reduced other ailments, such as nasal problems, severe colds and allergies.

As de Coti-Marsh pointed out in much of his work, it is essential that patients with arthritis are examined and assessed properly so that muscle and dietary problems can be dealt with. The patient can work with their diet by themselves at home. de Coti-Marsh stated that home treatment could be available to everyone, but many cases also require very specialised remedial massage treatment. Many doctors are now being trained in manipulative techniques. Osteopathy is based on very old traditional medical practices that were used as far back as the Roman times and should not, therefore, be ignored. The medical profession is now looking at osteopathy in a fresh light – trying to justify its use in medicine, asking why this practice has been avoided and why osteopathy has been considered to be outside the standard medical arena. In the book 'Musculoskeletal Medicine in Clinical Practice' by John K Patterson, the author realises that skeletal distortions are a big factor in persistent

medical conditions. Although arthritis is a clear example of a persistent medical condition caused by muscle problems, the author hypothesises that the two are not linked. Patterson also suggests that all doctors should go on a short course and be shown how to manipulate, particularly in the neck area, to realign the spinal vertebrae. From the remedial masseur's standpoint, this statement causes some concern. While the principle of manipulation can be learnt relatively quickly many more problems have been caused by manipulation of the neck area than have been corrected by it. Furthermore, some patients are apprehensive about the possibility of anybody manipulating their neck because of past experiences. In these cases, the remedial masseur has to overcome the patient's fears to enable them to continue with their treatment plan.

“Nerves from the sacroiliac, the pelvic nerves, govern the efficient function of the sex organs, bowel, bladder and kidneys. Any depression of these nerves causes an insufficient functioning of the organs supplied by that nerve, causing adrenal reaction which in turn causes Rheumatoid Arthritis.”

Charles de Coti-Marsh

Preparing joints for manipulation

Manipulation of a joint, and the spine in particular, should never be performed before muscle has been treated, softened and warmed because it will always resist manipulation. Some osteopaths manipulate 'cold' and may not consider using massage prior to starting treatment. Doctors may not contemplate needing to prepare the muscles either. When looking at muscle problems like spasms, especially in deep muscles, it is a difficult process for anyone who has not been trained to detect them. Palpation is the only way to detect these spasms. It is like an art form for the Practitioner to be able to use their fingers to determine where a problem is, as well as its severity. This process takes much practice – hours and hours of practice and sensitivity in fingertips to find the spasming muscle. Treating the muscle is another challenge altogether. To treat and remove the spasm out of a muscle is a technique that takes a very long time to develop. The nerves that are feeding that muscle can react against it. Treating a muscle, especially a spasmed muscle, if it is not worked properly and carefully can release the spasm but then make it recur. This occurs because the reflex nerve is stimulated, thereby initiating the spasm. Experience will help the remedial therapist to process how much can and cannot be achieved in one treatment. Teaching remedial massage is possible, but learning how to

accomplish this takes much more practice and time. Unfortunately, it is not as simple as performing a manipulation on a joint to realign it.

Spinal injury

Spinal injury can be caused by an impact. This impact may displace the vertebral body from its natural alignment, resulting in pain, restricted movement and impingement of the nerves in the affected area of the spine. As defined by de Coti-Marsh, these are the symptoms of an arthritic condition. A Practitioner will detect any spinal injuries when examining their patients and will determine a treatment plan to address these injuries accordingly. The possibility of joint calcification must also be taken into account and any forceful manipulative treatments must be postponed until the calcification has dispersed. In this instance the spinal injury may not have been caused by muscle malfunction, but the muscles and ligaments in the area of injury will be affected and should be considered in any treatment plan. A sustained scoliosis of the spine should be considered as a spinal injury because it will interfere with the spinal nerves and will lead to an arthritic condition.

Chapter 2: Arthritis diagnosis

Fear and disappointment in patients

Patients may turn to The Arthritic Association for help and support in managing their arthritis after being diagnosed with the condition by their general practitioner. Many of these patients will be close to a state of panic because it is often considered that there is no cure for arthritis. These patients may also be aware that their fellow sufferers may have been prescribed various medications, some of which are associated with unpleasant side effects. The lack of cure, concerns about the side effects associated with prescribed medications and the possibility of becoming reliant on these medications indefinitely are the key concerns for the patient. By approaching The Arthritic Association patients are keen to learn about natural, alternative methods of overcoming arthritis.

Prior to treating patients it is essential that The Arthritic Association Practitioner make their own diagnosis. The symptoms associated with an arthritic condition have to be assessed and compared with what is considered to be normal. The diagnostic process involves finding the tissue(s) that are causing the arthritic symptoms before any intervention can be considered. When making a diagnosis, the Practitioner may be influenced by personal bias. Although this is entirely understandable, it is important to keep an open mind and be conscious of contraindications and any special precautions. It is better for the Practitioner to be over cautious, even if incorrect, than not to be cautious enough. A final diagnosis cannot be reached before the Practitioner has carried out a proper examination involving all the necessary tests and observations.

By coming to The Arthritic Association, the patient has already made a choice to look for a more natural way to overcome their condition. Because patients often present with high levels of anxiety at their first appointment, it is important to provide them with reassurance about their condition. From a legal perspective, Practitioners cannot claim to cure arthritis. The Practitioner can, however, give confidence to patients by stating that evidence from past patients following The Arthritic Association's treatment regime has shown that they were able to overcome their arthritic condition.

Many patients who have been diagnosed with arthritis in the hip region have been told they will need a hip replacement in the near future. Again the Practitioner can reassure patients that, from past experience, this is not

necessarily the case. In addition, some patients who have already had a hip replacement will come to The Arthritic Association because their arthritis persists and they are concerned that their other hip will need to be replaced. Regardless of the patient's stage of arthritis, it is essential to provide them with reassurance. It is this reassurance that will provide the patient with confidence in their home treatment regimen. Increased confidence will also ensure that they have a more positive attitude and will encourage them to follow their home treatment plan more stringently.

Flippant diagnosis

For a minority of patients their symptoms will be incorrectly diagnosed. Because arthritis is typically a condition that affects older people, when these patients consult their doctor they may receive a diagnosis of arthritis because they have pains in their joints. Although pain in the joints is the technical definition of arthritis, their symptoms may be markedly different from patients with arthritis because, in reality, the cause of their problem may be the result of strained muscles or ligaments. In the absence of a thorough examination or case history, this diagnosis can be referred to as a 'flippant diagnosis'. Such a diagnosis may cause unnecessary anxiety for patients, especially when correcting the associated muscle problems can alleviate their symptoms.

Intricate and detailed diagnosis

It is important for the Practitioner to identify, in as much detail as possible, the patient's type of arthritis and what is causing it. In de Coti-Marsh's book 'Rheumatism and Arthritis – The Conquest' he describes the examination of one of his patients where he took weight, blood pressure and blood tests (possibly to compare blood viscosity in relation to inflammation before and after treatment to assess the effects of treatment). Although the patient's blood type was never determined, de Coti-Marsh's examination was very thorough. It would, however, be fascinating to understand if there was a relationship between blood types and arthritis and how this impacts on patients.

Consultations with patients should be holistic and as thorough as possible. Too many patients have been diagnosed and treated on a weak examination that did not take into account other parts of the body or the body as a whole. At The Arthritic Association's London Clinic, patients are always examined completely – from top to bottom as intensely as possible. It is easy to overlook

signs and it can be dangerous to make assumptions. While the Practitioner may have encountered similar symptoms in other patients, the cause of the problem may be very different and any irregularity in the patient's body should be questioned.

A man presented with a muscle problem that was distorting his spine. After treating the muscle problem, a subsequent check revealed that the distortion was still present. When the patient was due for their next appointment they contacted the clinic stating that they were too ill and could not get up from their bed. The Practitioner informed the patient that if the treatment had not removed the problems then they should contact their general practitioner for a home examination. The home examination resulted in the patient's transferral to a London hospital for immediate tests, which revealed a cancerous spinal tumour.

The impact of health to ward off arthritis

de Coti-Marsh made many references to poor diet and debilitation of the immune system being key factors in the development of arthritis. He concluded that the effects of both old age and disease (such as arthritis) could be combated with a healthy diet and robust immune system.

Diet

The emphasis on correct diet is essential and a good diet can have preventative properties against disease. The importance of diet should be reiterated to patients, especially when they start the home treatment plan, as it is essential to combating arthritis.

Home treatment plan

Food is vital for the intake of energy. Below is a table outlining the foods that are beneficial and those that should be avoided.

Overview of beneficial foods and foods to avoid*

X = avoid completely ● = in moderation ✓ = go right ahead ✓✓ = the most beneficial

Vegetables

Raw tomatoes	X
Cooked tomatoes or parsnips	●
Raw mushrooms	✓
All other vegetables – cooked	✓
All other vegetables – raw	✓✓

Fruit

Plums, raspberries, strawberries, rhubarb	X
Gooseberries, apricots, cherries, cranberries	●
Dried fruit	✓
All other fruit – fresh	✓✓

Meat and poultry

Red meat – beef, lamb, pork, ham, etc	X
Duck, goose and game	●
Turkey, chicken	✓✓

Fish and shellfish

Crab, crayfish, lobster, eels, whiting, hake, mullet	X
Oysters, prawns, langoustine	●
All other white, flat or round fish, other than those listed above	●
Cod, haddock, halibut, mackerel, pilchards, sardines, salmon, tuna	✓✓

Bread and flour

White bread, biscuits, cakes and pastry	X
Whole wheat flour and bread	✓
Rye, crispbread, rice cakes	✓✓

Grains, pasta and pulses

Pasta (whole wheat), brown rice, couscous, barley, rye, oatmeal, bran	✓✓
Seeds (e.g. pumpkin, sunflower, sesame)	✓✓
Pulses (lentils, chick peas, kidney beans, etc)	✓✓

Cheese

All blue cheeses, French soft cheeses, cream cheese	X
Port Salut, Bel Paese, Edam, Gouda, Leerdammer	●
Gruyere, Emmenthal, double Gloucester, Wensleydale, Caerphilly.	✓
Cheddar, cottage cheese, Cheshire, white Leicester, Parmesan	✓✓

Other dairy

Full cream milk, cream	X
Margarine – sunflower, soya or vegetable	X
Eggs	X
Butter	●
Vegetable and olive oil	●
Natural fromage frais, skimmed milk, natural yoghurt	✓✓

Soft drinks

Fizzy, coloured drinks; processed pineapple/tomato juice	X
Squash, lemonade, mixers	●
Processed grapefruit, apple or orange juice	✓
Filtered water, fresh fruit juices (apple, grape or orange)	✓✓

Hot drinks

Ordinary breakfast tea, instant coffee	X
Cocoa, drinking chocolate	●
Herbal and fruit teas	✓✓

Alcohol

All	●
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* Extensive research is currently being performed on the diet recommended by de Coti-Marsh and advocated by The Arthritic Association. The overview of beneficial foods and foods to avoid has, therefore, been updated. A complete version of the updated diet will be made available in 2008.

Table 2.1: Supplements

Name	Stage 1 (Weeks 1–8) Suggested dose	Stage 2 (Weeks 9+) Suggested dose	Stage 3 Maintenance dose
'K' compound*	1 – each morning 1 – each evening	1 – morning only	As stage 2
Energy Plus*†	As directed on the label/package leaflet		
Oil of garlic*	2 or 3 in the morning or before bed, but not with food	As stage 1	As stage 1
Deep seaweed*†	Morning and evening with meals (as directed on the label or package insert)		
Detox*	Once a week only 1–3 before evening meal	As stage 1	As stage 1
Decalcine*†	None	1 – every other morning	None

† The patient should consult their general practitioner if taking medicines for a thyroid disorder.

* Available from Hursdrex Ltd.

Nerve interference and muscle alignment

In addition to the effects of poor diet on the development of arthritis, de Coti-Marsh also commented on the effects of spinal deviations and nerve interference. Experience has shown that alleviating these problems results in the dramatic recovery of many sufferers of arthritis.

The methods that de Coti-Marsh used to correct spinal deviations were predominantly based on osteopathy, although a detailed description of his exact techniques have not been documented. As de Coti-Marsh explained, these manipulative techniques were contraindicated in patients with arthritis because forcing movements in calcified joints may cause extensive damage. By following the specific dietary guidelines, the use of supplements and other recommended therapies (such as salt baths), the patient can reduce the amount

of calcium in their joints. Once at stage two of the treatment regime (see call out below) the patient can consult a Practitioner who will correct any spinal/pelvic deviations. More recent work has shown that patients with arthritis can often be helped to recover from their spinal/pelvic deviations much earlier than previously considered. As these spinal/pelvic deviations are often the result of muscle malfunctions, they can be treated prior to the dispersal of calcium from the joints without causing any damage.

Stages of the de Coti-Marsh regime

de Coti-Marsh explained that there are three main causes of arthritis: spinal injuries, faulty diet and auto-intoxication. Briefly, spinal injury results in calcification, which may affect the nerves that control, for example, the hands and feet. A faulty diet is defined as a diet that has low nutritional benefit and is low in potassium. Potassium deficiency is associated with the rapid calcification of arteries, muscles and joints. Auto-intoxication occurs from ingesting foods that the body is unable to tolerate or the incomplete digestion of foods that release toxins into the body. Auto-intoxication is particularly linked to constipation. The de Coti-Marsh home treatment programme is designed to address these causes of arthritis. When following the regime, patients will experience the following:

Stage 1

The first stage, which last approximately 6–8 weeks, requires changes to the daily diet. Each day of the correct diet will help the patient feel stronger, with less pain and disability.

Stage 2

Suddenly, for no apparent reason, many patients experience additional pain and movements become more difficult. When a joint is fixed (either due to arthritis or calcification) it is unable to move and causes no pain. In Stage 2, the joint becomes decalcified and begins to move. It is this ability to move the joint that causes the pain and, in some cases, patients may also experience slight inflammation. These pains are referred to as *liberation pains*. The timeframe for these pains varies from patient to patient, but usually last for approximately two weeks.

Stage 3

Stage 3 is the final stage of recovery. During this stage the patient may have minor setbacks, but ultimately they will enjoy restored health.

Many sufferers of arthritis improve once they start following the diet, especially if their diet was poor in the past. For many of these patients, the level of improvement will reach a plateau until they undergo treatment for their spinal/pelvic deviations. There are also some patients who have classic symptoms of arthritis and follow the home treatment dietary regime without fault, but still have the symptoms of disease. Although these patients may feel disillusioned, they continue to seek help and support from The Arthritic Association. Once at the London Clinic, extensive examination reveals that these patients usually have deviations of the spine and/or pelvis. The usual cause of these deviations is malfunctioning muscles, which can be treated immediately without damaging the calcified joints. Treatment of the affected muscles is almost always what the patient needs to resume their progress in combating their arthritis. Sometimes, the results of these treatments are dramatic, for example alleviating the patient's arthritis. In some cases, however, osteopathic manipulation is also essential to complete the realignment – although this is never performed until the calcifications have dispersed.

Chapter 3: Consultation, including medical history and diet

The Arthritic Association usually refers the patients who attend their London Clinic, as they predominantly need more individual attention than they could get from just following the home treatment programme.

First meeting with the patient

As the patient enters the consultation room, it is important that the Practitioner observes their gait, general attitude and any other mannerisms that might indicate the patient's problems because when patients are in pain they often try to mask their symptoms. It is essential to greet the patient and make them feel welcome at the first consultation. This makes the patient feel more at ease and that their case is being considered both carefully and appropriately.

Consultation protocol

Patients who attend the London Clinic are posted a questionnaire to complete and return prior to their first appointment to provide the Practitioner with some background information. In addition to basic questions (such as name, address, contact telephone number, date of birth, etc), salient questions are also included to probe further into the patient's history and past diagnoses (see below). Space is also included in the questionnaire for the patient to document three days of eating and drinking habits to provide an overview of their diet. In addition to using the questionnaire, de Coti-Marsh also questioned patients in great detail and collected blood samples.

It is essential that the Practitioner has thoroughly reviewed the questionnaire before they first meet with the patient because:

- Any points that require further clarification can then be discussed during the appointment.
- Background research, for example into possible side effects associated with prescribed medications, can be performed.

Salient questions

During the routine question and answer session between the Practitioner and their patient, the patient's response to specific questions may need further elaboration to gain a better understanding of their problem. Typically, patients respond to questions in one of three ways:

- Providing very matter-of-fact answers with little or no additional details.
- Elaborating in great detail. In this instance the Practitioner will need to ensure that they make notes on the points that are relevant to the patient's condition.
- Answering in a way that they think the Practitioner would like to hear, especially if they have already seen the de Coti-Marsh home treatment programme.

In each of these cases, the Practitioner will need to ensure that they obtain the information that they need to help the patient.

Patients may also have forgotten events, accidents or ailments that happened a long time ago (in their lifespan of perhaps 70 or 80 years). In these instances the patient may state that they have never had particular occurrences (e.g. a shoulder injury), only for the Practitioner to find out during their treatment/further conversations that the patient had indeed had such an event. A possible explanation for this is that particular treatments on certain parts of the body may cause the patient to recall a previous pain or injury that occurred many years previously. While it may not be possible to record this information during treatment (the Practitioner cannot usually stop in the middle of a treatment and may have oil on their hands) it may provide essential background information on a possible cause of the patient's complaint.

Listening to the patient

Listening to the patient is very important to gain an insight into their general background and past medical history. This helps the Practitioner to elicit further information that may help with the diagnosis. In addition, allowing the patient to ask questions, as well as providing them with reassurance, is essential to gaining their trust.

Questions on which to elaborate

During the consultation it is essential for the Practitioner to delve into the patient's background in as much detail as possible. Outlined below are some of the key points for the Practitioner to consider.

Family history of arthritis

It is speculated that there is a link between blood types and arthritis. As a result, it is helpful if the Practitioner can determine whether other family members have or have had arthritis. Briefly, parents with different blood types will produce offspring with either their mother's or father's blood type or a combination of the both parents blood type. If a parent has had arthritis it does not mean that all their offspring will develop the condition. It may, however, indicate if a patient is more susceptible to arthritis, as it may be linked to their blood type. If patients have an increased likelihood of developing arthritis then they can start following the de Coti-Marsh dietary regime as a precautionary measure.

Type of arthritis

More than 200 different types of arthritis exist. It is important, therefore, to establish the type of arthritis with which the patient has been diagnosed.

The patient's physical condition and what kind of pain they have

The Practitioner should ask the patient how they describe their condition, how long they have had it and what is the severity of the associated pain (e.g. mild, aching or intermittent). Questioning whether particular activities aggravate or relieve the pain and whether the pain causes any restrictions in movement of activity will help the Practitioner with their diagnosis and treatment plan.

When and where the patient was diagnosed

It is helpful to determine who made the original diagnosis as different doctors provide different levels of information about patient diagnoses. A hospital rheumatologist, for example, will typically provide more information than a general practitioner.

X-rays or blood tests

The patient should be questioned on whether they have had any past X-rays or blood tests for their arthritis. In addition, it is useful to determine if the patient knows their blood group and blood type, although the majority of patients do not know this information.

Previous treatments and advice

The Practitioner should ask their patient what treatments they have received in the past for their arthritic condition and who were they from (e.g. their general practitioner or a hospital consultant). The majority of treatments that the medical profession use for patients with arthritis are based on pain relief. Some patients may also have had osteopathic treatments (e.g. for back pain). Many people in the medical profession may not recognise the importance of muscle problems and, in particular muscle spasms, in relation to the condition that they are treating. Information on previous treatments that the patient has received can be very relevant because many pain medications, for example, are associated with side effects that after long-term use can induce symptoms that are similar to arthritis. It is essential to know what effect, if any, past treatments have had and if they helped the patient with their arthritis. Refer to Chapter 5 for further information.

A female patient of approximately 70 years of age presented with arthritis. She was desperate for help with her arthritic condition. Her husband, who had had arthritis, had died the previous year. He had been prescribed large quantities of ibuprofen to manage his arthritis. After taking this medication for several years he had developed intestinal bleeding. The husband was taken to hospital to stem the blood flow and remained there for several months. When her husband returned home, his general practitioner again prescribed ibuprofen to alleviate the arthritic symptoms. Within a year the husband was back in hospital with severe intestinal bleeding that could not be stemmed and, as a result, he died. The female patient, having been diagnosed with arthritis and having read that the side effects of non-steroidal anti-inflammatory medications (NSAIDs, such as ibuprofen) include intestinal bleeding, was determined not to follow the same path as her late husband. The patient approached The Arthritic Association for a natural treatment. The patient's determination and adherence to treatment helped her to overcome her arthritis.

While rheumatologists are aware that anti-inflammatory medications can cause intestinal bleeding, they weigh up the relative benefits in relation to what they prescribe and the eventual, possible intestinal bleeding that might result in hospitalisation. In addition to ibuprofen, similar effects are noted with voltarol and methotrexate. For further information refer to Chapter 5.

Current health problems

It is important to know what medications the patient has been prescribed for conditions other than arthritis, such as heart problems or diabetes. Again, the patient's arthritic symptoms may be the side effect of one of the medications that they are currently taking.

Past illnesses and previous health problems

The Practitioner should question the patient on past illnesses and health problems and whether they received any X-rays, treatments or medications for this ailment. It is important to ask the patient if they have had any past accidents and/or operations and, if so, when and what part of the body was affected. Accidents can easily distort the body causing muscle problems. Patients often believe that the injuries from these accidents have been overcome, but this may not be the case. Accidents that the patient might consider to have been quite trivial could be relevant to their present condition. It may be necessary to ask the same questions several times, as the patient's memory may be triggered by other discussions at a later time or during treatment.

Nutrition, diet, supplements and weight

Nutrition and diet are big factors in the arthritic condition. The Practitioner needs to know what food and drink and how much is consumed at each main meal and whether the patient snacks in between meals. Eating habits are also important – does the patient eat quickly 'on the hoof' (e.g. rushing from the office at lunchtime to buy food such as fish and chips and eating it as they walk back to the office) or does the patient eat in a more leisurely/relaxed fashion so food digestion is more complete (e.g. eating while sitting down and chewing their food properly)? Understanding the way in which patients eat and drink can be very useful for the Practitioner. If the patient does not take the time to eat and drink without rushing then they are often not digesting their food properly. The way in which patients eat may also impact on their metabolism. The key message is to 'eat your drinks and drink your eats'. The action of chewing drink ensures the production of salivary enzymes and the initiation of digestion. Chewing food until it is almost liquid achieves the same action – increasing the surface area of food for digestion by enzymes. Some patients take vitamin and mineral supplements to complement their diet. This information is also useful to the Practitioner. Other information about diet is also relevant – does the patient suffer from indigestion, constipation or food cravings (e.g. are they a chocoholic)? The source of the food is equally important. Question where the

patient buys their food – supermarket, organic food store or do they grow their own food? What is the nutritive content of their food (i.e. quality rather than quantity)? People may eat a large amount of food but they can still be undernourished if it is the wrong type of food e.g. too much carbohydrate and insufficient fruit, vegetables, fibre, vitamins and minerals.

Nutrition also relates to the intake of foul air (e.g. smoking or taking drugs). This information is very useful, although the Practitioner may not be able to gather all the information in the first consultation and may have to readdress these questions at a later date. In addition, the patient may be nervous because they do not have any form of relationship with their Practitioner at the first meeting and they may be reluctant to share this type of information. As time progresses, the Practitioner–patient relationship will become stronger and additional information can be gleaned during future sessions.

It is important to note if the patient under- or overweight and to try and determine why. It may not, however, be appropriate to ask the patient why they are overweight as some people are extremely sensitive about their weight and repeated questioning may cause them to become stressed. If someone is overweight then this puts more pressure and stress on their joints and it may impact on their condition. For example, is the patient's weight due to the wrong kinds of foods, irregular meal times, frequent snacking, eating disorders, malabsorption of food due to age, digestive problems (e.g. irritable bowel syndrome or Crohn's disease) or diabetes?

Stress, lifestyle and work patterns

Stress, lifestyle and work patterns can also impact on a patient's wellbeing. It is essential to determine if the patient is under any stress and what the cause of this stress may be. Ask questions about the patient's partner, children, relaxation pursuits, hobbies and sporting activities. Below are some useful pointers to gain a better understanding of stress-related contributory factors that affect patients:

- What type of lifestyle does the patient have?
- Does the patient have a family?
- Is the patient employed and, if so, is it full or part time?
- What are the patient's hobbies and do they indulge in sports?
- Is the patient under stress, whether at work or at home (family, marriage, partnerships, etc)?

The impact of stress on the metabolism should never be underestimated. Stress can impact on the metabolism, for example, by inhibiting the production of digestive enzymes and resulting in the incomplete digestion of food, which may lead to putrefaction of undigested meat or the fermentation of sugars. Undigested food provides an ideal environment for the growth of 'bad' bacteria and the production of bacterial toxins. A person who is under stress may start to feel unwell and/or have digestive disorders. Toxins, if not dispersed from the body, may build up in the joints causing aches and pains and create muscle tension. A vicious cycle of muscle pain and muscle tension is then created causing the patient to feel even more stressed.

Gaining a better understanding of the patient's lifestyle is important as it may provide further information on the patient's condition. The type of employment the patient has may impact on their physical wellbeing. Manual work, for example, can play a key role in both pelvic and spinal distortions. People who lift heavy weights can often cause problems for themselves without realising it. Furthermore, the types of sports that patients are involved in may also be an indication of the types of injuries that a patient may be suffering from. If the patient is very competitive then they are often very anxious to return to their chosen sport and may be reluctant to rest when needed.

Three-day eating plan and diet

With the information provided on the questionnaire, the Practitioner can review the patient's eating habits and give attention to any points that need to be addressed. On one occasion, a Practitioner found that even though the patient thought they had been following the de Coti-Marsh guidelines they had been eating inappropriately because they had misunderstood the process.

Be aware that patients may not necessarily be open, rather they may say what they think the Practitioner wants to hear, especially if they have a preconceived idea of what they should be doing. This happens fairly frequently as patients may have received The Arthritic Association's literature and/or the questionnaire before seeing the Practitioner. One patient, when asked if she ate red meat, categorically denied having red meat in her diet. Unknown to the patient, the Practitioner had just seen her eating a steak and kidney pudding in the nearby restaurant. The patient had been with The Arthritic Association for more than a year and wondered why her arthritis was not improving!

Chapter 4: Examining patients

Introduction

After the patient has had a consultation they need to be carefully examined. The patient will need to remove their clothing for a thorough examination of their physique to be performed. Remember, undressing may make the patient feel embarrassed so the Practitioner should make the patient feel more at ease by advising them on what they are seeing without causing any alarm. As well as checking for problems that the patient has complained about, the Practitioner should also check for any other anomalies. The patient should be examined both when standing and lying supine. If the patient has difficulty lying down then there are specific positions they can adopt that will allow the detection of muscle problems.

Observations made during the examination should be recorded (using a body outline first and then supplementing the notes later if there is not sufficient time during the examination). The Practitioner should reassure the patient that their problems can be addressed and, at the end of the examination, make sure that the patient is aware of their treatment plan.

de Coti-Marsh determined three causes of arthritis – spinal injuries, faulty diet and auto-intoxication. Experience of examining patients with arthritis at the London Clinic shows that spinal deviations are present in at least 80% of cases.

Contributory factors to arthritis

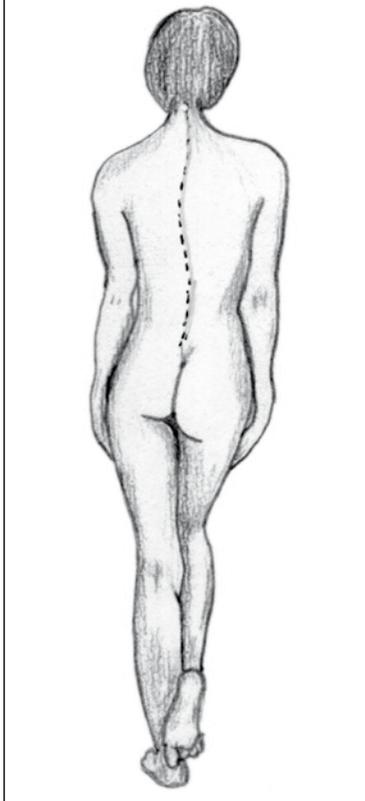
Other contributory factors to arthritis include scoliosis, poor postural habits, muscle imbalance, poor metabolism, nerve impingement, calcium deposits/spurs, disc herniation and spasmed muscles, as discussed below.

Scoliosis

Examining a patient with arthritis often reveals a scoliosis of the spine (see Figure 4.1). Scoliosis is not a natural state when the patient is standing or lying supine or prone. A diagnosis of scoliosis can usually be made when the patient is standing as upright as possible with their feet a shoulder-width apart. This posture spreads the body weight equally on each leg. If scoliosis is readily observed in this position, it indicates that the cause is most likely to be a muscle

imbalance. A lateral curve of the spine can be induced by standing with the whole weight of the body on one foot, a stance which is often adopted by a person when standing for long periods and wishing to rest one leg, or a person with an injury to one foot or leg that is aggravated when taking weight on it. This stance tilts the pelvic girdle. The spine then curves to accommodate the tilt and subsequently tilts the shoulder girdle in the opposite direction and, finally, the cervical spine curves again to bring the head to an upright position. The body can accommodate such a stance without causing harm or significantly affecting function. If such a situation of scoliosis continues indefinitely, however, it can become very uncomfortable – hence the reason that most people adopting such a stance would wish to put weight on their other leg for a while. This phenomenon is quite common in the population as a whole and, while not a problem in itself, if it becomes habitual to stand with all the weight of the body on one side for long periods this could gradually lead to a more permanent scoliosis occurring, with the subsequent problems of muscle tone imbalances. Muscle imbalances often cause twisting of the torso. Most patients have visible folds and creases in their skin. These folds and creases can be used to see any unevenness in the patient's posture, especially from a posterior aspect.

Figure 4.1: Induced scoliosis of the spine



Poor postural habits

Habits that affect muscle tone often distort the body. Some of the continual habits that can cause postural changes in people include carrying shoulder bags (particularly if always on the same shoulder), using walking sticks and pushing pushchairs or invalid chairs.

Muscle imbalance

The most common deviation is scoliosis, which is predominantly caused by muscle imbalance. Muscle imbalance is also caused by muscle spasm. Muscle spasm that distorts the skeletal frame is responsible for scoliosis of the spine in the majority of cases. It can also be responsible for exaggerating a kyphosis and lordosis or flattening a lordosis.

“Any deviation from normal of bony vertebrae in any part of the spine may cause pressure upon the nerves which operate the limbs and organs of the body.”

Charles de Coti-Marsh

Poor metabolism

de Coti-Marsh states in ‘Rheumatism and Arthritis – The Conquest’ that the long-term effect of scoliosis is to interfere with nerve roots from the spine, causing changes in metabolism and interfering with digestion, absorption of nutrients and the elimination of toxins.

Nerve impingement

de Coti-Marsh makes reference to the fact that nerve impingement can cause calcium deposition, which will build up and cause further problems impinging the nerve. The excess tension caused by muscle spasm can cause changes in the body’s structure. For example, the tissue of the spasmed muscle will become fibrous, making the muscle harder and more susceptible to injury. In addition, the muscle tendons become thicker and eventually calcify and become hard. Calcium deposits in and around the muscle can lead to the accumulation of spurs (also referred to as osteophytes).

Disc herniation and spasmed muscles

A muscle in spasm can apply enormous pressure to joints. When unilateral pressure is applied to the cartilage between joints, in particular in the spine between the vertebral bodies, it causes the cartilage disc to herniate on the opposite side to that being pulled or to bulge out. This protrusion can cause nerve impingement. Very often a spasmed muscle that is distorting the body’s framework and causing pain in a variety of places can make the muscle appear to be weak when in reality it is in a very contracted state. A contracted muscle that is pressing onto a nerve can frequently cause the whole body to be unable to move.

Body systems

The nerves that supply many internal organs emanate from the spine. When a scoliosis is permanent, the nerves may be under pressure, which affects the organs that those nerves supply. As a result, the spasm can have a powerful impact on the whole endocrine system and the function of glands. The function of the body systems is a big factor in the metabolic and autoimmune systems and can induce arthritis if not functioning correctly.

It is important for a Practitioner to know the remedial massage and soft tissue manipulation techniques to relieve spasmed muscles. When a Practitioner is able to relieve muscle spasms, it will be invaluable to the patient. Forceful manipulation is contraindicated in patients with arthritis. As a result, relieving a muscle spasm by remedial massage and manipulative techniques is the only way to release the muscle and decrease the associated pain. It is, however, important to determine the primary cause of any distortion of the pelvis and/or spine and to ensure that no spasmed muscle is overlooked.

Relieving a spasmed muscle(s) allows the body to realign itself, which can have dramatic results for patients with arthritis – relieving their conditions very quickly (within hours or days). Because the results of remedial massage and manipulation can be so dramatic, it can give the patient a tremendous confidence boost that, if they follow their treatment plan, they will overcome their arthritic condition completely. Further examples of the dramatic effects of remedial massage can be seen in the case histories presented in Chapter 9.

“The effect of manipulative treatment in releasing nerves is both immediate and magnificent.”

Charles de Coti-Marsh

Leg length difference – actual or apparent

When the patient is lying supine and in a straight line, the tilt of the pelvis can be observed. If the Anterior Superior Iliac Spine (ASIS) points are forming a line across the body that is not at right angles to the general vertebral line it is then almost inevitable that the Practitioner would observe a leg length difference that is more clearly seen than when aligning the medial malleoli. A difference of 1–2 centimetres is quite significant and in these circumstances quite common.

When such observations are seen, the important question is whether the leg length difference is actual or apparent. Determining the answer to this question is important because an actual leg length difference is dealt with in an entirely different way to an apparent leg length difference.

Measuring leg length difference is not as straightforward as it seems, because the measuring points are not easily found. The medial malleoli at the extremity are good points and easy to find. At the other end, however, points like the greater trochanter of the femur can give a false reading because the measuring point is arbitrary as it is rounded and not easy to palpate. The other end point that is often used is the ASIS because it is easier to find. The ASIS is not part of the leg so using it to compare lengths with the other side can also be arbitrary. Orthopaedic guidelines state that the most accurate way to measure leg length is by using an X-ray, where measurements can be made to and from a number of different points. To go to lengths of obtaining an X-ray would only be necessary if and when it is required to make a prosthesis to compensate for an actual leg length difference.

A rule-of-thumb method to determine whether a difference is apparent or actual is as follows. With the patient lying supine, take the longer leg, bend it at the knee and lay the knee out laterally as far as it is comfortable for the patient to bear. Then return the leg to lay along side the other and align the medial malleoli. If the leg length is only apparent it would now appear to have changed back to normal (i.e. the legs are the same length). If this does not happen, it may mean that the difference is actual. This method, however, cannot be regarded as accurate or foolproof. It is a good method for determining an apparent difference because, when it has been used, the medial malleoli line up, allowing the Practitioner to check the line of the ASIS and find it at right angles to the line of the spine showing that is how the patient could and should be if muscle imbalance were not pulling the pelvis out of kilter.

The holistic nature of the body

The state of muscles influences the whole body both in terms of posture and health. The Practitioner must first understand the holistic nature of the body. Holistic is a word that has been overused and it is easy to lose sight of its true meaning. It means that all parts of the body are dependent on each other and that the body is constantly communicating with itself. Anything that affects one part of the body affects the entire organism – mind, body and spirit.

Our bodies are influenced by everything that happens around and inside us. In a spasmed state, a muscle can cause internal stresses of which the patient may not be aware, affecting the patient's health on a number of different fronts. This is usually because the muscle is impinging on the nerve system, as well as causing distortions in the body's frame. Muscle spasm can also affect the circulatory system, arteries and veins by inducing, for example, calcium deposits causing arteries to clog and restricting blood flow. Instead of enjoying a relatively healthy old age, muscle spasm can cause the patient to appear to age very quickly, as well as induce arthritis.

Not making assumptions

When examining patients with arthritis, the Practitioner needs to be very careful not to base their findings on any assumptions. Making assumptions based on treating similar patients is inappropriate and may be harmful to the patient. The Practitioner must keep an open mind when examining each patient and should consider all of the patient's symptoms.

Solving the puzzle

To identify the primary cause of the patient's complaint, the Practitioner needs to adopt a holistic approach and continually ask themselves the question 'why?'. It is often a puzzle as to why someone has a problem, so repeated questioning helps to track down the primary cause and allows it to be treated. Once the cause is treated, the result of the treatment should be the elimination of the patient's symptoms. If some of the symptoms persist, then the Practitioner may either look further for the cause or refer the patient to another Practitioner, or the patient's general practitioner, to review the problem from a different stance.

Spinal injuries

The term 'spinal injuries' conjures up visions of the result of a terrible accident in which a person has sustained life-threatening injuries to their spine, such as a road traffic accident or a fall from a high place on to something hard. Such injuries can cause distortions or even fractures of the vertebra and can threaten the whole nervous system by injuring the spinal cord. In addition, these injuries can paralyse limbs or the whole body, and are outside the expertise of

the remedial massage Practitioner. Emergency medicine physicians should treat these patients in hospital.

The spine and pelvis can be distorted by far less extreme circumstances than those described above, and the result of these distortions can also be described as a spinal injury. The alignment of the vertebra is stabilised by ligaments that control their alignment while allowing flexible movement of the spine. The muscles that are responsible for moving the spine would, in normal circumstances, work in a coordinated way – acting as agonists, antagonists, synergists, fixers and stabilisers thereby allowing flexion, extension, adduction, abduction and rotation as demanded. If, however, one or more of the muscles responsible for these movements goes into a spasmed state, its continuous exertion of force can cause the vertebra to misalign to the limit allowed by its ligaments causing restriction of the normal movement. Osteopaths refer to this phenomenon as a subluxation or lesion. Subluxations can be detected by palpation and corrected with manipulative techniques and may remain indefinitely if not detected and treated. In such circumstances the body's mechanism for dealing with injuries may come into effect causing calcification around the injury site. Both the injury and the calcification can interfere with the function of the nervous system emanating from the spinal cord, with all the subsequent effects on the whole body. The recognised treatment for subluxations is to arrange the patient in such a way that the spine is rotated and flexed to a point of movement that the subluxation is restricting. At this point a forceful thrust is applied that will move and realign the affected vertebra, regaining normal movement. This is a technique that de Coti-Marsh must have used when he detected spinal injuries in patients with arthritis.

Two factors should govern the reduction of a spinal injury, regardless of whether it is a subluxation or general distortion (e.g. scoliosis or a twisting of the torso):

1. To determine any muscle problems that may be affecting the misalignment and to treat those muscles prior to any manipulation being carried out.
2. To determine the degree of calcification that is restricting the movement of the vertebra and to avoid manipulation until the calcification has sufficiently dispersed. The duration of the problem may be a consideration in determining the degree of calcification.

In practice, when a subluxation in the spine is identified, it is essential to determine the possible cause(s) by examining all skeletal muscles that may be involved. Any muscles that require treatment should be managed accordingly.

Once treated, the spasming muscles should return to their normal state. Other affected muscles are treated to obtain the same degree of normality. Such treatments may require several sessions over a period of several days or weeks to achieve satisfactory results. If the subluxation remains after treating the muscle problems then manipulation can be considered to address this problem. The patient is positioned appropriately for the Practitioner to apply the thrust to adjust the misaligned vertebra. Occasionally the subluxation will reduce without the thrust being applied. In these instances, the Practitioner will either hear or feel the realignment occur. It is possible, therefore, that the realignment is assisted by the position of the spine negating the need for the thrust movement. Evidence from treating patients has shown that this often occurs, reinforcing the belief that muscle is almost always the cause of a misaligned spine or pelvis. The majority of patients that are treated in this manner are not patients with arthritis. As a result, calcification of the joints does not have to be considered because the patients have usually only had the problem for a short time prior to seeking treatment. Calcification is more of a concern when the patient has lived with spinal injury for a long time.

The experience outlined above enables the Practitioner to help patients with arthritis and spine or pelvic injuries or distortions. Treating all the muscles involved in the distortion is usually sufficient to achieve realignment. If, however, the distortion or subluxation remains after treatment then gentle, passive movements can be used to arrange the patient in such a position that allows realignment to occur. Once the calcification has reduced sufficiently, realignment will take place. Force should never be used on patients with arthritis as realignment can be achieved with the use of gentle, passive movements that are preceded by appropriate remedial massage.

Treating the problem you see

During the patient's examination, the Practitioner may detect a muscle problem that is considered to be too trivial to be the cause of the patient's arthritis. The Practitioner should treat this problem because, in many instances, it may be either the cause or a contributory factor to the arthritis or it may mask other muscle problems. Once treated, the Practitioner should re-examine the patient.

Understanding X-rays and scans

X-rays and scans need the expertise of a radiologist to be read properly. Most people cannot understand X-rays and scans sufficiently, particularly scans that are taken in slices to build a three-dimensional picture. In addition, it is difficult to determine from a scan or X-ray exactly what the problem might be. Although X-rays are easier to understand, they only provide information on bone and calcium-based deposits. X-rays do not show muscle, cartilage and other muscle-related anatomies. X-rays are often accompanied by a radiologist's report, but these reports rarely, if ever, point out the alignment of the pelvis in association to the spine. The X-ray will show the curvature of the spine, or at the very least, the curvature of the lumbar spine. A radiologist might make reference to some of the discs between the vertebrae showing signs of herniation, or diminishing, but rarely is the cause or the abnormal spinal curvature mentioned. On seeing this unusual angle, the Practitioner knows that the root cause of the problem is muscle-related.

When receiving patient X-rays, it is useful to ask the patient whether they were standing, lying down supine or lying on their side when the X-ray was taken, as this affects the curvature of the spine. If the patient was standing, the real curvature of the spine can be seen. If the patient was lying on their side then this induces a curvature of the spine that would give a false reading. It is also possible to see from an X-ray the space where the cartilage is diminished. The diminished cartilage may not necessarily be due to cartilage deterioration but could be compression of the cartilage due to muscle spasm being present for a long period. Even though information may be available from the X-rays, a detailed examination of the patient is still essential.

Examination protocol

Below is a bulleted summary of the examination protocol. The Practitioner will:

- Assess the patient when they enter the consultation room for an overall impression. Points to note include how the patient greets their Practitioner; their body language, are they happy, robust, worried; suffering from lordosis, kyphosis, stance; their general posture and their attitude (e.g. aggressive, calm or anxious)?
- Perform a holistic examination. Patients should remove as much clothing as is required for the examination, but maintain modesty as appropriate. The initial part of the examination should be conducted as quickly as possible

so the patient is not standing undressed for any longer than is absolutely necessary. Some patients feel self-conscious and very uncomfortable about being in a state of undress, particularly if the Practitioner stands behind them. As soon as the patient is lying on the couch, cover them with a towel(s) and keep any parts not being treated covered up. A patient who feels over-exposed during treatment may worry and not relax their muscles. This could be detrimental to the Practitioner's examination.

- Put the patient at ease by keeping them informed during the examination; for example, what is being observed and noticed during the professional observation. Reassurance is important – care must be taken not to alarm the patient.
- Check the patient's stance, the angles of their feet when standing and their gait as they walk a few steps.
- Determine and analyse the physical reasons why the arthritic condition might exist e.g. scoliosis of the spine, shoulder and pelvic girdle distortions, leg length discrepancy, muscle imbalance, muscle spasm, ligament strains, joint damage or misalignment, cartilage deterioration or herniation.
- Perform a detailed examination of the head, neck, shoulder girdle, spine, limbs, hands and any area where the patient has complained of problems.
- Use passive movements to determine the range of joint movement and active movements to indicate where the problem might be.
- When qualified, consider the use of therapeutic and remedial massage, soft tissue manipulation, ultrasound, cryography, hydrotherapy or any other specialised techniques as appropriate.
- Explain their findings to the patient and determine a treatment and follow-up plan. This will enable an assessment of the patient's progress to be made. Patients need these plans for reassurance that, not only is the Practitioner concerned with their present condition, but that the Practitioner will monitor their progress and will see them on a regular basis. Encouraging and supporting patients is very important.
- Establish the dietary plan, how to take the supplements, the stages of recovery and set realistic goals so the patient is not disappointed if their progress is not as quick as they anticipate. Suggest ways to help the patient overcome bad eating habits.
- Recommend reading, exercises and relaxation techniques.
- Allow the patient to ask questions and ensure that these questions are answered and any points are clarified.
- Record the patient's progress. It is very important to keep accurate records, including details of patient consent for examination and treatment.

Examining a patient with arthritis

A physical examination of a patient with arthritis is very important and must be done thoroughly. To do this, the patient will often need to undress at least partially. This in itself can be a problem for many patients with arthritis, as they may find it difficult to dress and undress because of their condition, especially if it is related to their hands and arms. Nevertheless it is important that you look at them with as little clothing on as possible and get an overall impression in the first instance of their posture in relation to their lordosis, kyphosis, stance and general attitude when they are standing or walking. The Practitioner will already have observed the patient walking into their room and seen exactly what sort of gait the patient has and how they hold themselves.

It is essential that the Practitioner makes notes of all their observations without keeping the patient standing for long periods of time during the examination procedure, as it may make them very uncomfortable. Depending on the location of their arthritis they may also have difficulty standing for long periods of time. Note-taking must be quick and efficient. One option is to use a pictorial note-taking method where marks can be made on a drawing of the general skeleton to indicate where problems or irregularities occur. The Practitioner should be aware of the following:

- Informing and reassuring the patient. It is important that the Practitioner talk to the patient as they are examining them, because patients usually want to know what the Practitioner is doing (especially when standing behind the patient) and what observations are being made. The Practitioner should avoid using clinical detail that may confuse the patient, although a brief description will help to put the patient at ease. The Practitioner should avoid causing their patient to become alarmed by telling them that their irregularity looks worrying. It is better to inform the patient that they may have a slight distortion in a particular area and that it would be helpful to view this from a different angle.
- Examining the patient when they are standing. A general examination requires the patient, in the first instance, to stand with their feet slightly apart. This allows the Practitioner to observe the patient carefully from head to feet, checking their whole framework, as well as the shoulder girdle, pelvic girdle, spine, limbs, hands and feet. Key points to check include:
 1. How the patient holds their head and shoulders.
 2. The alignment of the spine and pelvis.
 3. Whether the patient has a scoliosis.

4. How the patient legs are positioned and the alignment of their feet.
5. The presence of creases in the body fat and whether they are uneven on one side.
6. The specific parts where the patient has complained of pain, discomfort and/or arthritis must be examined more carefully noting any restrictions in movements.
7. Check the general spinal and pelvic alignment. Although the patient may not have complained about problems here, any misalignments can impact on the patient's health and need to be checked.

With a trained eye, the first five observations can be made relatively quickly. The final two points may require a little more time.

Examining the patient on the couch

After examining the patient while standing the Practitioner should ask the patient to lie on the couch in a supine position. The following points should be checked:

- Leg length difference (actual versus apparent)
- Head, neck and shoulder girdle alignment
- Movement of the limbs and the joints, especially in those that might be causing the patient any discomfort.

During this examination, it is better to keep the patient as covered as possible and only to uncover the parts of the body that need to be examined. This will help the patient to avoid any unnecessary embarrassment, as well as keeping them warm and comfortable.

- Observations and palpation. Palpating the patient may be necessary, especially if they have a suspected muscle problem. Palpation will reveal whether these muscles are spasmed, tighter or softer than usual. Palpation is important, but the Practitioner should be careful to avoid causing the patient any unnecessary pain.
- The Practitioner should determine the possible physical reasons for an arthritic condition, such as scoliosis of the spine. The most common causes for scoliosis include shoulder and pelvic distortions and leg length discrepancies.

Muscle spasm, muscle or ligament sprain, joint damage, cartilage deterioration and misalignment of joints are all things that can be part of an arthritic condition. Once the cause of the patient's arthritis has been determined then a treatment programme can be developed.

After the patient's examination

Examining the patient's progress

The Practitioner should give a thorough explanation of exactly how they see the patient's progress with the suggested treatment regime, as well as details of their follow-up plan. This provides the patient with encouragement, hope and a determination to do everything that has been suggested. Allowing the patient to ask questions is equally important, to allay any fears or concerns they have and to ensure that they understand fully their treatment regime.

Nutrition, dietary changes and supplements

Many patients require their dietary changes to be explained to them carefully. This provides them with clarification on why they have to change their diet, why they should not eat some of the things they may have been eating and drinking for years, how the supplements need to be taken and the three stages of recovery. All this needs to be explained to the patient in a way they can understand and follow easily. It is very unlikely that patients will have a perfect nutritional diet – many patients' diets are quite poor. Managing arthritis requires a two-pronged approach. Firstly, improving the patient's diet. Following de Coti-Marsh's guidelines on diet and the use of specific supplements is the first practical step that a patient can take to begin the process of rectifying their arthritic condition. Secondly, it is very important that the patient's muscle problems are recorded as they may be improved by better nutrition. The physical (muscle) problems are treatable before the calcifications that restrict joint movement are cleared. The whole treatment regime is devised to clear the calcifications, but this may take several months or even years. There are, however, things that can be done to relieve muscle spasm before the calcification is corrected. Relieving a muscle spasm helps to realign the body structure and should be performed as soon as possible. Osteopathic manipulation is contraindicated when joints are calcified, because it can cause tremendous damage. Relieving a muscle spasm, however, can occasionally achieve the same result, because the body is always trying to realign itself. If the cause of the distortion is removed, the body will begin to realign itself automatically. Establishing a programme to remove muscle spasm is an important factor in helping the nutritional changes work more effectively. Any relief from nerve impingements that might be affecting internal organs will help metabolism. The nutritional improvements will then help muscle to function more effectively.

Helpful hints to overcome bad habits

Some people have bad postural and/or dietary habits. Providing the patient with tips on how to overcome bad habits is very useful. Supporting the treatment regime is very important in helping patients to overcome their arthritis.

Further reading

The Practitioner may recommend reading for patients if they want to understand further the whole treatment process. de Coti-Marsh's books can be very helpful to patients. The Practitioners should encourage patients with arthritis to clarify the whole regime that they are following and answer the questions that will undoubtedly come with further visits.

Setting realistic goals

Set the patient realistic goals that they can achieve. Some patients may not be able to make all the required changes to their lifestyle overnight. If the patient shows signs of doubt over some of the recommendations, then the Practitioner should set the patient a goal that they can achieve at least parts of. At the next visit the patient should be encouraged to take the next step until they are following the treatment regime properly. As the patient starts to feel better they will be more encouraged to follow their treatment plan.

Relaxation

Relaxation is an important factor in overcoming arthritis. Teaching relaxation techniques is a very important aspect for any patient to help overcome their condition. There are many techniques for overcoming stress and relaxing, such as visualisation. The Practitioner should assess these carefully to determine which would be best for the patient. Visualisation techniques are quite useful in this respect.

Stress

Some people believe that stress can cause muscle problems, but this is unfounded. In reality when a patient is in a stressed or emotional state they become much more aware of their muscle problems. In addition, stress may have an adverse effect on metabolism and food digestion (for example, causing it to shut down) resulting in the malabsorption of foods and possible auto-intoxication.

Exercises

Exercises are often important in helping patients manage their arthritis. A patient may ask what exercise they can do to improve their condition. Some exercises can be counterproductive and dangerous, especially for spasmed muscles. A spasmed muscle is already contracted and will not be relieved by exercise. Any exercise that the patient does should be to improve the movements that are possible, rather than straining the muscle that might be causing problems. Devising exercises for an arthritic patient needs to be done very carefully and should be left until there is a better possibility of movement to avoid any possibility of damaging the joints further.

A female patient presented with a knee problem. The patient had been advised in the past to use an exercise bicycle to overcome the problem. The patient had used the exercise machine for months without any clinical re-evaluation as to whether her condition was improving or deteriorating. The patient approached The Arthritic Association as she was very concerned as to whether she would ever be able to play bowls again. Upon examination, the Practitioner found that the actual problem with the patient's knee only required a simple manipulation of a cruciate ligament. The manipulation corrected the knee problem immediately. The patient was advised to return for a follow-up appointment after two days, where she informed the Practitioner that she was once again able to play bowls. Had the patient been examined properly when the problem first occurred then she would have recovered much more quickly.

Monitoring, reviewing and recording patient progress

Measuring the movement restrictions that the patient had at the beginning of their treatment and monitoring, reviewing and recording patient outcomes should be performed regularly so the patient's progress during treatment can be assessed.

There are various methods that can be used to capture the patient's progress. Patients respond particularly well to improvements captured in a visual manner. Some examples are outlined below:

- Drawing around the outline of a limb on paper at regular intervals
- Taking regular impressions of hands or feet on absorbent paper
- Using photography.

All of these tools can be used to show the differences that have been achieved at the end of each treatment session.

Chapter 5: Drugs and medications

Drugs and medications are often prescribed to patients with arthritis to suppress the symptoms that are associated with their condition (e.g. joint pain). While these medications may make the patient feel more at ease, they do not address the root cause of the problem and may even hinder the treatment programme.

Side effects

Prescribed drugs or medication for conditions other than arthritis and other substances such as 'recreational drugs' may be relevant to the symptoms of arthritis that a patient describes. As a result, the use of such substances should always be taken into consideration. A Practitioner will not advise the patient to stop taking prescribed medications because they are not qualified to comment on this. If, after the patient has started the de Coti-Marsh regime, the condition for which the patient is taking the medication improves then they may decide to stop taking the medication. The decision to stop taking medications has to be made by the patient, who should also inform the doctor that prescribed the medication.

It is quite legitimate for the Practitioner to advise the patient on the side effects of any medications they are taking. Various reference books, such as the book *Medicines* that is published by Parragon, list the side effects associated with most medications. Most patients read the patient information leaflet that is contained within the medication package and are aware of some of the side effects. Pharmacists are also able to provide information on the possible side effects of the different medications. There could, however, be further side effects from drug–drug interactions if the patient is taking more than one medication. In these instances, the side effects may be different from those listed in the patient information leaflet. In addition, the effects of medications vary between different types of people. For example, antiemetic medications that are used to overcome nausea in adults cause Parkinson-like disorders in children, and this level of information may not be available in the patient information leaflet.

The rheumatologists' approach

Rheumatologists predominantly rely on therapeutic interventions for the management of arthritis and may refer their patients to pain clinics rather than seeking solutions in alternative practices. It is well known that many anti-inflammatories cause intestinal bleeding and this is taken into account as a calculated economic factor against the physical risk when these medications are prescribed. Anti-inflammatory drugs do not, however, cure arthritic conditions – they merely suppress the symptoms. New medications are constantly being developed to overcome arthritic conditions and may be used in conjunction with other medicines to overcome drug-related side effects.

In addition, some of the medicines that are prescribed by rheumatologists have such severe side effects that patients are afraid to take them. One particular patient was advised to take methotrexate for their arthritis, but was concerned that, if they did, they would never be able to stop taking it and their condition would deteriorate further. The patient approached The Arthritic Association to look for an alternative way to manage their arthritis. The fear of using medications is another factor that Practitioners should be aware of in patients with arthritis.

Attitude of the medical profession

The medical profession perform an outstanding task by treating so many patients with a wide variation of illnesses and medical complaints. The treatment that patients receive in hospitals is amazing, for example, being able to reattach severed limbs and perform delicate nerve surgery in people who have suffered in road accidents. When it comes to managing patients with arthritis and inflammatory conditions, however, there is much reliance on pain medication, which can obscure the real cause of the patient's problem.

The other factor that affects patients is the doctor's time. Most doctors do not have sufficient time to examine the patient thoroughly and provide a lengthy consultation. Doctors are forced to diagnose patients very quickly on the evidence they have in front of them. The doctor does not have enough time to examine each and every muscle and they may not be aware of what to look for. Suggestions that a muscle problem might be the cause of the patient's complaint are unlikely to be taken into consideration. Using the technical definition of 'arthritis' (where '*arthro*' means joint, and '*itis*' means inflammation) can cover a multitude of conditions. If someone twists their ankle this could,

theoretically, be diagnosed as arthritis even though it had been caused by accident and is likely to clear up within a few weeks/months. Elderly patients that are diagnosed with arthritis can be fearful of the consequences. They may not have arthritis in the true sense but might have strained a limb resulting in pains and symptoms that are similar to arthritis. In such instances, the patient may be prescribed anti-inflammatory medicines to overcome their condition. The short-term use of anti-inflammatory medicines is not a problem, but the side effects of long-term use can be devastating.

Pain clinics

As already mentioned, patients with arthritis may be encouraged to attend pain clinics. Pain clinics typically provide advice on how patients can live with their pain. From a Practitioner's perspective, living with pain is not something that should be encouraged because pain is indicative of a problem. If the problem is not addressed then, over time, it may exacerbate causing further problems and associated pains.

Arthritis Care

Arthritis Care is an organisation that was established to help sufferers of arthritis. Arthritis Care help people to live with their arthritis, rather than curing it, by providing information about practical aids and equipment that will help the patient with their lifestyle, for example, devices to help pick up cups or adaptor handles for plugs for those people with arthritis in their hands. It also provides regular social events for sufferers of arthritis to meet. The organisation provides an excellent service to patients with arthritis, but they do not provide patients with information to overcome the condition.

Arthritis Care is sometimes mistaken for The Arthritic Association, although the two organisations are very different. Practitioners should advise patients on the benefits of both organisations. There may also be other societies that can provide support to sufferers of arthritis.

False hopes regarding cures

Practitioners should never give false hope to patients or promise to cure their condition. As well as being unethical, this may also cause problems from a legal standpoint. The best option is for the Practitioner to explain the treatment

regime to patients and hope that this will eventually lead to their symptoms receding. The symptoms may not recede in all patients, so patients must be made aware that their condition may not change or completely recede, even if they follow their treatment plan precisely. It is important to be fair to patients and realistic about the goals they might achieve, while still encouraging them to pursue the programme because of the likely benefits. This is a fine line for the Practitioner to tread! Having a positive attitude and empowering the patient with a positive attitude is vital.

Chapter 6: Spinal deviation

Vertebrae, discs and the myth of the 'slipped disc'

The spinal vertebrae consist of free moving bones (with the exception of those that are fused along the sacrum) that are controlled by ligaments and muscles and divided by cartilaginous discs with a gelatinous-like nucleus. The vertebral body has a cup shape in which the discs sit. A 'slipped disc' has not moved out of place. In reality a slipped disc is a myth and cannot occur. Various different problems, however, can occur with the vertebra as outlined below:

- A curvature of the spine (either forwards, backwards or sideways) causes the two vertebral bodies to press hard on one side continuously. The pressure can cause the disc to herniate on the opposite or same side, which may interfere with the nerves.
- Vertebral bodies may be too close together if there is a deterioration of a disc.
- The space in between the vertebral discs can become diminished by pressure on the discs and subsequent compression of the discs when muscles are in spasm.

Natural compression of the spine occurs during the daytime while people are going about their daily activities. This can be illustrated further by measuring people in the morning and at the end of the day – people are usually shorter in the evening and taller after lying down for a night's sleep. Other pressures can be put on the vertebral discs simply by the patient being overweight or routinely carrying heavy objects. If this is the only cause of the pressure on the spine, then the discs have time during overnight rest to return to their natural state. If, however, pressure is applied on discs by muscle(s) in a spasmed state pulling joints together, this will only change when the spasmed muscle is released. A muscle can remain in spasm for a long time – weeks, months or even years.

Herniation

Often surgeons who look at magnetic resonance imagery (MRI) scans will see a herniating disc that might be interfering with a nerve. A possible solution may be to operate and remove part of the vertebral disc. From the Practitioner's perspective, the first question should be 'why is the disc herniating?'. In many instances, releasing the spasmed muscle will allow the spine to settle down causing the hernia to diminish.

Shoulder girdle distortions and pelvic girdle distortions

Shoulder girdle distortions are often a direct result of a pelvic girdle distortion. Distortions in the shoulder may affect the pelvic girdle and vice versa. Pelvic girdle distortions are more often the cause of shoulder girdle distortions because the lateral curvature of the spine, which is trying to correct the alignment of the body on a tilted pelvis, will move the shoulder girdle in the opposite direction. This can be seen more easily on an induced scoliosis when standing on one leg deliberately tilts the pelvis. While a temporary state does not cause any harm to the body, if the condition remains for a long time it can cause problems. Pelvic and shoulder girdle distortions may also affect the cervical spine, the sub-occipital muscles and the glands.

Feet, ankles and posture

Part of the piriformis' work is in lateral rotation of the femur. If someone is standing upright with the piriformis in spasm, then one foot will be splayed at a very acute angle in comparison to the other foot. This is the first indication of a piriformis problem on one side. The unnatural angle of the foot affects the angle of the feet when walking and will impact on the person's gait. If the problem remains untreated for a period of long time, it can cause problems with gait and the way the feet and ankles work when walking or running. In such instances, the patient may seek treatment from a chiropodist or podiatrist. A podiatrist may determine a leg length difference and usually recommends that shoe inserts be used to compensate for the difference. If the leg length difference is due to the piriformis being in spasm then the problem will be perpetuated by the use of shoe inserts and not remedied. Inserts may also be used to change the angle of the foot. Again this angle change could be caused by

the piriformis being in spasm. The feet can get into a very bad state if someone permanently walks with such a distortion. Rarely, if ever, do podiatrist's look at the piriformis as a possible cause of a foot problem.

This, in turn, reinforces the importance of a holistic examination – looking at the whole body for the cause of the complaint. Experience of treating patients with foot and ankle problems often reveals a problem with the piriformis that, when corrected, allows the patient to walk normally again. Obviously other muscle imbalances (e.g. in the quadriceps and sartorius) can also affect the feet and the patient's gait.

A knee problem may be caused by the sartorius, which inserts on the medial side of the femur. As with any muscle problem it can result in pain at its insertion points, even though the problem can be in the belly of the muscle. When the sartorius, which laterally rotates the leg, is too tight that can cause problems that appear to be related to the knee.

The gracilis muscle, when in spasm, can cause a hernia or lead someone to believe they have a hernia. A Practitioner may, through releasing a spasm in the gracilis muscle, prevent the patient from needing an operation. When in spasm, the gracilis muscle will pull on the pubis causing it to be pulled down. The abdominals will try and compensate for this movement causing pain in the inguinal area.

The three hamstrings (biceps femoris, semi-tendinosus and semi-membranosus) can cause similar problems. The tibialis anterior may also cause pain in the knee joint. The tibialis anterior inserts on the condyle of the tibia under the knee. In addition, the peroneus longus inserts on the condyle of the fibula under the knee joint. As pain is often directed at the insertion point, it may result in a knee operation. The muscle at its insertion point does not move the knee, however, so the operation could be needless.

Although these problems are not classic symptoms of arthritis, they are often associated with pain and inflammation and may result in a diagnosis of arthritis, especially in elderly patients.

Twisting of the torso

Twisting of the torso can be due to the piriformis, psoas or iliacus muscles. The tilt of the pelvis is usually caused by the piriformis or other muscles in that group being too tight. When a patient bends forward, it will throw one side

of the pelvis up thus twisting the torso. A twisted torso is less visible when the patient is standing upright and the pelvis is level. Problems with the psoas muscles may also be the result of the piriformis muscle being tight.

It is very important to determine a twist of the torso as this can affect everything from walking to working and the posture of the spine. Measuring a twisted torso is possible. Briefly, align the Posterior Sacro Iliac (PSI) points with the heels by putting a piece of wood on the floor against the patient's heels, pushing on to the PSI points with another piece of wood and looking down to compare the two pieces of wood to see whether they are in alignment. It is also important to note whether the patient's knees are 'locked' – if only one knee was locked it would change the result. Someone with a knee problem may stand with one knee slightly out of a locked position.

Folds and creases

During the examination, when the patient is in a normal standing position, if they have sufficient body fat to create folds and creases then check whether these are uneven on one particular side. This can be difficult if the patient is obese. Excess body fat can also make palpating bony prominences difficult or impossible in some people.

Scoliosis

Scoliosis refers to an unnatural lateral curve of the spine. As outlined in Chapter 4, this can be assessed when the patient is standing as upright as possible with their feet a shoulder-width apart. If scoliosis is seen then this usually indicates a muscle imbalance.

Lordosis

Lordosis is a forward curvature of the lumbar spine, which can be affected by the psoas that insert on the lumbar spine. When in a spasmed state, the psoas muscles may flatten the lordosis.

Kyphosis

Kyphosis is a forward curvature of the thoracic spine that affects the cervical spine. Kyphosis can be caused by muscle problems in, for example, the pectoralis or abdominals. Kyphosis can often 'creep up' on people over many

years resulting in a gradual loss their ability to stand upright. If kyphosis is due to prolonged habitual bad posture, then early correction of muscle problems and the teaching of good posture can do much to prevent its progression.

If calcium deposits occur in the vertebral joints then it can be virtually impossible for the person to straighten up. Kyphosis of the spine can also affect internal organs e.g. causing compression of the lungs and oesophagus and preventing them from expanding fully. Other causes of kyphosis include osteoporosis and congenital conditions, such as Cushing's Syndrome involving the classic 'hunchback' posture.

Gait

Gait is affected by all of the above conditions. Watching the patient walk can give a good indication of what a problem is. Whether, for example, a limp is caused by pain or a distortion. Other important observations include whether the roll of the hips is symmetrical and if there is unevenness in the gait. Gait can be measured by equipment for its evenness/unevenness and gait analysis can be shown by camera.

If a patient is walking incorrectly then there is usually a reason for it, which should be determined. While podiatrists may determine the cause to be a joint problem, it is usually a muscle problem that affects the joint. In some instances, other factors such as congenital problems or accidents may also affect the joint.

Muscle pain

Muscle pain is not continuous and the intensity of the pain may vary according to the patient's posture. When sitting down, for example, the pain may not be the same as when the patient is active. If the pain is continuous then this is suggestive of a biomechanical problem.

Problems with the cruciate ligament can cause the knee joint to function incorrectly and cause the patient to be in pain. The joint is distorted and one of the bones is either moved forwards or backwards due to the cruciate ligament tension. Correcting the cruciate ligament involves manipulative procedures. Muscle problems may occur if the patient has fallen over and the muscle did not respond properly, was damaged or was too weak to overcome the strain it was placed under.

Problems with hip joints may cause intermittent pain. In these scenarios the muscle is in spasm and intermittent pain occurs when more strain is put on the muscle. Patients are often referred for hip operations because the pain has become extreme and continuous. The continuous pain is likely to be caused by the nerves that feed the joint area. When joint cartilage has deteriorated or diminished (through continuous pressure and/or compression) the nerves are put under some pressure from the joint. After the spasming muscle has been released, the cartilage becomes revitalised and the pain is reduced. Repaired cartilage has more fibrous tissue and/or synovial fluid than undamaged cartilage. The blood supply to cartilage is limited and, as a result, it may take longer to heal than a damaged muscle.

The whole healing process is geared up for rejuvenation. With proper nutrition the body has the ability to do this. If nutrition is depleted (i.e. where all the necessary nutrients are not consumed) then healing and rejuvenation is slowed down and hindered. This is discussed in further detail in de Coti-Marsh's book 'Prescription for Energy'.

Leg length discrepancies – actual and apparent

Leg length difference may be either actual or apparent, as defined below:

- Actual. This could be the result of, for example, a childhood injury (e.g. an accident that cause the leg to break) or disease (e.g. Ricketts). For those patients with an actual leg length discrepancy, they may require a prosthesis such as a shoe insert to correct it.
- Apparent. This type of leg length discrepancy is often the result of muscle spasms and can be corrected by Practitioners. A tilt in the pelvis, for example, may make one leg appear longer than the other. Apparent leg length differences are not usually visible when the patient is standing. Diagnoses of apparent leg length differences are, therefore, made when the patient is lying down.

A female patient attended The Arthritic Association's London Clinic with one shoe built up with approximately 20 mm of cork layers. In addition the patient needed two sticks when she walked. It was evident that the patient had a problem with her piriformis muscle. At the first appointment, the patient's leg length difference was measured in two ways – firstly, with a tape measure and, secondly, with the patient sitting with her hips and PSIs against the wall. Although these measurements suggested a different leg length the patient also had a lot of tension in her pelvic muscles. The patient attended the clinic every week for approximately one year and in stages the cork layers were removed from her shoe. Work on the patient's hip, pelvis and spinal muscles at every appointment was accompanied by lots of passive movements in the pelvic hip joints. Over time further layers of cork were removed from her shoe until all the cork was gone. Tests at that point indicated no leg length discrepancy. Eventually, the patient was able to walk unaided.

When patients are told by, for example an osteopath or chiropractor, that they have a leg length difference, it may be implied that the situation cannot be changed. If the leg length difference is an apparent difference, then working and relaxing the relevant muscles over a period of time can resolve the problem and the leg length difference will revert back to normal.

When the scoliosis and leg length differences are corrected the so-called arthritis disappears. Often this goes hand-in-hand with a nutritional problem, which concurs with de Coti-Marsh's theories. The Arthritic Association has promoted de Coti-Marsh's nutritional advice as much as possible. Although de Coti-Marsh states that spinal injuries – the first of the three causes of arthritis – play a key role in the development of disease, de Coti-Marsh's theories on the impact of spinal injuries are less well known. Unfortunately, spinal injuries cannot be addressed as part of the home treatment programme, and many patients are often not aware that they have such injuries. Spinal problems can, however, be addressed with remedial massage and manipulation once patients have progressed to a certain stage with their home treatment. Improved nutrition and supplements help patients to feel much better and have more energy. At this stage spinal distortions, such as scoliosis, can then be treated.

Supplemental information

Some Practitioners treat the piriformis muscle with their elbow because they either do not have sufficient strength in their fingers or they are using 'hands-free' techniques to avoid repetitive strain injuries in their hands. Because this technique involves the patient moving their thigh by bringing their knee up towards the shoulder and consequently moving the gluteus medius across to expose the piriformis, this stretches the piriformis. When the piriformis is in spasm, however, it should not to be stretched. The piriformis is less likely to be released from a spasm when it is stretched.

If someone is lying prone, the piriformis is still in spasm but not stretched. When the muscle is worked on, it will relax and return to its normal state. It is far better for the Practitioner to work the piriformis with their thumb as they are able to feel the muscle, which is not possible with an elbow. The piriformis is a deep muscle and, whichever method is used to release the spasm, it may cause some considerable discomfort to the patient. Although the Practitioner is aware that the treatment will hurt the patient, it is the only way to treat the muscle, so the treatment needs to be performed quickly (for example, in no more than six seconds).

Chapter 7: Possible treatment programmes

Philosophy of physiotherapy

When patients visit physiotherapists, the physiotherapist needs to diagnose the patient and provide a treatment plan and prognosis. A key belief of physiotherapists is that the mobilisation of joints, limbs and muscles will help the majority of 'muscle' problems. While keeping mobility is beneficial, exercise can, in fact, be detrimental to many muscle-related problems. In these instances, if the muscle is in spasm, then exercising often puts the muscle under further strain. To address the patient's problem the muscle needs both treatment and rest to recuperate.

Many patients that attend The Arthritic Association's London Clinic have been told previously that exercise will address their muscle problem. People who have a strange gait, for example, may have been advised to walk regularly. In reality, their gait may be the result of a problem with their spine, which will be exacerbated with this type of exercise. There is an apt expression to describe this situation 'you don't cure a cut finger by rubbing it against a brick wall'.

After the patient has been treated by a Practitioner and had a suitable period of recovery then the Practitioner will provide advice on specific exercise that will be beneficial. Walking is a very good activity for people who do not have muscle problems. There are, however, specific exercises that improve muscle strength. The piriformis muscle, for example, can be strengthened with exercise to regain normal function. When the patient no longer has any muscle pain then these strengthening exercises will hopefully prevent the muscle problem from recurring. Exercise needs to be symmetrical. It is a physiological fact that muscles can be developed by exercise. Taking a weight in one hand and regularly exercising with it will help to build up the bicep muscle. Interestingly, comparing the left and right arms of a right-handed tennis player does not reveal a visible difference in the size their arm muscles. Although one side of the body might be slightly stronger, the muscles on both sides of the body will be developed to the same degree. As a result, any exercises that the Practitioner recommends to the patient should be devised to ensure that the muscles on both sides of the body stay symmetrical.

There are, of course, examples where the muscles on both sides of the body may not be developed to the same extent, for example, in patients who have had unilateral strokes or patients with birth defects. In some stroke victims, the stroke damages part of the brain causing paralysis down one side of the body, so it is no longer symmetrical. Damage to nerves or malfunctioning muscles can lead to similar debilitating problems. For many people, they are unaware that the source of their complaint is from a muscle problem and may, therefore, exacerbate their condition by further straining their malfunctioning muscle by undertaking exercise.

Distortion or scoliosis of the spine can be caused by a slight imbalance of muscles that, even if only just detectable upon examination, should be corrected. Muscle problems can cause many problems that would not be considered as related to malfunctioning muscles, for example changes in general character (e.g. being irritable, miserable or depressed). Once the muscle problem is resolved, even if it has not knowingly affected the patient physically, they subsequently feel different psychologically and mentally. Their hormonal balance, limbic system and all the systems used for co-ordination and balance may have been detrimentally affected by muscle problems. Each system of the body is dependent on other systems, the functions of which can be upset by a simple distortion of the spine caused by one muscle being in spasm.

Acupuncture

Acupuncture is based on the insertion of fine needles into the body's energy channels and is frequently used complementary health therapy for the treatment of ailments, as well as for the provision of pain relief. The pain relieving properties of acupuncture are probably safer than conventional therapies, as unlike conventional medicine there are no associated side effects. From the perspective of both remedial masseurs and physiotherapists, acupuncture may not resolve the underlying cause of the patient's condition but, through the provision of pain relief, may make manipulative therapy more bearable.

Kinesiology

Like acupuncture, kinesiology is another complementary health therapy. Kinesiology refers to the study of muscles and movement of the body and is used as a diagnostic technique – muscle reactions to indicate the body's own imbalances and intolerances. Any imbalances that are detected can be addressed

through nutrition or physical therapy. Again, from a remedial masseur's stance, once kinesiology has diagnosed muscle imbalances, the patient should then be referred to a Practitioner for appropriate treatment.

Magnet therapy

Magnet therapy is a complementary health therapy that uses magnets of varying strengths and poles to prevent and treat illnesses and diseases. Magnet therapy is based on the ideology that an imbalance in the body's electromagnetic force is responsible for the development of ailments.

For the remedial massage and manipulative therapist, the use of magnets can relieve muscle spasms in a painless manner. This is of particular benefit in elderly or infirm patients, who may not be able to tolerate the pain associated with releasing muscle spasm. The effect of using magnets to release muscle spasm is not as long lasting as goading the muscle through remedial massage. The use of magnet therapy, however, can be repeated to achieve the same response.

The use of a one-inch magnet to release the piriformis muscle from spasm takes approximately 20 minutes. The magnet must be placed over the belly of the muscle when the patient is lying in the prone position. It is also important that the polarity of the magnet (as indicated on the surface of the magnet by the manufacturer) is correct. The exact position of the magnet can be determined by palpating the muscle and the magnet can be held in place with adhesive tape if required. During the 20 minutes required to release the piriformis muscle, massage work can be carried out on other parts of the body.

Approach of remedial masseurs and manipulative therapists

Remedial masseurs provide the best possible service for sufferers of arthritis. The majority of remedial masseurs are in private practice and diagnose patients for whom they devise treatments. The Practitioners of The Arthritic Association are remedial masseurs and manipulative therapists. A further qualification of manipulative therapy can be attained by taking an advanced course that incorporates other techniques in remedial massage and manipulative therapy. Appropriate qualifications can, for example, be obtained at the Northern Institute of Massage in Bury, Lancashire.

Manipulative therapy is based on osteopathic manipulations, but is used in a slightly different way – it is used in conjunction with remedial massage to ensure that the soft tissue is always worked on prior to performing any manipulations. Contrary to osteopathic procedures, a remedial masseur would never carry out treatments without pretreating the muscles. .

The remedial masseur who is also qualified to perform manipulative therapy is more able to address the problems attributed to arthritic conditions e.g. distortions of the spine and pelvis. The remedial masseur always takes a holistic approach to the patient's problem, particularly in arthritic conditions. If, therefore, the patient has a distortion in the pelvis or spine that might be a contributing factor to the patient's condition, they will ensure that this is dealt with accordingly.

Manipulative therapy should never be used 'cold' but in conjunction with massage to soften all the muscles involved in the joint that is being manipulated.

A patient with an acute problem in a muscle may find it difficult to use their joint. The joint should not be made to move, whether by an active or passive process, until the muscle or group of muscles controlling the joint have been softened (preferably by massage or by heat). By using palpation and massage, the Practitioner can determine the condition of the muscle.

Remedial masseurs and manipulative therapists follow the same patient management guidelines outlined in Chapter 3, which is in keeping with the recommendations of de Coti-Marsh. The treatments provided by Practitioners, however, differ from those used by de Coti-Marsh. If a muscle problem is causing the body to distort, then this is dealt with immediately because it is not forcibly moving a joint that might be calcified. As a result, the remedial masseur can alleviate problems in a patient with arthritis at an earlier stage than treatments used by osteopaths. de Coti-Marsh, an osteopath, stated that no manipulation should be attempted before the end of Stage 2 of the treatment plan – the stage at which calcification should have dispersed in the joints. With remedial massage, distortions caused by muscle problems can be alleviated before Stage 2. The body's natural tendency is to realign itself. If realignment does not happen because the joint is calcified, then it is necessary to wait until the calcification is sufficiently reduced. After calcification has dispersed then manipulative techniques may be used.

Chapter 8: The remedial masseur's approach to the treatment of spasms and muscles

Introduction

Before the Practitioner is able to work on the patient to treat their arthritis, the patient must have started the de Coti-Marsh dietary regime and use of supplements. In addition, at the first consultation the Practitioner will have outlined the proposed treatment plans and provided the patient with the opportunity to ask questions.

Exercise

Usually patients are advised not to undertake any exercise until they have completed their treatment plan. If, however, the patient is already involved in work activities or existing exercise that is detrimental to their recovery then it may be necessary for them to have sufficient time after their treatment to recover. This is not always easy – especially if it relates to the patient's work.

Recovery time

Patients frequently ask about recovery time and want definite answers on how long this will be. Unfortunately, for the majority of cases the Practitioner cannot provide specific answers to these questions. The patient should be advised that their recovery is dependent on many factors, particularly on how thoroughly they follow the Practitioner's advice.

Treatment/follow-up appointments

The patient will want to know when they will have follow-up appointments and when their condition will be reassessed. This information is beneficial because it:

- Makes the patient aware that the Practitioner is concerned about their progress
- Gives the patient a goal to achieve for their next appointment.

Fixing a date for a follow-up appointment is very important. If further treatment is needed because of a spinal/pelvic distortion, which is common in arthritic conditions, then the patient should be advised accordingly. The patient may be concerned about the financial cost of their treatment. The majority of spinal and/or pelvic problems, which are the usual cause of muscle malfunctions, require at least three treatments. While the patient may feel better after fewer treatments, the complaint may not be completely corrected. The need for any further treatments depends on the effectiveness of the first three treatments and how the patient reacts to these sessions.

Example treatment procedures for a spasmed piriformis

The first appointment focuses on releasing the spasm in the piriformis muscle and working on the other muscles that were compensating for the associated distortion. At least two days are required for recovery before the second treatment.

During the second appointment, the muscles that were compensating for the skeletal distortions are worked on again to re-educate them on their normal function.

In the third appointment, approximately one week after the second appointment, the Practitioner will check to ensure that the body is still properly aligned. Again, any muscles that were compensating for the skeletal distortions are worked on again. After a check to ensure that the patient's muscles are functioning normally, the need for further treatments can be assessed and the patient advised accordingly. For the majority of patients, three appointments are sufficient to rectify a scoliosis that is caused by a spasmed piriformis.

Further treatments

If further treatments were needed, or the problem had reverted back to the initial complaint, then it is essential to establish why. Usually the answer is that the patient has not followed the Practitioner's advice. For example, the patient may have caused their muscle to go back into spasm by lifting a heavy object.

It is better to treat the patient in the minimum number of appointments, rather than perform more treatments than necessary. It is not ethical to state in advance that a patient may require, for example, 10 treatments and ask the patient to agree to this.

Monitoring the patient's progress

A monitoring procedure to follow the patient's progress is essential. In the first instance, the patient's progress could be monitored once a month or six-weekly as the first stage of the de Coti-Marsh regime is approximately six weeks. This will ensure that the patient is making good progress and whether they have progressed to the second stage of recovery. Monitoring the patient's progress will also allow the Practitioner to assess the patient's attitude and how they feel about their treatment programme.

Referring the patient

If the patient's condition does not respond to treatment, then there may be an undiagnosed cause beyond the knowledge of the Practitioner. In these instances, the patient should consult their general practitioner to determine if there is an underlying condition that requires medical treatment. Alternatively, it may be clear from the outset that it is not appropriate to treat a patient because of contraindications, and that specialist treatment should be sought. In this scenario, the patient should be advised accordingly.

A male patient had had an intermittent back problem for 40 years. These back problems would come and go – sometimes taking as long as three days to go. An examination revealed that the patient had a severe scoliosis of the spine, his right shoulder was down, there was an apparent leg length difference of 1.5 cm and his piriformis was in spasm. The spasm in his piriformis was released by applying pressure for approximately six seconds. This immediately released the spasm and the leg length difference returned to normal. The patient's quadratus lumborum and levator scapulae muscles were worked as these were extremely tight. The spasming piriformis muscle meant that the whole torso was in a continual state of tension, which explained his recurrent back problem.

Manipulation – when and how

In de Coti-Marsh's book 'Rheumatism and Arthritis – The Conquest' he presents a case study on Laurance Swale, aged 46, who had severe distortions of his spine. de Coti-Marsh suggests that Swale had rheumatoid arthritis, rather than osteoarthritis, even though his spine was calcified. (We were told

arthritis still causes calcium to accumulate where it should not accumulate.) de Coti-Marsh did not carry out manipulative work on this patient for a considerable period of time until Swale had been on the de Coti-Marsh regime for a while, changing his diet and taking supplements. It was not until de Coti-Marsh had performed his manipulations and realigned the patient that Swale got better. de Coti-Marsh described an osteopathic technique for realigning the lumbar, upper thoracic and cervical area – he was not using a great deal of force, rather he was using the technique more as a passive movement. de Coti-Marsh was able to make these movements even though the calcium deposits had not completely dispersed. A key to assessing whether the body is ready for such treatments is through touch.

de Coti-Marsh was not only feeling what he was doing, but he could hear cracks and crunches that were suggestive of calcium deposits breaking up whilst he was moving the patient. It is common with osteopathic techniques for these types of noises to occur. In fact these noises may not be the breakdown of calcium deposits, but may relate to the movement of ligaments or tendons across bone surfaces. de Coti-Marsh knew that big forcible movements could cause damage as he reiterated this message many times. When treating patients with arthritis de Coti-Marsh used the same technique – slow, careful movements. Today, similar lumbar roll techniques are used that rotate the vertebrae on top of one another along the whole length of the spine. It is usual, however, for one or two vertebrae to move only partially – these vertebrae can be felt when the patient is in a rotated situation by running fingers down their spine. Applying a little pressure may help the vertebrae to rotate, but they should never be forced. This technique is very useful for patients who are in the second stage of the de Coti-Marsh regime and taking Decalcine tablets (Hursdrex Ltd).

Muscle problems are usually the primary cause of distortions of the spine and pelvis. When muscle spasms have been released, realignment often occurs immediately, although it may not be complete. After allowing time for the Decalcine tablets (Hursdrex Ltd) to work, this osteopathic manipulative technique can be used to encourage the whole movement of the pelvis, hip joint and vertebrae and it may help the calcium disperse more quickly. The importance of changing the diet and taking supplements is the key for improvements to occur and allow treatment to take place.

As de Coti-Marsh stated, osteopathic manipulations should not be used immediately for patients with arthritic conditions. If muscle spasm is a cause of distortions then these should be treated immediately as there is no valid

reason to delay this. The patient can then go and start their dietary regime, including taking supplements, from Stage I. The use of gentle manipulative techniques to encourage calcified joints to move should be performed later. If the manipulations are done gently, eventually the rotations will occur properly and all the vertebrae will rotate.

It is the same with a calcified hip joint. Osteopathic techniques are available to move the hip joint and, again, these should be performed gently. For further information refer to case history I in Chapter 9. Determining when these treatments can be performed is a decision that has to be made with each patient – there is no set time. If the joint is calcified it must not be forced. All movements should be performed gently, rather than quickly. Manipulation should never be carried out without muscle being warmed and softened prior to the manipulation of the joints.

Contraindications

Osteoporosis

Osteoporosis is not always a contraindication to manipulative therapy, although pressure cannot be applied. Patients with osteoporosis need to be treated with great care. Where possible, the patient's bone density should be checked with a body scan. It is essential to have the results from more than one scan after starting the food regime and taking nutritional supplements to see if the bone density is improving. Usually the patient's bone condition will improve if they follow the regime. If it becomes worse, however, then the cause must be determined. Reasons for decreasing bone density include malabsorption of nutrients or lack of magnesium and/or vitamin D.

Fractures

Using manipulative techniques on patients with fractures is contraindicated. Muscle spasm can occur to protect a fracture and no attempt should be made to release it. Some fractures can still be treated with massage therapy, but only under the guidance of a physician.

Skin problems, eczema and psoriasis

It may not be possible to work on muscles where the patient has extensive skin problems. Psoriasis is not always a contraindication because it may be localised and not in the area that needs to be worked on. In addition, some massage

techniques can be carried out through clothes. If a spasmed muscle needs releasing, this can be felt through clothing and worked on across the muscle fibres. Advice on the nutritional causes of psoriasis and possible treatments can be obtained from The Arthritic Association's nutritionists.

Heart problems or pacemakers

Care must be taken when working on patients with heart problems – especially to avoid any shocks or extreme pain that may cause their heart beat to race. If the patient has a pacemaker then this is a definite contraindication to magnet therapy.

Pregnancy

Pregnancy is not a contraindication to treatment, but the pregnancy may aggravate the patient's condition, for example, a back problem. Postural support (such as the use of pillows) should be used for patient comfort. Any techniques used should also be sensitive to the patient's pregnancy.

Follow-up

If the patient has had treatment then follow-up appointments would be made after about six weeks to check that the problem has not returned. If the patient has not been treated, then a follow-up appointment six weeks after starting stage 1 of the dietary regime can be offered to give guidance about whether they are ready to progress to stage 2. Some patients may need up to 12 weeks before progressing to the second stage of the treatment regime. In these cases, a follow-up appointment after two months is helpful to ensure that the patient stays focussed. Without these follow-up appointments, the patient may lapse into bad habits. There is not a specific time period for follow-up appointments because people take different amounts of time to recover. If, after a year, the patient still has not recovered properly they may need encouragement to continue and assurance that carrying on is likely to make a difference.

Patients are not always going to be able to make all the changes to their diet in one step. In addition, they may have lapses, become upset and feel that they cannot carry on. Meeting with their Practitioner provides patients with the opportunity to express these feelings and get the understanding and support they need. The patient can then go back to the regime with the reassurance they require to start again. It can take a long time for some people to change their habits and lifestyle, especially after years of bad habits and poor diet. Although

not condoned by the Practitioner; people will make mistakes with their diet. In addition, making multiple changes over a short time frame can be a shock for the body. Some patients may feel awful during the detoxification process. Slowly adopting the de Coti-Marsh regime may ensure that it is maintained.

Anticipated changes after treatment

Experience shows that treating for deviations of the spine and pelvis in relation to the arthritic condition results in:

- Changes to the patient's posture.
- A general feeling of well-being. This can be quite startling in some cases – the patient may say they have never felt this well before.

Often patients have lived with the tension from a distorted skeletal frame for a very long time and become so used to it that they are less aware of their condition. When the tension dissipates the patient may suddenly feel great relief or even elated. It usually only takes about three treatments to achieve this. When the patient feels better, they will be more inclined to follow their diet and the regime. After three sessions the spinal/pelvic distortions may have disappeared but the patient may need further treatment to go back to a completely normal condition, especially if there is still some calcification.

The purpose of follow-up treatments is to ensure that ultimately the patient is completely correct in their posture and alignment, although this cannot always be guaranteed. Some people have lived in a distorted state for many years and the resulting structural changes in the body, such as in the torso and bone structure, may have taken place to accommodate these long term distortions. Overcoming these distortions is yet another step that has to be taken and getting these back into perfect alignment is not always possible. The patient, however, is usually in a better condition than they were prior to the treatment.

Occasionally treatments fail completely. Sometimes patients take anti-inflammatory medications or steroids. The Practitioner cannot tell a patient not to take their prescribed medicine. If the patient continues to take the prescribed medications they will always be affected by them regardless of what diet and treatment they undertake. Strong drugs can have strong side effects and many problems that some patients have can be attributed to these medications.

A patient with diabetes followed the de Coti-Marsh dietary regime. Regular blood tests showed that the amount of insulin she required continued to decrease. Although the professionals in charge of her care refused to attribute this effect to the result of a better diet the patient's blood tests were repeated and the result was verified.

What the patient should do in between and after treatments

Activities for patients should be determined on an individual basis according to their personal circumstances. The Arthritic Association has published an exercise booklet in collaboration with the Keep Fit Association entitled 'Moving with arthritis', which provides an overview on some patient activities. Patients are advised to do these activities gently and not to push through any pain barriers.

Massage techniques

Choosing the appropriate type of massage to use on patients is the decision of the Practitioner and will depend on the Practitioner's training and qualifications, as well as what is best for the patient.

Neuromuscular massage therapy (NMT)

Neuromuscular massage can be used to release muscle spasm because it stimulates the nerve(s) that feed the muscle at its insertion points. Briefly, pressure is applied to the insertion points at each end of the muscle. This alerts the nerve, stimulates it and causes it to react. The deep massage, with long strokes through the belly of the muscle is then applied. When muscles are in spasm they are very hard and when goaded by the Practitioner can cause excruciating pain for the patient.

A footballer had badly strained calf muscles (gastrocnemius and soleus) and followed the correct resting and recuperation procedures. The muscles remained in a spasmed state. When the neuromuscular massage technique was used for approximately one minute, the muscle softened immediately – releasing all the tension, as well as the spasm. Although the procedure was painful, the player's muscle was working normally.

Neuromuscular massage is often used for hamstring injuries, which are notoriously common in football and rugby players. While the treatment is very painful, the effect is very quick – often allowing players to return to the pitch in the same week. Neuromuscular massage is not suitable for all patients and should not be used on elderly patients or patients with arthritis or heart conditions.

Physiotherapists use a technique called Proprioceptive Neuromuscular Technique (PNF), which involves a stretch reflex manoeuvre to alleviate muscle spasm. A very similar technique is used by Practitioners to release the piriformis muscle. In these scenarios, the patient is lying prone so the spasmed piriformis is in a position where it would normally be relaxed. Pressure is applied through the gluteal muscle on to the piriformis, then very hard pressure is applied across the piriformis fibres to release them. The effect of this treatment can be dramatic. The piriformis muscle can also be released with the use of magnets (refer to Chapter 7 for further details).

A female patient was in a great deal of pain because of a spasm in her piriformis muscle. When the piriformis was released, the patient felt so fully recovered that she insisted she would go dancing. While it is important to relax after treatments, she would never have thought she would have been so active so quickly.

The effect of muscle spasm can be far reaching and the root cause of the problem should be determined. The patient should be examined using a holistic approach from top to toe. If anomalies (e.g. a scoliosis of the spine) are detected, then the cause of these problems needs to be determined and treated. This cause may actually be the answer to the patient's problem rather than what the patient thought it was. If it is not the answer, then further examination may reveal other anomalies. It is important to remember that the site of the pain is very likely to be in a different place to the origin of the pain. The patient needs to be examined to see if there is a distortion elsewhere that is affecting the site of the pain or the whole body, causing a problem to manifest in the site of the pain. A tip to assess the hips when the patient is standing is for the Practitioner to put their thumbs on the patients PSI points and ask the patient to bend forward. If one thumb rises higher than the other then there is a distortion. This helps determine where the problem is and which muscles may be causing it. Palpation will verify the spasmed muscle so that it can be released.

A bus driver presented with terrible trouble with his arm and shoulder. A scoliosis of the spine and a pelvic tilt was detected. The root cause of the problem was a spasmed piriformis, that when treated allowed the patient to stand correctly and alleviated the shoulder complaints. The shoulder problem had come from the cervical spine, which had distorted because of the pelvis and resulting curvature.

The sub-occipital muscles are in a very vulnerable area, where there are cranial nerves, spinal nerves and the sinus that may affect the pituitary gland. All those muscles in the neck will tighten up if the piriformis is in spasm; it creates a knock-on effect all the way up the body – the pelvis tilts, the spine curves, muscles have to compensate and yet more muscles compensate. Very few people realise the problem is there at all if they have had it for a long time, as the body has gradually adapted to it, or that they have a scoliosis of the spine which they cannot see. Some female patients say that their dresses hang unevenly so had to trim them off on one side, or men say one trouser leg has to be shortened. The patient may only be aware that they have aches and pains or arthritis. They are more aware of an acute problem e.g. if they bend over, their back 'goes' suddenly and they cannot straighten up again.

Curvature of the spine can also be induced by poor sitting posture e.g. dowagers' hump from sitting hunched over a desk causing a forward cervical kyphosis, or scoliosis from habitually carrying heavy weights on one side, hunching up of the same shoulder to repeatedly carry a shoulder bag on one side, or holding a walking stick always on one side.

Rheumatism is an old fashioned word that is hardly ever used now. Rheumatism is the painful disorder of muscles going into a spasmed state. Sometimes muscles tighten of their own volition in reaction to the cold or damp – in susceptible people the cold causes the muscle to contract more than usual. The blood vessels also contract in the cold, so there is less blood, oxygen and nutrients to the muscles. Some people go abroad to warmer climates in winter so their rheumatism or arthritis does not cause them so much bother. Muscles that are warm are more relaxed than muscles that are cold. Other times muscles become tighter because of the tension in the person. The joints then feel uncomfortable because the muscle tension pulls the joints tight. The same happens with the hip joint when the piriformis is in spasm – it is pulling the joint tight together so it becomes painful.

Chapter 9: Proof of the pudding

Case histories – where spinal distortions impact on the arthritic condition

The following case histories are intended to show how spinal distortion is a significant factor in the development of arthritis. Treatment to rectify this distortion helped these patients to overcome their conditions.

Case history I: Miss J

Miss J first attended The Arthritic Association's London Clinic in April 1996. The preceding month the patient had started the de Coti-Marsh dietary regime as she had been in poor health for a considerable time. At the first appointment, the patient arrived on crutches as she was unable to place her right foot on the ground without suffering from excruciating pain. Simply attending the appointment had been a struggle. The patient's condition made her feel very depressed.

Prior to attending the London Clinic, the patient had visited her general practitioner who had referred her to a rheumatologist. She had subsequently been referred to the Horder Centre in East Sussex for her arthritis. At the Horder Centre the patient was diagnosed with:

- Pain in her right hip and leg
- Irritable bowel syndrome
- A benign polyp on her cervix
- Cervical spondylosis
- Asthma, stress and anxiety
- Chronic fatigue (and feeling run down)
- Poor sleeping habits
- Frustration and anger
- Depression.

A detailed examination at the Horder Centre stated that, after examining the patient's right hip, there was restricted movement in the hip, neck and lumbar region. The hip joint had limited range with virtually no rotation, abduction or adduction. Although there was no visible muscle wasting, the patient had a lack of muscle strength. X-rays showed that there was no cartilage remaining in her right hip and it appeared that bone was rubbing on bone. The left hip,

however, showed a normal cartilage space. The Department of Rheumatology in a London hospital had also commented on the X-rays and declared that in absence of cartilage on the right hand side of the hip the patient would require hip replacement surgery.

Miss J also had osteoporosis and had been informed at the Department of Rheumatology in London that there was currently no specific measure that would slow down the progress of osteoarthritis. The patient was recommended for hospital-based physiotherapy and exercise. The patient was prescribed pain-relief medication, taking care to avoid any medications that would accelerate deterioration of the joint. The safest medication at that time was Arthrotec (Pharmacia Ltd, Sandwich, Kent). It was understandable, therefore, that with such a diagnosis that the patient would feel depressed.

The primary reason for the patient attending the London Clinic was to avoid having hip replacement surgery. Although the patient was approximately 50 years of age, she felt she was too young to have a hip replacement and that it would need replacing again too soon. Furthermore, she was determined not to let osteoarthritis overcome her.

Having started the de Coti-Marsh regime a month earlier, the patient's diet could not be faulted. The patient had also added many other supplements to her diet that she believed would help overcome her osteoporosis and, hopefully, improve the joint of her right hip. The supplements included calcium ascorbate, vitamin E, Devil's Claw, vitamin B, vitamin D (due to lack of exposure to sunlight) and various other mineral supplements. It was clear that the patient had extensively studied the nutritional aspects of her condition. It was, therefore, important to determine what other causes that might be relevant to the patient's condition.

Diagnosis

The first examination was difficult because the patient found it extremely difficult to move from the chair to the couch – a distance of approximately one metre – without the use of her crutches. Although not ideal, the majority of the initial examination had to be performed with her lying on the couch, because standing was too difficult. Confirming the diagnosis of the Horder Centre, the Practitioner identified:

- A severely restricted movement range in the right hip.
- Restricted movement in the lumbar and cervical areas of her spine.
- A marked scoliosis of her spine.

- A severe tilt to the pelvis.
- A leg length difference of approximately 3 cm.
- A twist of her torso.

There was no evidence to suggest that the leg length difference was actual as the patient had not suffered from any severe illnesses or had any fractures when young that may have interfered with leg length. She had also followed a career as a ballet dancer, which would indicate that at least at this time there was no leg length difference.

Questions relating to possible causes of these distortions revealed that the patient had had a motorcycle accident several years before and was treated in hospital for neck injuries. She had to wear a neck collar for some considerable time and had some physiotherapy treatment.

Treatment

The patient was suffering from extreme distortion and treatment was essential. She had distinct signs of muscle spasm both in her hip area and various other muscles in her back. The course of the patient's treatment was determined, requiring her to visit the clinic on a weekly basis to overcome her severe distortions. Treatment commenced on the clearly visible muscle spasms. The patient received the following treatments:

- Release of the muscle spasms in the hip area, paying particular attention to the piriformis (a major cause of the patient's condition).
- Release of the gluteal muscles, quadratus lumborum, iliocostalis, multifundus and many other muscles in the neck and shoulder area. The patient had also complained of shoulder pains, which may have been due to the prolonged use of crutches (the top of the crutch being under her arm at the shoulder).
- Passive movements of her right hip were extremely difficult, due to the restriction and the pain that any attempt caused. It was also clear that the sacro-iliac joint had been displaced to some extent causing the twist and tilt of pelvis. Many of the vertebral joints, especially in the lumbar area, were also restricted in rotational movement. There are many manipulative techniques that can be used to overcome these joint problems after muscle spasm has been released. In this case, however, the presence of osteoporosis was a consideration that would prevent a normal approach.

At the end of each session the patient's progress was reviewed. By April 1997 (approximately one year after treatment started) the patient's improvement

was evident even though she was still unable to walk without crutches and the pain remained. The patient still had a leg length difference although it had reduced to approximately 1 cm. Treatment also reduced the scoliosis of the spine. It was clear that additional treatments would provide further improvements. The patient's determination to avoid hip replacement surgery made her very willing to continue with the de Coti-Marsh dietary regime, as well as the remedial massage.

The essence of the patient's treatment was to eliminate as many joint problems as possible. Various manipulative techniques were employed including one that assisted the rotational movement of the spinal column. It became evident that there was no calcification of vertebral joints because, eventually, the joints could be moved freely by rotating the shoulder girdle beyond right angles to the pelvic girdle in both directions.

Releasing the sacro-iliac joint was a bigger problem because the usual manipulative technique for moving this joint requires a thrust in the process, which is contraindicated in patients with osteoporosis because of the high risk of fracture. The leverage required in this process puts pressure on the femur and the pelvis. In patients with osteoporosis only very gentle pressure can be applied. Rotational movements of the hip joint were beginning to improve, although movement remained painful for the patient – the crepitus could be felt and heard during every movement. The rotation of the joint was improving with a greater range being achieved over time.

A key part of the treatment strategy was to try to create space within the hip joint to allow, if possible, something to take the place of the cartilage that seemed to have deteriorated. Various traction techniques were used to do this. The traction was held for as long a period of time as was comfortable for both the patient and Practitioner – approximately 1–2 minutes. The traction proved very effective and a method was devised for the patient to continue such treatments at home. The pulley system required a ceiling hook to be mounted, which the patient arranged, and for her to lie on a table under this hook with the pulley system cradling her calf under her knee. This allowed the patient to pull the system to create a traction similar to that which was applied at the clinic.

The patient continued to attend weekly sessions as often as possible. In July 1998 the patient's leg length difference had been corrected. There were smoother rotational movements of the femur at her right hip, the power of her muscle

groups in the pelvic area was improving and the twist of her torso had virtually disappeared. She was, however, still using crutches and declared that she could not walk on her right leg.

Throughout this time she had continued to follow de Coti-Marsh's dietary guidance religiously and took the required supplements, as well as her additional supplements and mineral complexes. Her determination remained steadfast. The patient's last appointment was in September 1999. She left the London Clinic still using her crutches, but without the distortions of her pelvis and spine that she had two years previously. Ideally, another X-ray would have verified the patient's treatment. The patient, however, was concerned about radiation damage from the X-ray and declined to have one.

In May 2003 Miss J came into the London Clinic once again, but this time without the use of her crutches and with a confident walk. She asked the Practitioner whether he thought that she had had a hip replacement to which the Practitioner admitted that he had considered this. The patient proudly announced that she had not had hip replacement surgery, but through following the de Coti-Marsh regime and continuing with the exercises she was able to walk approximately one mile without any pain.

This is a story of a remarkable recovery. Great credit must be given to the determination and dedication of the patient to achieve what she set out to do. Much credit must also be given to the late de Coti-Marsh for his pioneering work in devising this whole regime that allowed Miss J the means to make this recovery.

“An outstanding fact is that, unless fully qualified osteopaths are employed in hospitals, arthritic patients will still, for many years to come, be advised to buy themselves wheelchairs.”

Charles de Coti-Marsh

Case history 2: Mr E

Mr E attended the London Clinic for the first time in February 1998. The patient was approximately 20 years of age and weighed just 9 stone 10 lbs even though he was 5'11" tall. Mr E presented with swollen feet and hands. The swelling increased in the patient's limbs after walking, which affected his ability to find employment. The patient was worried because he had been told by the rheumatologist, who had been treating him for over a year with a variety of anti-inflammatory drugs that had not curtailed his rheumatoid arthritis, that

he was going to be given a new powerful drug called methotrexate and that without these medications he could be wheelchair-bound within 5 years. Mr E had also been seeing an eminent naturopath, in Harley Street, London, who confirmed that he had ankylosing spondylitis, as well as arthritis. The patient was determined not to take methotrexate and he, with the support of his mother, would seek an alternative way of managing his condition.

Before the examination, it was evident that much of the patient's problem was with his feet. The patient had special shoes made for him because his feet were so swollen, particularly his left foot. He also had swollen hands and declared that his thumbs were particularly painful. Past X-rays of his feet revealed calcification of the metatarsal joints. The patient had already started to follow the de Coti-Marsh dietary regime but had to be advised to eat more raw food and more fruit. Additional dietary supplements, including zinc and selenium, were also recommended.

Diagnosis

After an extensive examination, it was evident that the patient had a scoliosis of the spine, a leg length difference of more than one centimetre and a twist of his torso.

A course of treatment was outlined to correct these faults. Treatment was started after approximately one month when it was possible for him to attend three times in a pattern that best suited his treatment – two treatments at two days apart and a further treatment one week later. Prior to the given date for the first appointment for treatment, the patient informed the Practitioner that he could not attend the appointment because his feet had significantly swollen and he could no longer wear his special shoes. The patient was encouraged to continue following the diet, eating more raw food and to try hot and cold treatment on his feet to help reduce the swelling. Another appointment was arranged. By the time of the second appointment, the swelling in the patient's feet had reduced and he was able to wear his special shoes. It was evident his new diet and supplements were beginning to have a positive effect.

Treatment

Treatment to correct the patient's spinal deviation and pelvic tilt was performed. This involved:

- Releasing the spasm from the piriformis muscle
- Reducing the spasm in quadratus lumborum and erector spinae muscles
- Working on his shoulders and neck, particularly the suboccipital muscles.

The treatment corrected the pelvic tilt and removed the leg length difference. On the subsequent visit the patient's leg length remained correct (no notable difference) and his scoliosis was considerably reduced. All the muscle groups involved in compensating for the scoliosis (i.e. back, neck, shoulders and pelvic area) were then treated. On his third visit, one week later, the scoliosis and pelvic tilt were completely reduced. The patient reported feeling less pain and his feet had improved to the point where he could wear normal shoes. The patient was encouraged to return in one month. In the interim period, the patient was advised to continue the de Coti-Marsh dietary regime as strictly as possible. He was also given exercises to improve his posture and regain mobility.

Follow-up

Unexpectedly in October 1998 Mr E made an appointment to see his Practitioner as he had fractured his hand. The patient's arthritis had flared up again, both in his hands and feet. It turned out that the patient had been very depressed and angry at having this condition at such a young age and being unable to seek employment. In his frustration he had punched a wall, breaking his hand in two places. This caused his arthritic condition to flare up again. An examination revealed that his spine and pelvis remained in good order, but clearly there was tension in his body generally. The Practitioner massaged all his gluteal muscles, back muscles, neck, shoulders, arms and hands. Again, the patient was encouraged to continue with the diet and supplements and to take as much exercise as possible without causing himself greater pain. Another appointment was made for approximately two months' time (December 1998). At this appointment the patient presented with neck pain and stiffness. His feet had shown more signs of improvement, less pain and less swelling with more movement possible. The patient remained in a tense state, which was possibly caused by his frustration. Examination showed that his spinal alignment and leg length had deteriorated since his last visit. The patient was treated to improve the piriformis muscle, quadratus lumborum and all the muscles in the back, neck and shoulders. In addition, the patient was recommended to:

- Apply hot and cold treatment for his feet at least twice a week.
- Engage in activity every day to raise his heart rate, including upper body exercises and some gentle cycling.

The patient was also shown some deep breathing exercises.

Mr E next attended the Clinic in February 1999. His diet was very good, he had been exercising with weights, swimming regularly and walking. His feet

were less swollen. His whole posture and gait were looking more normal. He complained of some pain, when walking, which came and went. His spinal alignment was checked and found to be in good order, with no treatment required. Additional dietary supplements, including selenium ACE and magnesium, were recommended.

In April 1999, after approximately two months, the patient returned to the Clinic for a follow-up appointment. He reported that he had been making great progress and had been feeling well until a week before the appointment, when pains had returned to his right leg and were more troublesome at night. The patient's left foot was beginning to swell once again. The patient found this alarming because he had continued with the dietary regime, as well as taking supplements. Further examination revealed that his spine and pelvis were severely misaligned. While determining the cause of the misalignment, it became apparent that the patient had been going to the gymnasium and working on machines that may have strained his back. The piriformis muscle on his left side had returned to a spasmed state. This muscle was treated and released immediately and all the compensating muscles in his back, neck and shoulder areas were worked on. The patient was advised not to use the gym for exercise for three weeks and then to return to exercises slowly and carefully. The dangers of some of the machines he was using were also highlighted. A follow-up appointment was scheduled for May 1999.

At this appointment the patient informed the Practitioner that he had now obtained employment – the first employment since his problems began. The patient was worried about not fitting in with his new environment. Worry and anxiety appeared to be contributory factors in his condition. An examination showed that the patient was properly aligned, but with great tension in all muscle groups. The patient received treatment to ease his tension and was advised to take St John's Wort as an additional supplement because of its properties with helping depression. The patient admitted that he had recently lapsed on diet and supplements, but announced that he would make a renewed effort.

After a further two months, in July 1999, the patient attended the clinic for a follow-up visit. He had no symptoms other than periodic pains in his left foot. The patient had started his job and felt comfortable and accepted and had made friends with many of his work colleagues. He was exercising, swimming, walking and feeling in better health. The alignment of spine and pelvis were in good order. His hands were almost normal, with only a slight swelling in the

second finger of one hand. No other appointments were scheduled, although the patient was able to return to the clinic as and when required.

In February 2000 the patient returned to the clinic. His work involved lifting boxes, which he found difficult. His arthritis had returned to both in his feet and hands. His diet had lapsed considerably. The patient explained that some foods available in the works' canteen were not compatible with the de Coti-Marsh diet. He had also lapsed in taking his supplements. On examination, the patient was found to have scoliosis of the spine and a tilted pelvis – that was presumably induced by his lifting activities. The patient was treated immediately for his spasmed piriformis muscle and all other muscle groups were worked as necessary, including the calf of his right leg. A follow-up appointment was scheduled for two days' time. At this appointment, the patient's alignment was checked and all muscle groups involved in the scoliosis were massaged. The patient was advised to go back to Stage I of the de Coti-Marsh dietary regime and follow the whole procedure again. A follow-up appointment was scheduled after approximately two months.

By April 2000 the patient was in better health and following his normal activities and work. As a result of his past experience, he decided to attend the clinic on a regular basis to keep a check on his spinal and pelvic alignment. The patient's final appointment was in May 2002, when he had distorted himself severely again at work by lifting. His place of work directed him to have a medical check. A doctor had told him to take sulfasalazine and methotrexate. The patient was worried about this advice and did not take that medication but reverted to the de Coti-Marsh regime. Once again the patient was treated for his distortion allowing him to regain normal function and continue his work.

“There would have been no recovery possible for these patients if physical medicine, by this I mean specialised manipulative surgery for arthritic purposes, had not been employed.”

Charles de Coti-Marsh

Case history 3: Mrs P

Mrs P presented with an arthritic problem in her right knee and, although she had worked in the medical profession, she turned to alternative therapies to manage her symptoms. Her past medical history revealed that she had a slipped disc in 1972 for which she had been treated at the hospital where she worked.

At her first visit to the London Clinic, the patient had started the de Coti-Marsh dietary regime, including taking the supplements as specified. She was advised, however, to eat more fruit and raw food.

Diagnosis

The patient's right knee was the cause of her condition. An examination revealed that the patient had a pelvic tilt and scoliosis of the spine. The patient's right knee was extremely stiff and had a limited movement range. In addition, the patient had a valgus, which was measured to ensure that the treatments reduced its size.

Treatment

A series of treatments were devised for the patient. The first task was to work on her lower back and pelvis to reduce spasm in muscle groups involved in realignment. All the muscle groups that crossed the knee of her right leg were also worked on using passive movements of the knee joint to try and regain the normal range of movement. After approximately one month, the patient had completed five treatments resulting in almost complete reduction of the scoliosis and pelvic tilt. Her knee had also regained a considerable movement range. An additional supplement, which included a mineral complex and magnesium, were recommended to help muscle function.

The patient had had considerable spasm in the vastus muscle of the right leg, particularly on the medial side. In addition, many of the hamstrings had shown signs of spasm. After reduction of these spasms the valgus began to reduce in size.

After a further three months, the patient had achieved a near normal range of movement in the right knee. Strengthening exercises were recommended, therefore, for the quadriceps and hamstrings. The calcification that was evident in the early stages of the patient's treatment had now reduced considerably. The patient was at Stage 2 of the de Coti-Marsh dietary regime, taking a Decalcine tablet (Hursdrex Ltd) every other day. Deep frictional massage of the knee joint had, no doubt, stimulated the blood supply to enhance the dispersal of the calcium deposits.

In May 1996, after approximately five months, the patient reported that she had been attending the local leisure centre for exercises and had joined an aqua-aerobics group and that she was very pleased with the results of her efforts. The patient attended the clinic every two months for work on her

quadriceps, hamstrings, gastrocnemius, gracilis and tensor fascia lata. During these appointments the patient's back and pelvic area were massaged to keep her body aligned.

In August 1996 the patient's muscle tone was very good in the right leg, but she continued to experience periodic pain in her knee joint. The valgus remained but was considerably reduced. The nature of the pains in the knee suggested that they may have been caused by meniscus floating because the pains were so intermediate. It was recommended that the patient visit her doctor to be referred to an orthopaedic surgeon to confirm the diagnosis and possibly have part of the meniscus removed. The patient was very reluctant to do this. Further investigation on the source of the patient's pain revealed that it was caused by the insertion point of the tibialis anterior on the condyle of the tibia. Subsequent work on that muscle released the tension and the pains subsided completely. Mrs P was able to continue her exercise regime at the leisure centre without pain and, although her right knee did not function perfectly and the valgus remained a slight problem, she was satisfied with the results.

Case histories – where remedial massage has had an immediate effect

The following case histories are examples of where the effect of treatment has been so fast that any change in diet (including the use of supplements) had not had time to affect the condition and was, therefore, unlikely to affect the patient's recovery.

Case history 4: Mr B

Mr B, a man in his late sixties, presented with arthritis in his right arm. His past history revealed that, for most of his life, he had been a bus driver. Although he had retired from bus-driving full time approximately two years before he attended the clinic, he felt very fortunate to have to have found part-time employment driving disabled children to school. Mr B relished his job and was in a state of despair because his arthritis meant that he had lost sufficient power in his arm to turn the steering wheel and, as a result, was unable to operate the minibus. After visiting his general practitioner, he was prescribed an anti-inflammatory medication but was still unable to continue driving. Mr B then sought help from The Arthritic Association.

Diagnosis

At the first appointment, the Practitioner advocated the de Coti-Marsh dietary regime and tried to establish the cause of the condition. An examination of the arm, shoulder and hands revealed no underlying problems. Examining the patient from head-to-toe revealed a tilted pelvis, scoliosis of the spine and a leg length difference of at least 1.5 centimetres. It became evident that the pelvis and spine were causing the problems in the patient's arm.

Treatment

The piriformis muscle on the right hand side was in spasm. By goading the muscle (for approximately six seconds) the muscle spasm released causing an automatic correction of the leg length difference. Any muscle that was hard to the touch and/or in spasm was subsequently worked, including the quadratus lumborum, the erector spinae group (as well as the iliocostalis) and the gluteus medius on the left hand side, the rhomboids and the levator scapulae and other muscles in the neck area.

As agreed, two days after treatment the patient returned for follow-up treatment. In the time between appointments the patient had agreed not to drive the bus. At the follow-up appointment the spine and pelvis were in good order, there was no leg length difference and the scoliosis of the spine had not returned. At this appointment the muscles in the neck area were worked.

The patient was scheduled for a third appointment one week later. It was recommended that, in between appointments, the patient refrain from driving even though he was anxious to return to work. The Practitioner recommended various activities the patient could do to prevent the piriformis returning to a state of spasm. The patient almost cancelled the third appointment because the arthritis had disappeared from his arm and he felt in good health. When examined, it showed that that the patient's spine and pelvis were in good order. All the previously affected muscles were reworked and found to be in good order. It was also important to determine what activities had caused this condition in the initial instance for the patient to avoid a future recurrence. With further questioning the patient explained that he had to push the wheelchair-bound school children up on a ramp to get them on to the bus, which was the likely cause of the patient's condition. The patient agreed, therefore, to take an escort on the bus to help with the children.

The dietary regime and use of supplements, as outlined by de Coti-Marsh, are usually advocated for the management of arthritis. In this particular case

history, however, the modified diet would not have played a key role in the patient's recovery as his condition was the direct result of a spinal and pelvic distortion.

Case history 5: Mr R

Mr R, an office worker of almost 60 years of age, attended the London Clinic explaining that for the past 4 years he had not been able to move his head from right to left or up and down. The only way the patient could look from right to left was to turn his whole shoulder girdle as his head and neck area was as stiff as a board. The patient's general practitioner had tried a number of different remedies including prescribing anti-inflammatories, physiotherapy of various sorts at the hospital and in private practice and referral to an osteopath. During this time, the patient had tried visiting chiropractors and massage therapists. After approximately four years his general practitioner had determined that the problem was arthritis. The patient sought help from The Arthritic Association and was referred to the London Clinic.

Diagnosis

During the patient's first appointment, the Practitioner took a case history, advocated the de Coti-Marsh dietary regime and use of supplements and performed a physical examination. Although the patient had been seeking help for the previous four years nobody had previously asked him to remove any clothing to perform a detailed back, shoulder and pelvic examination. The examination revealed that the patient had scoliosis of the spine, a pelvic tilt and a significant leg length difference.

Treatment

Collecting information about the patient during the first visit can be time-consuming and in this case left very little time for treatment. Before the end of the appointment, the Practitioner released the piriformis muscle. Amazingly, the release of this single muscle meant that the patient was able to move his head, both up and down and from side to side. The patient returned for follow-up treatment two days later for the Practitioner to work on the muscle groups that had been compensating for the spasmed piriformis muscle.

Case history 6: Mrs K

Mrs K, a woman of almost 50 years of age, had been diagnosed by her general practitioner with arthritis in her hands. During the patient's first appointment at the London Clinic her hands had the appearance of those from a more elderly patient and her fingers were gnarled and curled and she was unable to straighten them. The patient's hands, and in particular her fingers, were not very dextrous and she was in a great deal of pain. The patient found it very difficult to use her hands (for example, to hold a cup of tea) and had been prescribed anti-inflammatory medication, which she had been taking for a long time even though it did not ease her pain.

Diagnosis

An examination of the patient's hands confirmed the diagnosis of arthritis. Applying passive movements to the patient's hands allowed the Practitioner to straighten her fingers, although the patient was unable to do this herself as she had no power in her hands. The patient's diet, which had been very healthy, was reviewed and she was introduced to the de Coti-Marsh regime. A complete body examination revealed that the patient had scoliosis of the spine, a pelvic tilt and a leg length difference. Palpation revealed that various muscles, including the piriformis, quadratus lumborum, erector spinae and various muscles in her neck, were in spasm and that she had a slight distortion in her shoulder girdle. These classic symptoms are often the result of the piriformis muscle being in spasm.

Determining what had caused the muscle spasm was more difficult. The patient lived alone and performed numerous tasks that involved lifting and pulling – any of which could have put the piriformis muscle in spasm.

Treatment

The following treatment plan was devised:

- The aim of the first treatment was to relieve the piriformis muscle and start the recovery of the other muscle groups.
- The second treatment, two days later, was to follow-up on this treatment and stabilise the treated muscles.
- The third treatment, one week later, was to ensure that the body was aligned, no muscles were in spasm and subsequently do further massages to re-educate all muscle groups. If required, manipulative work could be performed to ensure that the spine and all the vertebral discs were moving correctly.

During the second treatment, the patient showed the Practitioner that her fingers were now straight and that she had the power in her fingers to hold things. There was no evidence of the curved, gnarled hands that she had had at her first visit. This effect was a direct result of realigning her pelvis and spine. The treatment programme and dietary regime continued even though the first two days of treatments had eliminated virtually all of her symptoms.

The patient returned to the London Clinic about one year later with the same symptoms – curled, gnarled hands. It was important that this stage to establish the activities that had caused the symptoms to recur. The patient explained that she had been shovelling snow from the rear door of her house. As expected, the examination revealed that the patient's pelvis was tilted and that she had a scoliosis of the spine. Palpation revealed that the piriformis muscle was, once again, in spasm. Repeating the same treatment procedure as before returned the patients hands to normal in a very short time. To prevent this from happening again, the patient was advised on how the problem could be averted, the type of exercises that would improve the strength of the piriformis muscle once it has been treated and had time to recover and the types of activities that might aggravate the piriformis, as well as how to avoid them.

Chapter 10: Research

Nutrition and supplements

It is often argued that if you have good nutrition then you do not need supplements. That may or may not be true. Even if it does appear to be true, the foods that the body requires to obtain all the relevant vitamins and minerals would have to be grown in the perfect environment. These good foods are not easy to find. Organically grown foods are considered to be the best foods, but can lack minerals if they are grown in a mineral-deficient soil. If the mineral is not present in the soil, then the plant cannot acquire it nor the body absorb it.

The most balanced, healthy diets are still likely to be deficient in certain minerals. Supplements are, therefore, an essential part of the diet. The extent to which supplements are required, however, is difficult to determine because it is impossible to know where or how things are grown and because the requirements for each individual is different. Supplements are worth taking, but care must be taken to avoid overdosing on minerals that could then become toxic. A good example of this is vitamin D, a fat-soluble vitamin. As well as ingesting vitamin D, the body can also create this vitamin when exposed to sunlight. It is possible to store sufficient vitamin D in the body over the summer months to last over the winter months. Too much vitamin D is toxic to the body. Fat-soluble vitamins are more likely to accumulate in the body because they are stored in the fat cells.

Not all vitamins are toxic when taken in excess. Water-soluble vitamins, such as vitamin C, are not stored in the body, rather they are excreted when in excess. In the case of vitamin C, for example, the body will produce diarrhoea to rid itself of the excess vitamin.

If the body is deficient in certain vitamins or minerals it is important to know when best to take them. Many nutrients work in tandem with other nutrients and, as such, are best taken with food to ensure proper absorption. This also supports the texts by de Coti-Marsh, which discuss the synergy of vitamins and minerals. A good example of this is the Energy Plus compound (Hursdrex Ltd) that de Coti-Marsh created. The main ingredient of this supplement is vitamin E, which is combined with approximately 90 other minerals that are required by the vitamin E to provide maximum benefit to the body.

There are also various vitamins and minerals that the body is unable to absorb at the same time, or are absorbed in different areas of the digestive tract. Some nutrients are antagonistic to each other and, interestingly, a particular food type may contain both supplements. Finally, taking some supplements may cause an imbalance of nutrients.

There are significant differences in taking supplements that, for example, contain potassium and ingesting potassium-rich foods. The prime difference is the body's ability to absorb the required supplement – in this case the potassium. Another factor that impacts on the body's ability to absorb nutrients is whether they are natural or synthetic. Essentially, the body will absorb the required nutrients from foods. Taking supplements unnecessarily may cause the body to overdose and for substances to reach toxic levels.

de Coti-March devised a compound called 'K Compound' (Hursdrex Ltd), which has many more properties than just supplying potassium. The K Compound helps the body absorb the potassium that it usually rejects, as well as providing potassium in the correct atomic structure to harmonise with the body.

Prior to taking supplements, the benefits and roles of supplements should be explained to patients, as well as details of what each supplement contains. By adopting a holistic approach, de Coti-March clearly outlined why each recommended supplement is important for patients with arthritis. Research is currently being conducted into the dietary supplements recommended by de Coti-March to gain a better understanding of their effects. Overall, however, de Coti-March advocated an increased potassium uptake, a varied diet, avoiding foods that contribute to calcium deposition and eating foods that provide additional energy.

How muscular distortions affect metabolism

Muscular distortions can affect the body in numerous ways, including impacting on the endocrine system, the production of hormones and the process of absorption (where ingested minerals are used as catalysts for enzymes involved in various biochemical processes). The circulating blood supply is key to many of these processes, absorbing nutrients from digested food and delivering them to specific parts of the body. In certain circumstances, when the blood is supplying nutrients to the functioning muscles this may interfere with the absorption of

nutrients. After eating a big meal the body feels tired – this is a message from the body stating that rest is needed to allow proper digestion and absorption of nutrients. Any strenuous exercise after eating will, therefore, interfere with this process because the body will ensure that the energy reserves are directed to the muscles and will shut down the digestive system.

It is important, particularly for people with arthritis, to eat in a calm and relaxed situation, rather than when stressed, to ensure that all the required nutrients are absorbed. When the body is stressed, anxious or worried, it produces adrenaline in preparation for 'fight' or 'flight' and the ability to digest and absorb food is reduced. The whole process of eating is almost as important as what is being eaten.

When ingesting food it is important to 'eat your drink and drink your eat' meaning that food should be chewed until it is almost drinkable and drinks should be chewed before they are swallowed to ensure that they are well mixed with the body's salivary enzymes.

Distortions of the body can also affect the metabolism in the following ways:

- Interfering with the nerves. Spinal distortions in particular can interfere with all the spinal nerves. These spinal nerves feed various digestive organs including the pancreas, liver, stomach and intestines. Any pressure on or interference with these nerves may affect the function of these organs, their blood supply and subsequently metabolism.
- Inducing stress. Distortions of the body often leave people in a painful and uncomfortable situation causing them to become stressed. Stress itself is an important factor that impacts on the metabolism.

The simple fact of eating a balanced diet with more nutritious foods is not sufficient to overcome the arthritic condition. Other factors that affect the metabolism need to be taken into account and have to be rectified as part of the process to overcome arthritis. Nutritional defects and skeletal distortions can cause a vicious cycle leading to arthritis.

Cartilage – degradation

As already mentioned, pressure can diminish joint cartilage. Nutritional deficiency is also a big factor in cartilage deterioration. Put these two

compounding factors together and cartilage deterioration can become rapid. It is impossible to state that in patients who have good nutritional intake but extensive cartilage deterioration the cause is almost entirely due to pressure on the joint and cartilage caused by muscle malfunction. There are very few people whose nutrition is so good that their cartilage is in perfect condition, especially with older patients. With age, eating habits may change quite considerably and the ability to absorb some nutrients may become impaired.

Hip replacements – and why many operations may not be necessary

Working with patients has shown that preventing hip replacement surgery is possible by relieving the patient's muscle problems, their distortions and trying to take the pressure off the joint to allow the cartilage to reform. In these cases, good nutrition and absorption of nutrients is essential. If the cartilage has already deteriorated, then good nutrition is essential to rebuild it.

Many people have started taking the supplement glucosamine sulphate. Although not researched by The Arthritic Association, Hursdrex Ltd are now producing glucosamine hydrochloride, which is thought to be more effective and more readily absorbed. Prior to taking supplements, such as glucosamine hydrochloride, it is essential that the patient's overall diet be improved to ensure that the cartilage is not deteriorating through poor diet.

In an ideal world, it would be wonderful to take a tablet and assume that this will sufficiently improve diet. While this is completely understandable, it is not the case. Patients need to take responsibility for their health – having a suitable diet and taking supplements only when they are needed. The key to obtaining optimum health is two-fold – physical (healthy body and muscles) and nutritional (a good balanced diet).

Advice on diets and the use of supplements

The Arthritic Association has home treatment advisors, based at their Eastbourne office, who can provide advice on diet and the use of supplements to members. The Arthritic Association also has a qualified nutritionist at their Eastbourne office, who can provide nutritional advice to Practitioners.

Chapter II: The benefits of sunlight

Sunlight and arthritis

The sun is the life force of the planet. The media, however, often issues warnings about the sun, stating that it is dangerous, people can burn their skin through exposure to the sun, it can cause skin cancers and it can prematurely age people. People are often advised to apply sun creams to block the sun's rays, to cover their skin when they are exposed to sunlight or to stay in the shade. Man has, however, lived on this planet for many centuries without doing any of these things.

In reality, the sun impacts on the body's functions in numerous ways. Exposure to sunlight is essential for health and without it health can deteriorate. Arthritis, which is often accompanied by osteoporosis and psoriasis, can be due to lack of sunlight and can be healed in its presence. Before the development of antibiotics, sunlight was used for the treatment of many diseases including tuberculosis and psoriasis. In addition, it is well known that lack of vitamin D is a contributory factor in the development of osteoporosis – as well as being ingested, this vitamin can be produced by the body on exposure to the sun.

As well as direct exposure to the sun, the foods that are essential for our health are also dependent on sunlight. Many green plants, including lettuces and spinach, need sunlight to photosynthesise and produce chlorophyll. In plants, the sun's energy is captured in a complex system of enzymes that, using energy from the chlorophyll, combines carbon dioxide and water to produce carbohydrates and releases oxygen into the atmosphere. These carbohydrates are the primary energy source for the planet.

Man also requires sunlight for the Krebs's cycle. The body produces energy from exposure to sunlight, which is used for the synthesis of vitamin D, to improve the absorption of other minerals and for the activation of enzymes to repair damaged deoxyribonucleic acids (DNA). In addition, the sun activates the production of oils in the skin, which have antiseptic properties and are protective, and the production of hormones that stimulate the immune system.

The sun also affects the glands. The pineal gland, which is located in the brain, affects sleep patterns through the exposure of the body's eyes to sunlight. In addition, the pineal gland is responsible for the production of melatonin. Melatonin suppresses the production of insulin by the pancreas. Conversely, calcium and vitamin D stimulate the production of insulin. Maintenance of this delicate balance is essential. The pineal gland also affects the adrenal cortex and the thyroid and thymus glands, which are responsible for the immune system and the production of T cells.

Sunlight and absorption of calcium

Osteoporosis causes bones to become less dense and more brittle. When present, this disease increases the patient's susceptibility to bone fractures and breakages. The primary cause of this disease is lack of calcium and/or the depletion of calcium from the bones. Bone formation requires the absorption of both calcium and magnesium from ingested foods, with vitamin D being required for optimal absorption. The key source of vitamin D is exposure to sunlight.

The absorption of calcium into the blood is not dependent on vitamin D alone; it also requires secretion of hydrochloric acid in the stomach to dissolve ingested food. The production of hydrochloric acid becomes deficient in elderly people. In addition, the production of hydrochloric acid can also be inhibited by:

- Diets high in animal protein that contain sulphur-bearing amino acids.
- Alcohol.
- Some medications, such as those prescribed for duodenal ulcers.
- Bran and wholegrain wheat, which contain phytates that bind calcium and make them unavailable for the body. Ideally, diets should be managed to separate the intake of foods high in calcium away from wholegrain wheat products.

The other mineral that is required with calcium is magnesium, which is essential for its proper use. The absorption of these minerals is dependent on vitamin D. Vitamin D is essential to help the formation of bones in growing children, as well as the maintenance of strong bones as people age. The depletion of bone density in adults can cause bone fractures, kyphosis and arthritis.

The loss of calcium from diets is greatly increased by two factors – sugar and coffee. Both sugar and coffee increase the production of insulin, which lowers the body's sugar level by forcing it into cells and excreting it in urine. Minerals

(such as calcium) and amino acids accompany the sugar into the cells and urine and, as a result, are also lost from the body. Vitamin D ensures that more calcium and magnesium are recycled back into the blood stream.

In his book 'Daylight Robbery', Downing explains that calcium is not only used for the formation of strong bones and teeth, but that it is necessary for every cell in the body. The interference of calcium absorption can lead to a number of disorders, such as hardening of the arteries and raised cholesterol. Downing also refers to work performed by Hans Selye on the effects of stress. Stress can mobilise calcium from bones into the blood stream, leading to the abnormal calcification of soft tissues and arteries. In addition, abnormal calcification is associated with excess vitamin D, leading to a characteristic pattern of calcified areas around the joints. Interestingly, a deficiency in vitamin D causes a rise in circulating calcium and can also lead to abnormal calcification. The maintenance of vitamin D levels is, therefore, essential.

Vitamin D supplements

Care should be taken with vitamin D supplements as they can lead to an excess or deficiency of this vitamin. The optimal method of obtaining vitamin D in the correct quantity is acquired is through exposure to sunlight – the body will make as much or as little vitamin D as required.

A Practitioner would never advise patients to expose themselves to the sun without caution, but it is evident that sunlight can be beneficial and lack of vitamin D can be detrimental to health. It is more beneficial to expose the skin to the sun for short periods of time (for example, in the early morning or late afternoon) and to expose as much skin as possible than to expose the skin for long periods of time when sunscreen or sunblock should be applied. Sunblock cream will block out the rays of the sun that are most beneficial to the body. Over time, the body will develop its own protection against the harmful rays and will allow longer exposure.

It is also essential that people exposing themselves to the sun are consuming a good diet. As Hobday explains in 'The Healing Sun', the work performed by Dr Zane Kime researched the high fat content in western diets in relation to exposure to the sun. In addition to obesity, high fat diets are also responsible for heart disease and various cancers. Western diets contain oils that have been processed industrially (producing an alternative to the so-called saturated fats) to reduce cholesterol. Although these fats are considered to be healthier,

they have often been treated with chemical solvents and subjected to high temperatures in the process of partial hydrogenation. This process radically alters the molecular structure of these fats, whereby they are transformed into trans fats. These trans fats are found in numerous foods (e.g. crisps, biscuits, chips and other baked or fried food products) and are now feared to be responsible for heart disease and cancers, as well as many other serious complaints. Many low-fat spreads contain trans fats, while butter contains saturated fats and is considered, therefore, to be less harmful.

Skin cancers

It is well known that some prescribed medications can cause adverse effects in the skin when exposed to sunlight. Such medications are usually accompanied by warnings in the patient information leaflet. A Practitioner who advocates exposure to sunlight should, therefore, enquire whether their patient is taking any prescribed medications and, if so, what these medications are. Capillaries in the skin harvest the benefits of the sun's rays so it is important that the blood remains as healthy as possible and nutrition (including the use of prescribed medications) may impact on this process. A poor diet that is high in fats, sugar, salt and the chemicals from food processing is much more likely to be responsible for the development of cancers than simple exposure to the sun. This reinforces the need to consume a healthy diet prior to sun exposure.

The sun is essential for health – for the prevention of diseases and the development of strong bones and a robust immune system. It is also important in the recovery of diseases such as arthritis, osteoporosis and psoriasis.

Chapter 12: Questions and answers

Introduction

The following chapter is based on a series of questions and answers. The questions were raised by Michelle Olorunda, MSc, BSc, MCSP, RPT (physiotherapist) and Elizabeth Hartland, BSc, Dip ION (nutritionist) and answered by John Wedlake Griffiths, LCSP (Phys), a Practitioner to The Arthritic Association, and qualified remedial masseur and manipulative therapist.

Questions on Chapter 1

Question: Why are patients unaware of muscle spasm? Are they not in pain?

Answer: Initially, when a muscle goes into spasm it might be painful. The body will then start to produce endorphins (natural pain killers) that mask the pain and can cause the patient to believe that the malfunctioning muscle has healed. Physiologically, however, the spasming muscle will cause other muscles to compensate and may cause the body to distort. At this stage the patient may suffer from discomfort and pain in the muscles that are compensating. For example, muscle spasm in the piriformis will distort and tilt the pelvis. The nervous system will then engage other muscles to rectify the patient's posture (for example by pulling the lumbar spine into an upright position, moving the shoulder girdle into a more stable position and making the head appear upright). The net result is that the spasming piriformis muscle causes scoliosis of the spine by tilting the pelvis. This in turn can have a knock-on effect – exerting pressure on the vertebral discs, nerves, sinuses and a number of other structures, which may lead to further problems that require investigation. Furthermore, pain is rarely felt when the piriformis muscle is in spasm.

Question: What is the main cause of pain in patients with muscle spasm?

Answer: It is unlikely that the spasming muscle itself causes pain. There are two possible causes for the pain:

- Pressure on the nerves as a result of joint compression. Nerves can run alongside muscles and if the muscle goes into spasm it becomes hard, putting pressure on the nerve and aggravating it. This aggravation may be painful for the patient. The hip and pelvic area is very complex, containing many nerves that can be interfered with by spasmed muscles.
- Other muscles compensate for spasmed muscle and gradually achieve a spasmed state themselves through overuse.

Question: Can muscle spasm be induced by incorrectly lifting an object just once?

Answer: It is more likely that lifting objects incorrectly a few times is necessary to strain the muscle in the first instance. The muscle will then become more vulnerable to going into spasm with one particular lift. Patients say, for example, "I was just bending down to tie my shoelace and I couldn't stand up again" causing the therapist to question why the action of bending down would cause the muscle to spasm. In these instances, it is more likely that the muscle has been strained quite severely by previous lifts or pulls. Once the muscle has gone into spasm, it is not able to release because of the interaction of the nervous system (see Chapter 8 for more information). Briefly, when the muscle spasms, it contracts and may constrict its own blood supply. During muscle contraction waste products, such as lactic acid, are produced and constriction of the blood supply prevents them from being removed. Lactic acid is a powerful irritant that, under normal circumstances, causes the nerve to send messages to the brain to relax the muscle. Constriction of the blood supply interferes with the signal, resulting in a weakened message. The weakened message causes the brain to strengthen the contraction and a vicious cycle ensues. Once the muscle remains in a spasmed state for any period of time there is nothing the patient can do to release it. The piriformis muscle lies deep in the pelvis and is underneath two other groups of muscles. The gluteal muscles, for example, cover the piriformis so it is not possible for the patient to access the muscle. In addition, the production of endorphins masks the pain, causing the patient to believe the problem has dissipated. Pains will occur in other parts of the body from muscles compensating for the distortion. These pains, for example, in the lower back, neck and legs may remain indefinitely. For the more superficial muscles (such as the gastrocnemius/calf muscle) the patient can hold, squeeze or press the muscle to restore the blood supply, which gradually releases the spasm.

Question: When a patient attends clinics for problems/pains associated with, for example, their neck, are they aware that they may need to have other muscles treated to correct their problem?

Answer: There is a great unawareness about the effects and problems associated with malfunctioning muscles, particularly in the field of conventional medicine. Doctors may not look at the root cause of the problem – more likely they would prescribe anti-inflammatory medication, which has no curative effect on the muscle. In fact, the side effects of anti-inflammatory medications are more likely to aggravate the muscle problem than help it. Other therapists, such as osteopaths or chiropractors, are less likely to recognise muscles being a primary factor in the distortion and are more likely to try and rectify the distortion by forcible manipulative techniques to realign the spine. Osteopaths, in particular, have a philosophy that realignment of the spine is paramount in treating any ailment. The remedial masseur agrees with the need to realign the distortion, but would question why the patient has the distortion. The remedial masseur's approach is that the muscles cause the distortion and if they are not treated properly then the problem will recur.

Question: For those patients about to undergo hip replacement surgery, has all of the cartilage in the joint been worn away?

Answer: X-rays are commonly used prior to hip replacement surgery to assess the level of cartilage in hip joints (as shown by the gap between the ball and socket). The cartilage is believed to have deteriorated when either no gap or a very small gap is visible between the ball and socket (i.e. the two bony structures are too close to each other) and the patient suffers from pain and/or possible nerve interference. In most cases, a lack of space indicates that the cartilage has been dispersed or compressed. Work with patients who have a diminished space (1 mm or less) has shown that this reduced gap is not necessarily due to total deterioration of the cartilage, but actually relates to continuous pressure (due to muscle spasm) being applied to the joint, resulting in compression of the cartilage. This continuous compression may also speed up the cartilage deterioration process. Refer to case history 1, Chapter 9, for further information. For patients with rheumatoid arthritis (an auto-immune disease where the body attacks itself) the disease as well as the pressure may result in the cartilage deteriorating more quickly than normal.

Question: After hip replacement surgery, the patient often feels that the pain is no longer present. Does the Practitioner still feel that the muscle is in spasm?

Answer: During hip replacement surgery muscles are moved and separated to access the hip. It is impossible to know how much damage is done to muscles and how much ligament was removed during this procedure. It is not recommended for Practitioners to work on muscles that have been surgically altered as they are no longer in their natural state. Some patients who have had hip replacements do, unfortunately, get a recurrence of pain that is suggestive of muscle malfunction/damage. If, however, a patient has no pain after this procedure then there is no need to investigate.

Question: Should members of The Arthritic Association who have had hip replacement surgery stop following the de Coti-Marsh dietary routine and receiving manipulative therapy?

Answer: Patients should continue with both the diet and the manipulative therapy because, if one hip has been replaced, it is highly likely that the other hip will also need replacing if the de Coti-Marsh regime is not followed. Maintaining a healthy balance to prevent muscles from going into spasm is essential. It is, however, very difficult to treat patients who have had hip replacement surgery, because it is impossible to understand fully what has happened to their muscles during this procedure. In some cases, treatment may be counterproductive or harmful. For further information on the benefits of diet and remedial massage in patients who are eligible for hip replacement surgery, refer to case history I, Chapter 9.

Question: Can the use of remedial massage increase the distance between joints (such as the ball and socket joint in the hip) where X-rays suggest that the cartilage has deteriorated?

Answer: Work with patients suggests that remedial massage can increase the distance or cartilage space between joints, although further research is required to verify this. For further information refer to case history I in Chapter 9.

Question: de Coti-Marsh describes “a correct time in the treatment process to release the nerves by manipulation and the correct osteopathic manipulation procedures” as very important. How does the remedial masseur assess when the patient is in the correct stage to begin manipulation?

Answer: It is important to remember that de Coti-March was an osteopath and had to ensure that calcium had dispersed from the joints before forcible manipulation could be used on his patients. Remedial masseurs use a different approach and can perform more treatments to correct distortions before calcifications have dispersed. Arthritic problems can be alleviated if muscle problems that are distorting the body/interfering with a nerve are removed. If, however, the body is not ready to re-align because it is too calcified then it should never be forced. For the majority of cases, releasing the muscle causes realignment to occur. Muscles that have been released from spasm are vulnerable and can rapidly return to their spasmed state if put under any stress or strain. Patients must, therefore, be very careful after treatments to prevent the spasm from recurring. To this end, a Practitioner will always advise the patient on what they can and cannot do after treatment.

Question: de Coti-Marsh suggests that constipation is one of the known causes of arthritis, how is this possible?

Answer: It may not be the constipation that causes arthritis, but the associated problems. It is normal for the water content of waste products to be recovered in the large intestine, thus causing the waste products to become more solid before they are excreted. When someone is constipated, this waste material remains in the colon for too long and can become putrid. As this stage, the process of recovering water from these waste products would also include the reabsorption of toxic fluids. The net result is a poisoning effect. This is what de Coti-Marsh classifies as ‘auto-intoxication’ and is a cause of arthritis. When in spasm, the psoas and external oblique muscles on the left side of the body can press against the sigmoid portion of the descending colon and may cause colitis. If pressure builds up in the colon this may result in diverticulitis. Again, the knock on effects of muscle spasm can be extensive.

Questions on Chapter 2

Question: de Coti-Marsh refers to two types of arthritis – how many types are there?

Answer: There are over 200 types of arthritis. Many people in the medical profession use the term arthritis as a method of defining where the arthritis is located. Regardless of the number of types of arthritis, the cause of the disease and method of treating it remains the same. Psoriatic arthritis, for example, can be related to a mineral deficiency (either through lack of intake or poor absorption). Many patients with arthritis also have evidence of psoriasis, which disappears when they follow the de Coti-Marsh dietary regime.

The two most common forms of arthritis are rheumatoid arthritis and osteoarthritis, which are often associated with gouty arthritis and lupus. Some sources suggest that viral infection plays a key role in the development of lupus and, as a result, different treatments from those advocated by The Arthritic Association may be needed to treat this particular disease.

Question: Does diet impact on the immune system?

Answer: A balanced diet is essential for maintaining an effective immune system. When the body is in a run-down condition it becomes more susceptible to disease. Fortifying the immune system through diet will help to overcome viral infection and illness.

Questions on Chapter 3

Question: Osteoarthritis and rheumatoid arthritis are the two main types of arthritic conditions discussed within de Coti-Marsh's literature. From a nutritional standpoint the home treatment plan is ideal for those suffering from arthritis. In some cases, additional remedies may also be appropriate, such as selenium, vitamin C and fish oils for patients with lupus and additional bromelain (a derivative of pineapple), vitamin C and fish oils for patients with gout. Does remedial massage treatment also vary for the different types of arthritis?

Answer: A holistic approach is used to assess each patient and to provide the solution to the patient's complaint. The Practitioner will advise the patient on

the diet and supplements recommended by de Coti-Marsh, as well as providing further advice on any additional supplements that might be beneficial. Ideally a nutritionist would also see each patient to provide dietary advice. The examination of any patient with any type of arthritis is the same. If the patient has deviations of their spine or pelvis then these would be treated accordingly. Realigning the pelvis and spine eliminates the possibility that this may have been the cause or contributory factor to the patient's condition.

Question: According to D'Adamo in his book 'Eat Right For Your Type' certain blood types will predispose people to certain conditions and that "Type 'O's are the predominant sufferers of arthritis". Is there data to substantiate this?

Answer: It appears that blood type (e.g. type O, A, B and AB) is a relevant factor in many ailments and illnesses. It would be very interesting for The Arthritic Association to know whether there is any link regarding blood type in patients who have been referred to their Practitioners for treatment. A question on blood type is included in the pre-consultation questionnaire, but very few patients know their blood type. General practitioners no longer tell patients their blood type in case it leads to erroneous information being given out by the patient in an emergency. In an ideal scenario, it would be an interesting study to keep records on blood groups to determine any correlation to specific types of arthritis.

Question: D'Adamo states that "Type O immune systems are environmentally intolerant and there are many foods, potatoes among them, whose lectins produce inflammatory reactions in their joints". How important is diet for patients with arthritis?

Answer: Diet plays a very important role in people's health. For example, the usual treatment for an overactive thyroid is permanent medication or surgery. Evidence has shown that this can also be controlled by diet – changing from a vegetarian diet (soya products, soya milk and the exclusion of dairy products) to a diet including white meat (e.g. chicken) corrected a thyroid problem for one patient. This concurs with D'Adamo's theory that people with blood group O should be meat eating.

Questions on Chapter 4

Question: If, after examination of a patient with arthritis, there is no evidence of spinal injury or problems with the spine or pelvis, should the patient still have treatment?

Answer: If there is no evidence of apparent injury then the patient does not require remedial massage or manipulative therapy. In this scenario, the patient would be advised to follow the de Coti-Marsh diet and supplement regime to overcome their arthritis. Appointments can still be offered to the patient to monitor their progress, address any questions they may have and to provide encouragement as required. Some patients with arthritis need to be seen on a regular basis to help them follow the regime correctly and to keep them focussed. Other patients, however, are confident that they can follow the advice given without the need for regular visits. Many patients with arthritis have overcome their condition by following the home treatment programme.

Questions on Chapter 5

Question: How did de Coti-Marsh feel about the use of prescribed medications?

Answer: de Coti-Marsh was opposed to the use of prescribed medications to overcome arthritis. In fact, de Coti-Marsh stated that "Medical treatment is confined to drugs which lull the patient into a false security by lessening pain but allowing the arthritic activity to continue until limbs become crippled and distorted. Surgery is then recommended."

Questions on Chapter 6

Question: Do all cases of arthritis result from muscle spasms and imbalances in the pelvic area?

Answer: Arthritis can be caused by muscle imbalance and spasms in the pelvic area that affect many other parts of the body and, in particular, the spine and cervical spine. If muscles in the cervical spine are affected then subsequent problems will occur in the cervical area. The muscles in this area become spasmed and can cause problems in the cephaloid sinus, which in turn may affect the pituitary gland and the whole endocrine system. The resulting impact

on the body can be immense. Muscle problems in the pelvic area may also affect, for example, the patient's hands and feet. However, pelvic and spinal problems are not evident in all cases of arthritis.

Question: Is sciatica that originates from the spine the same as sciatica-type pain caused by piriformis syndrome?

Answer: Sciatica is defined as any problem caused by the sciatic nerve. The sciatic nerve emanates from the lumbar vertebrae and in some people it passes either through the piriformis or very close to it. In piriformis syndrome, the piriformis actually interferes with the nerve in some way, giving the effects of sciatica in part of the leg. The sciatica that emanates from the origins of the sciatic nerve in the lumbar spine can also be caused by the piriformis because of the distortion it can cause. The overall effect of applying pressure to the lumbar discs interferes with the sciatic nerve at its root. It could be argued that the piriformis muscle is not the only muscle that causes a situation such as this to occur. Some people suggest that the quadratus lumborum is more likely to cause this scenario, although Practitioners believe that the quadratus lumborum is responding to the problems caused by the piriformis.

Question: Can all types of arthritis be cured and are some types more easily cured than others?

Answer: The Arthritic Association cannot claim to cure arthritis. It can, however, help patients to manage their arthritis in such a way with the hope of reducing their symptoms. Gout, fibromyalgia and tendonitis all cause inflammation, pain and occasionally restrict the movement of joints. These diseases can, therefore, be defined as arthritis. Origins of all disease, including arthritis, may be the result of a distorted spine and/or dietary problems. It is known that, for example, distortions of the spine can impact on metabolism and vice versa. Nutritional aspects can be corrected by providing dietary advice (as long as the patient heeds the advice) while a Practitioner can correct distortions of the spine and pelvis. Nutrition and muscle correction should be performed in combination with each other. Correcting problems, whether dietary or muscle-related, even if they may not appear to be the cause of the overall problem, eliminates different aspects when trying to identify the true cause. Most people who follow the de Coti-Marsh regime can overcome their arthritis. Arthritis in juveniles has also been overcome by these methods.

Question: What side effects may occur as a result of steroid use?

Answer: In addition to causing arthritis-like symptoms, steroids may also cause bruising, bleeding and thin skin. Patients can get further information on the effects of steroids by reading the patient information leaflet that is supplied with their medication. There are also various reference books that provide details on drug-related side effects. If patients are supplied steroids when in hospital they may not be aware of the associated side effects. Often when people stop taking steroids they feel much better. Ironically, people can also feel better when taking steroids because they mask the pain and discomfort associated with arthritis, thus giving the patient a false sense of wellbeing.

Questions on Chapter 7

Question: What causes stiff joints?

Answer: Bony spurs and calcification may cause a joint to become stiff. Calcification may result in arthritic changes in the joint, including the hardening of ligaments and fibrous material being laid down in the joints. Inflammation can also cause a joint to become stiff. Many people with arthritis have swollen joints, where fluid in the joint capsule thickens and has a stickier constitution.

Question: What physiotherapy techniques are used for reducing inflammation?

Answer: Massage and exercise are the key tools used by a physiotherapist to reduce inflammation. Many people with arthritis have painful joints and, as a result, try to minimise their movements and exercise by adopting more static postures (sitting or lying down). Lack of exercise causes fluid to pool in the patient's legs. Physiotherapists try to get patients to be more active to circulate this fluid. Hydrotherapy, which uses non-weight bearing exercises, is another useful tool to increase circulation. Physiotherapists also use passive movements to manage patient's arthritic symptoms, which keep the patient's joints free and their muscles strong. Physiotherapists also provide advice on exercises that the patient can perform at home.

Question: What techniques would a Practitioner use to reduce inflammation?

Answer: Inflammation occurs because the body is sending nutrients to any areas that need 'healing' and can be quickly and readily be reduced by massage. The inflammation will return, however, if the underlying cause of the problem

is not addressed. The additional fluid in the inflamed joints has a secondary protective affect of providing cushioning to prevent further damage. Allowing the fluid to move means that it can remove toxins away from the damaged area and bring in fresh nutrients for healing. The excess fluid is filtered through the lymph glands and eventually returned to the blood system (i.e. the lymph system is recycled). The lymph glands often become inflamed and may become painful as they are processing the toxins from the damaged area. Keeping the lymph fluid moving through the body system will help to reduce inflammation and will assist with the healing process. If the lymph fluid is allowed to pool in the limbs and/or damaged area, it may stagnate and become more viscous. That, in turn, may result in joint stiffening. If the fluid build up is the result of a muscle being damaged then asking the patient to do more exercise may exacerbate the problem. The Practitioner will use a massage technique called lymph drainage to reduce inflammation and remove toxins from the system.

Questions on Chapter 8

Question: How do hormones affect arthritis?

Answer: The production of hormones is controlled by the endocrine system. The endocrine system is very complex and although it has been extensively researched, it is still not understood completely. The hormone adrenalin, also referred to as the 'fight' or 'flight' hormone, is released in times of stress. When under stress, the body's metabolic and digestive system shuts down to allow for 'fight' or 'flight', affecting both digestion and digestive enzyme metabolism. Poorly digested nutrients that remain in the digestive system can be self-intoxicating. If these toxins are not excreted they may settle in the joints creating painful or inflammatory responses. Maximum digestion of food and adsorption of nutrients occurs when the body is relaxed, so it is not advisable for someone to eat when they are stressed. Different emotional states (e.g. anger, resentment, jealousy or envy) also put the body under stress and can have the same effect.

Question: How does exercise impact on the digestion of food?

Answer: It is not advisable to exercise after eating because the blood supply that is essential for digestion and adsorption of nutrients is diverted from the digestive tract to the muscles. This may lead to the incomplete digestion of food and the putrefaction of undigested food in the bowels.

Question: Although contrary to Practitioner's recommendations, physiotherapists advocate the use of exercise during the muscle 'healing' process. Does the Practitioner advise patients to rest in bed after treatment?

Answer: Bed rest is not advocated after treatment of malfunctioning muscles as it is essential that patients keep moving. Practitioners will provide patients with information on posture including how to stand (keeping feet slightly apart, accepting the same amount of weight on both legs and avoiding leaning on things because these actions may cause a scoliosis to recur) and sit (avoid sitting cross legged). In addition, the Practitioner will advise the patients on exercise, including those that should be avoided in the initial instance (e.g. running, lifting and using a vacuum cleaner). The Practitioner will give patients exercises that will stretch their muscles, for example:

- Lying on their side and pulling their knee up to the opposite shoulder. Note, the stretch should never be longer than 20 seconds and a good tip is to tell the patient to count to 20 while they hold this position. If the stretch is held for too long then a nerve reflex action will try to recover the muscle from the stretch and because the muscle is recovering from an injury, this scenario should be avoided. The nerve, which tells the muscle how to react, is designed to resist a stretch over a period of time, especially towards the end of a range.
- Lying on their back, pulling both knees up to stretch the quadratus lumborum muscles and improve posture. This can often need working on with distortions of the pelvis.

Question: What advice can the Practitioner give to patients about lifting heavy objects?

Answer: People should never lift objects from one side. Instead they should be face on to the item they are lifting – even for simple activities like lifting a kettle. This approach avoids twisting of the torso, which could strain the piriformis muscle. As soon as the hip begins to turn, the piriformis muscle has to work to stabilise the pelvis.

Question: When patients are undergoing remedial massage treatments, what exercises should they avoid?

Answer: Certain exercise machines, either in leisure centres or at home, can be detrimental to the patient's healing process because the patient often overdoes these exercises. Overuse of bicycle or cross-training machines are

particularly harmful and may compound existing problems or create additional complaints. Non-weight bearing exercises, for example dynamic tension, are good for patients undergoing treatment.

Most importantly, patients need time to recover before embarking on strenuous exercises. Approximately six weeks after treatment, the Practitioner will give the patient muscle strengthening exercises. Performing isometric resistance exercises can strengthen the piriformis muscle, which is the lateral rotator of the femur. Not only do these exercises strengthen the muscle, but they also increase muscle bulk and only require approximately 20 seconds of pressure. To strengthen their muscles the patient should perform each exercise twice a day. Briefly, the patient sits with a soft ball between their feet and applies pressure to the ball for 20 seconds. In this exercise the piriformis is relaxed, the antagonist muscle is also used for medial rotation of the femur. In the second exercise, a belt is tied around the ankles and the patient pushes their feet in an outwards direction. This laterally rotates the femur and uses the piriformis muscle. Patients should apply as much pressure as possible but always be guided by any pain they feel. The patient should stop applying pressure when they feel any pain and hold the position for 20 seconds – they should never push through or beyond their pain barrier. Pressing through pain can put the muscle or body back into a state of spasm and may be how the spasm was initially achieved.

Question: Why do muscles go into spasm?

Answer: Muscle spasm is a 'guarding' technique where the body prevents the muscle from moving so it cannot be further damaged. Once the muscle is in spasm, the spasm will intensify through incorrect messages being sent to the brain and a vicious cycle will ensue. Muscle spasms also occur when the body is damaged, for example a joint dislocation or bone fracture. In this scenario the muscle spasm prevents movement of the damaged joint/bone. Scoliosis, however, is usually the direct result of the piriformis muscle being in spasm to prevent overuse. When muscles are in spasm, the spasm will not go away or dissipate on its own so treatment is essential.

Question: Does the body undergo structural changes as a result of long-term distortion?

Answer: Both tissue and bone structures can alter to accommodate different circumstances. Once the bone structure has changed, then changing it back is virtually impossible. A female patient of approximately 30 years of age presented with a terrible shoulder pain. She was due to have an operation to

trim off some of the scapula at the acromium process. She could not put her arm behind her back as it was touching the bone. After examining and treating the patient, a space was created in her joints so she no longer needed the operation. In another example, a patient presented with a painful heel spur, which was confirmed by X-ray. After starting the de Coti-Marsh regime and using supplements and Decalcine tablets (Hursdrex Ltd), an X-ray revealed that the heel spur had reduced in size. The patient maintained her diet for about one year and, after this time, was able to walk several miles. In absence of any sporting activity to cause the heel spur, it was probably the result of too much calcium in her diet.

Question: Does the way that food is now produced affect its nutritional content?

Answer: Every year since the 1960s the government has produced tables of the nutritional content of food. Since records began, the presence of magnesium in foods has reduced by approximately 95% and the levels of iron have also decreased. Vegetables and grains may be produced in poor soils that do not contain the required minerals that, in turn, will affect its nutritional content. Forcing plants to grow more quickly may also reduce their nutritional content. Furthermore, the balance of sodium and potassium in people's diets is generally incorrect. The correct balance of these minerals is essential for the electrical conduction of muscles and the generation of energy. The induction of muscle spasm is enhanced by poor diet, less magnesium, less potassium and too much sodium. These factors are all detrimental to muscle function, so the likelihood of muscle spasm increases. The muscle hardness is affected and spurs build up on the bone and calcium deposits occur on the tendon. The Decalcine tablets (Hursdrex Ltd) help to disperse these calcium deposits.

Questions on Chapter 9

Question: In case history I, the former ballet dancer suffered from extensive muscle spasm and it was believed that much of the cartilage in her hip joints had deteriorated. Would her dancing have caused these problems?

Answer: It is very likely that the muscles may have become strained during her dancing training. In fact, many dancers and athletes increase the range of joint movement by using exercises that can strain ligaments. In later life, weaker

muscles may not be able to compensate for this, causing postural problems. The treatment plan for this patient was to release the muscle groups that are specifically vulnerable in dancers. When dancers raise their legs to high angles, the gluteus minimus is very often strained, which was the case in this patient. In addition, the patient also has a motorcycle accident, which may have caused the whole area to go into spasm.

Questions on Chapter 10

Question: Why are supplements needed in the de Coti-Marsh treatment regime if the patient's diet is healthy?

Answer: In addition to the benefits of supplements outlined by de Coti-Marsh, there are two further reasons for using supplements. Firstly, the improved diet will take a long time to achieve a great improvement in recovery. By taking supplements, this process occurs more quickly by increasing the levels of required nutrients. Secondly, even a very healthy diet that includes organic food can still be deficient in certain minerals, especially if these minerals are absent from the soil in which the plants are grown. Many centuries of farming can leach the minerals out of the soil, which may not be replaced. Supplements may be the only way of obtaining these minerals in the diet.

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