**Medical Dictionary**

A

**Achilles Tendinitis**

The Achilles tendon attaches the calf muscle to the heel bone. It can become inflamed from walking or running down or uphill. Although severe pain may be felt on starting to walk or run, or just getting up onto the feet, the symptoms may improve with continued walking or running. This is because the Achilles tendon sits within a sheath and with continued activity, the increased temperature and blood flow in the area allows the tendon to move more freely with it. It is important to discontinue excessive weight bearing activities and running, as continuing to overstrain the tendon will cause a build-up of scar tissue in which will result in the tendon being painful while exercising, after it has healed. The tendon may not heal fully for weeks or even years after the initial onset of symptoms and avoidance of running up or downhill is necessary until it has fully healed. A torn tendon may require surgical repair. A strained tendon can be treated with anti-inflammatory or analgesic drugs, ultrasound and massage therapy. An exercise programme to improve the muscle balance of lower leg, ankle and foot muscles, especially strengthening the calf muscle and ankle tendons will aid recovery and avoid reoccurrence of the condition. Wearing flexible running shoes, wearing foot supports (orthotics) and stabilizing the heel properly, in sports shoes with a firm heel counter (backing to the shoe), will help to avoid reoccurrence of the problem.

**Ankle Sprain**

A sprained ankle result from turning or twisting the ankle joint and overstretching or tearing the ligament around the joint. Most commonly, the outside of the ankle is affected, by turning the foot inwards, beneath the ankle (inversion sprain). Sometimes the Achilles tendon can be affected at the back of the ankle and this may lead to a longer recovery time. Mild sprains can be treated successfully with rest, anti-inflammatory treatment, ultrasound and manual therapy. Moderate sprains are usually immobilized during the healing phase, while severe sprains may require surgery. Once the ligaments of the ankle are strained, there is a high risk of suffering repeated strains as the joint will be less stable. Keeping the core, hip and leg muscles strong, may help to reduce the risk of repeated strains and during the rehabilitation phase, proprioceptive or balancing exercises on the ball of the foot will help to improve the long-term stability of the ankle.

**Ankylosing Spondylitis**

Inflammation and stiffness occurs in the spine and pelvic joints, as well as the hips and shoulders. Men are most likely to suffer from the disease with the onset of symptoms occurring mostly between 20 and 40 and it usually has a genetic cause. The disease may cause a hunched-forward posture or conversely, a straight, stiff spine. Back and joint pain, weight loss, fatigue and anaemia are common symptoms and the mechanics of breathing may be hampered due to the stiffness of the spine which limits rib movement. X-rays commonly show erosion of spinal and pelvic joints, and joint fusion. Symptoms usually start in mid 20s but can be effectively controlled with anti-inflammatory drugs and exercise to control posture and muscle balance.

**Anterior Achilles Tendon Bursitis (Albert’s Disease)**

The bursa (fluid-filled sac), located between the base of the Achilles tendon (at the back of the heel) and its attachment to the heel bone (calcaneus) becomes inflamed in this condition. The cause may be the result of muscular imbalance of the ankle, leg or hip muscles, which results in traction or overstrain of the Achilles tendon. Hypermobility syndromes, Rheumatoid arthritis and any condition which results in instability and poor posture of the ankle joint may cause this bursitis.  
Rehabilitation and continued exercise to improve the strength and flexibility of the calf muscles, as well as the leg, hip and core muscles, as well as maintaining good foot posture (i.e. orthotics); will help to manage the problem and avoid repeated episodes.

B

**Behcet’s Syndrome**

Joint swelling and pain is common in this chronic, relapsing inflammatory condition, which commonly affects the mouth, skin, genitals and can also affect the eyes, nervous system, gastrointestinal tract and blood vessels throughout the body. As symptoms may mimic other diseases, diagnosis may be difficult.

**Bone Tumour**

This is a collection of abnormal cell, which are either malignant (cancerous) or benign (non-cancerous). Malignancies may arise from the bone itself locally, or spread from another malignant tumour into bone, via the bloodstream. They are commonly detected by the severity of the pain, or by fracture, as the tumour makes the bone more brittle or because tumour may also be visible.

**Bursitis**

A bursa is a pocket of fluid which is located at sites of friction in the body, typically below tendons. With inflammatory conditions, such as arthritis (Osteo and Rheumatoid), gout and infections, as well as repetitive strain or overuse injuries, the amount of fluid increases in the bursa, causing pain and limitation of movement in muscles and joints in the area. This occurs commonly at the shoulder, side of the hip, knees and heels (Achilles). Symptoms will resolve with improving muscle balance at the joint, anti-inflammatory treatment directly for the bursa, avoiding overuse or repetitive movements, and rest.

C

**Charcot’s Joints**

If the nerve supply to the joint is disrupted, the mechanics and efficient functioning of the joint will be affected. This can be due to any disease of the nervous system, but happens especially, in diabetes, syphilis and spinal diseases. This will cause excess wear and tear, arthritis and joint deformity unless treatment with anti-inflammatory drugs, splinting the joint and exercise to improve muscle balance is undertaken.

**Costochondritis and Tietze Syndrome**

Chest pain associated with costochondritis may occur with postural problems (i.e. while using the computer) by excessive exercising for the upper body, minor trauma, or an upper respiratory infection.

Sharp pain is experienced at the front of the chest, especially over the fourth, fifth and sixth ribs where they meet the Sternum (costochondral junctions). Symptoms may radiate down to the abdomen or to the back and may be felt more while taking deep breaths.

Costochondritis exhibits no noticeable swelling, whereas another condition of the costochondral junction, Tietze syndrome causes visible swelling.

Tietze syndrome affects the costochondral junctions of the second and third ribs, usually. The syndrome may develop after surgery, upto several years after the operation and the condition may last for several months, when the infection manifests itself and gives symptoms of swelling, tenderness and redness or pus discharge at the operation site.

**Chondromalacia Patallae**

The cartilage on the underside of the knee cap becomes inflamed in this very painful condition of the knee. Usually it is caused by muscular imbalance of the quadriceps muscles which extend over the front of the thigh bone and attach to the knee cap and the tibia. Imbalances of the pelvis or leg lengths may be a predisposing factor, as well as overtraining or excessive joint mobility (i.e. hypermobility syndromes, foot arch problems or flat feet. The condition is common in adolescents and also in women of 30 – 50 years old. It can be treated by cold therapy, anti-inflammatory drugs and exercise to improve the muscle balance around the hips and knees.

D

**Degenerative Disk Disease**

Through wear and tear, disks become thinner and the part which meets the vertebra (at the vertebral end plate), starts to become uneven and the bone remodels itself.  
Bony spurs (osteophytes) can emerge on the sides of the vertebra and cause local irritation to soft tissues. Depending on the location of the bony spurs, they may narrow the exit of peripheral nerves from the spine and cause pain locally and along the length of the nerve, into the limb.

**Disc Prolapse or Rupture or Herniation**

A spinal disk comprises a fibrous outer layer and a viscous centre. The viscous centre hardens as part of the aging process, but while it is still soft (up to 45 years of age) it may leak out, through a crack in the outer harder layer. The crack may be due to an injury (usually, twisting and bending forward or a high impact injury), or degenerative changes. This causes inflammation in the area and may cause irritation of soft tissues around the vertebra. Commonly, a disc rupture affects a peripheral nerve (causing nerve root compression, i.e. Sciatica), if it has leaked posteriorly and laterally to the vertebral body, presenting pain, tingling and numbness. Some problems with sensation and movements in the arms, legs or foot (i.e. footdrop) may occur and in severe cases, there may be extreme weakness or paralysis. If the disk ruptures centrally, bowel or bladder function may be impaired, and this constitutes a surgical emergency.

E

F

**Facet Joint Inflammation/Apophysitis**

These posteriorly-located spinal joints lie on both side of the vertebrae and can become inflamed with loss of disk height, or excessive and sudden stretching, rotation, extension or compression of the spine.

**Fibromyalgia Syndromes**

Symptoms may include aches and pains, stiffness of joints and muscles, throughout the body or in specific joints and regions of the body. The cause is unknown, but symptoms usually start and reoccur following a period of physical or mental stress or lack of sleep. The condition may also be related to infections or Rheumatoid Arthritis. The pattern of pain, and response to treatment, usually helps with the diagnosis. Exercise, reducing stress and regular sleep patterns tend to improve symptoms.

**Foot Fractures**

Pain, swelling and bruising over the site, indicates the location of a foot fracture. In the absence of specific injury to the foot, it is important to consider than low bone density in a post-menopausal women, may be a predisposing factor. Rest and anti-inflammatory treatment will help the area to heal. A fractured ankle should be completely immobilized. Severe fractures which can be detected on X-ray, may require surgery to realign the bone. Rehabilitation exercise as per ankle sprains, which consider the stability of the ankle and foot joints will enable patients to resume their daily activities and sports.

G

**Gout**

Commonly, symptoms occur initially at the base of the big toe, with a heat, swelling and redness, but another or several joints may be affected. It is caused by crystal deposits (monosodium urate) because of high uric acid levels in the blood. This causes joint pain, inflammation and destruction. Treatment depends on the cause of the gout. Mostly it is idiopathic and often linked to a hereditary enzyme deficiency, or may be due to some drugs which impair the kidney’s ability to excrete uric acid. Anti-inflammatory drugs, drinking plenty of water, and avoiding alcohol and protein-rich foods may help the condition and prevent repeated attacks of gout.

H

**Hamstring Injury**

This usually occurs when a person takes a stride forwards, and overstretches the hamstring muscle or tendon, at the back of the thigh bone. It is common with footballers, rugby players, runners and athletes. There may be a structural imbalance of the pelvis (i.e. twisted pelvis), which has caused a shortening of the affected muscle, which has predisposed the injury or may be due to a lack of warm up or stretching exercises ahead of sports. Rest, anti-inflammatory treatment followed by a rehabilitation programme to recondition the injured muscle will be required.

**Heel Spurs**

This is the formation of bone just below the heel, where a strong ligament (fascia) connects.  
Heel spurs are common in people with fallen arches as the fascia under the foot is overstretched from the excessive inward rolling(over-pronation) of the foot during walking  
Inflammation of the bursa (fluid sac) below the spur may occur causing a condition called  
Calcaneal Bursitis. After reducing acute inflammation with therapy, consisting of anti-inflammatory treatment or ultrasound therapy, the heel spur can be resolved by rolling the foot over a cylindrical object, such as a rolling pin. The reoccurrence of the condition can be avoided by improving the muscle balance of the legs, cushioning the heels, supporting fallen arches (i.e. orthotics), and regular stretching of the calf muscles.

**Hypermobility Syndromes (i.e.Ehlers-Danlos, Marfans)**

These are hereditary conditions which result in connective tissues which are unusually elastic, causing the excessive movement in joints.  Some conditions may also result in arteries and organs of the body being overly extensible and therefore, may cause additional health risks. A full diagnosis is therefore necessary to determine the extent of the condition. Hypermobile joints may result in early onset of degenerative arthritis and therefore, strengthening exercises and efforts to maintain good posture and muscle balance are important.

I

**Infectious Arthritis**

This is an infection of the (synovial) fluid within the joint and occurs with a spread of bacteria into the joint, usually after surgery or via the bloodstream.

J

K

L

**Lateral Epicondylitis/Tennis Elbow/Extensor Tendinitis**

This is an inflammatory condition of the tendons which attach the muscles at the back of the forearm to the elbow. They are responsible for bending the wrist backwards. It is a form of repetitive strain disease which may occur after excessive use of the limb, and therefore, affects housewives and cleaners, as well as tennis players! The tendon fibres start to tear, causing pain and inflammation at its insertion point at the elbow joint and often along the forearm. In tennis, it is caused during a backhand return, and is often associated with muscle imbalance or tendon problems at the shoulder joint. It is important to rest the arm and wrist and elbow as much as possible until the inflammation in the tendon subsides. Anti-inflammatory treatment as well as a programme of stretching and strengthening exercises for the whole arm, shoulder and upper body, will enable the person to resume normal daily activities and sports.

M

**Medial Epicondylitis/Golfers Elbow/Flexor Tendinitis/Forehand Tennis Elbow**

This is an inflammatory condition of the tendons which attach the muscles at the front of the forearm to the elbow. They are responsible for bending the wrist forwards. It is a form of repetitive strain disease, which may occur with excessive use of the limb, and therefore, affects office workers (i.e. computer overuse) or anyone who carries a heavy bag, as much as if affects golfers! In golf, it is caused by the force of the swing while gripping the golf club tightly. It can also be caused by a powerful serve, or a ‘spin’ serve in tennis, or using a racket which is too heavy or has a grip which is too small for the player’s hand. Pain occurs at the tendons insertion point at the elbow and may occur along the inside of the forearm. It is often associated with a muscle imbalance or tendon problems at the shoulder. It is important to rest the arm and wrist and elbow as much as possible until the inflammation in the tendons subsides. Anti-inflammatory treatment as well as a programme of stretching and strengthening exercises for the whole arm as well as the shoulder and upper body, will enable the person to resume normal daily activities and sports.

N

O

**Osgood-Schlatter Disease**

This is the inflammation of cartilage and bone just below the knee cap (patella), on the shinbone (tibia), which occurs in children. Most commonly it affects boys around 10-15years old and may be associated with excessive sports or an injury which affects the insertion of the tendon of the thighbone muscle (quadriceps), which crosses over the knee to attach to the upper end of the tibia.  
X-ray diagnosis is important in children to rule out a bone pathology. In severe cases, the knee is immobilized in plaster, but usually just analgesics, anti-inflammatory medication is required, as well as avoiding sports and excessive exercise.

**Osteoarthritis**

Osteoarthritis refers to the wear and tear of any joint in the body, where cartilage inflammation and erosion occurs, and causes pain and stiffness in the affected joints. In the spine it is degenerative disk disease (primary osteoarthritis) or Spondylosis, but may also have other causes such as Paget’s Disease or infection ( secondary osteoarthritis). The majority of people over 40 years old will have some osteoarthritis, which is diagnosed by X-ray. Repetitive strain disorders, ligament or cartilage injury (i.e. in the knee) and being overweight, can increase the likelihood of having osteoarthritis and increase the severity of symptoms. The affected joints become stiff and painful and may eventually become enlarged and fuse in a bent position (i.e. in the thumb and fingers).

**Osteomyelitis**

This is an infection in the bone, which causes severe, persistent bone pain. It is more common in child following bacterial infection and fever, and usually affects the ends of the leg and arm bones, but any bone can be affected. Some days after the onset of other symptoms of the infection bone pain will occur. In adults, Osteomyelitis commonly affects the spine and symptoms may start more gradually, without fever. If undetected for a long period of time, the bone is at risk of fracture and deformity.

**Osteopenia and Osteoporosis**

Commonly these conditions affect post-menopausal women or young women who have suffered from anxiety and eating disorders. If the body does not produce or store Oestrogen, Calcium absorption into bone is impaired, causing the reduction in bone density. A bone density scan can detect the early stages of this problem Osteopenia, and medication or Calcium supplements can be given to patients to avoid the later stage Osteoporosis from developing, thereby reducing the risk of fracture. Weight-bearing exercise, can also help to improve bone density. Other causes may include Drug therapy, Renal Failure, Hormonal problems (i.e. thyroid, parathyroid, adrenal glands), genetic factors, old age.

P

**Pagets Disease of Bone**

This commonly affects the pelvis, thigh and shin bones, the skull, spine and collarbones, as well as the upper arm. The bone becomes enlarged, and weakens. This increases the risk of fracture and may lead to postural deformity of the spine or bow legs. The disease arises when bone cells become overactive and abnormal cells are produced, which are structurally weaker and more. Paget’s disease is rare in the under 40s and there is no known cause for it, although it seems to run in families.

**Polymyositis & Dermatomyositis**

Pain, inflammation and degeneration of the muscle fibres, and sometimes the skin occurs in this chronic connective tissue disease. Over time, muscle strength deteriorates, typically at the shoulders and hips, but any muscles can be affected. The disease tends to start more abruptly in children, perhaps following infection, and is usually accompanied by fever, fatigue, swallowing difficulty and weight loss.

**Polyarteritis Nodosa**

Muscle and joint pains are common symptoms experienced in this rapidly progressing and potentially fatal disease which starts with the inflammation of blood vessels (Vasculitis). Fever and tingling in the hands and feet are common early symptoms. The disease can quickly affect the functioning of vital organs if not treated at the early stages.

**Polymyalgia Rheumatica**

Severe pain is experienced in the muscles of the neck, shoulder, jaw and hip girdle occurs with this condition. No weakness or deterioration in muscle fibres occur, as it is a vascular condition. It may be associated with Temporal Arteritis, so needs to be diagnosed and treated rapidly to avoid destructive consequences of this disease.

**Popliteus Tendinitis**

The Popliteus muscle attaches on the back of the lower leg (tibia) and the inside of the knee joint on the lateral meniscus (moveable cartilage in the knee), and lower part of the thighbone (femur). Its function is to ‘unlock’ the knee joint, rotating the lower leg inwards. The Tendon can become overstrained or tear with excessive inward rolling of the feet ((pronation).  
The outer part of the knee may feel sore or painful, particularly if running downhill  
It is important to avoid running to allow the tendon to heal, which may take about 1 month. Foot supports (orthotics) should be worn to avoid excessive pronation. The strained tendon can be treated with anti-inflammatory or analgesic drugs, ultrasound and massage therapy. A programme of improving the muscle balance of the knee and strengthening the core and hip muscles is advisable, to aid recovery and avoid reoccurrence of the condition. A torn tendon may require surgical repair.

**Posterior Achilles Tendon Bursitis (Haglund’s Deformity)**

The bursa (fluid-filled sac), located between the base of the Achilles tendon (at the back of the heel) and the skin becomes inflamed in this condition. It occurs from repeated pressure between the heel and footwear. By adjusting the posture of the foot (i.e. orthotics), or cushioning the back of the heel, the condition can be resolved. Analgesics or anti-inflammatory medication will help to relieve the pain and inflammation in the area.

**Posterior Tibial Neuralgia**

Pain in the toes, ankle or foot may be a result on pressure on the Posterior Tibial Nerve. This nerve runs down the calf area and then through a bony canal towards the sole of the foot. Imbalance or inflammation of the tendons at the back of the ankle, may result in compression of irritation of the nerve and neuralgia (nerve pain) may ensue. A burning or tingling pain is common, which is usually worse with weight bearing. The cause of the problem may be difficult to diagnose and overall consideration of the person’s medical history, posture, weight bearing, other foot problems, and muscle imbalance should be taken into account. Treatment is aimed at relieving pressure on the nerve by adjusting foot posture with orthotics and leg stretches. Steroid or anaesthetic injections or surgery may be necessary, depending on the severity and chronicity of the problem.

**Pseudogout**

Similar to gout above, but caused by calcium pyrophosphate dehydrate crystal deposits in the affected joint(s). It is characterized by intermittent attacks of joint pain and inflammation, although symptoms can vary considerably. Usually the knees, hips and wrists are affected causing weakness and stiffness in the limbs. Although the cause is unknown, sufferers usually have high levels of calcium in the blood, as well as low levels of magnesium, which can be cause by hormonal or kidney problems. High iron levels (hemochromatosis) in the tissues, is also common. Although acute episodes occur, they are less severe than gout.

**Psoriatic Arthritis**

This form of arthritis may develop in people who have been diagnosed with Psoriasis, the condition which affects the skin and nails. Red, scaly rashes and thickened, pitted nail beds occur together with inflammation. The finger and toe joints are commonly affected, although other joints may also become arthritic and deformed. Drug treatment is similar to Rheumatoid Arthritis, but also Ultraviolet light therapy is usually effective in alleviating symptoms.

Q

R

**Reiter’s Syndrome**

This is the inflammation of joints and tendon attachment of muscles to bone, which is also associated with conjunctivitis and inflammation of other mucous membrane (i.e. the mouth and urinary tract etc.). Reiter’s occurs mainly in men between 20-40 years old, and has been linked to gastrointestinal or sexually transmitted infections.

**Retrolisthesis**

This is the backward movement of one vertebra relative to the vertebra directly below it; and is less common than Spondylolysthesis.

**Rheumatoid Arthritis**

This is an immune system disorder which creates an inflammatory reaction within the joints. This eventually causes destruction of the joint although anti-inflammatory or immunosuppressive medication, may slow down this process. The disease may also resolve itself spontaneously. Symptoms usually start with pain and swelling in the small joint of the wrists and feet, although it can also start with widespread pain and inflammation throughout the body. The antibody ‘Rheumatoid Factor’ is present in 70% of blood tests, and characteristic changes to the joint are seen on X-ray. Other symptoms, such as low-grade fever, anaemia, eye inflammation, blood vessel inflammation, inflammation of the lining of the heart and lungs, and swollen lymph nodes. The disease starts mainly in women between 30 and 50 years old, but also in children who develop the disease under 16 years old. This is called Still’s disease. Fever, rash and many joints can be affected, especially the knees, elbows, wrists and ankles. In childhood, ‘Rheumatoid Factor’ is rarely found in the blood test.

**Rotator Cuff Imbalance and Tendinitis**

The Rotator Cuff is a group of muscles which attach from the top part of the upper arm (humerus), the shoulder blade and the shoulder joint. They work together, providing rotation and circumductory movements of the arm. The most dominant muscle, Supraspinatus, is constantly active, holding the upper arm firmly into the ‘ball & socket’ shoulder joint, and is the most commonly injured by poor posture, which leads to friction on its tendon. This tendon is particularly vulnerable, as it passes underneath the bone at the tip of the shoulder (Acromion Process) to attach to the upper arm (humerus). As it is constantly active, it is prone to degenerative changes, which can make the tendon susceptible to small tears or rupture. With muscle imbalance of the shoulder joint, excessive strain is put on the tendons of the Rotator Cuff, which eventually become painful and inflamed. The condition may also be associated with other muscle imbalances or inflammatory condition or the neck. All tendons may be affected or just one of the group. It is important to rest the shoulder and arm initially, until the inflammation in the tendon(s) subsides. Anti-inflammatory treatment as well as a programme of stretching and strengthening exercises for the neck, shoulder and upper body, will enable the person to resume normal daily activities and sports.

**Runners Knee**

This condition arises as the knee cap (patella) and tendon of the thigh muscles (quadriceps), which attaches to the top of the shin bone (tibia), should lie in a central position over the knee joint, but a muscle imbalance in the area or poor congruency of the knee joint itself (i.e. after surgery, or structural defect), causes the patella to deviate, usually laterally. This leads to friction under the knee cap itself and may also cause inflammation in the tendons surrounding it. Initially, rest and anti-inflammatory treatment is required and as the acute symptoms subside, a programme of stretching the hamstrings and calf muscles and improving the muscle balance of the leg muscles generally is required. It is also necessary to improve of maintain good core stability, which will help to control the efficient movement of the hip and lower extremities and avoid a reoccurrence of the condition.

S

**Scheuermann’s Disease**

This disease of the spinal vertebrae, occurs in adolescence. It is believed that increased blood circulation at the vertebral growth plates, leads to deformity of the bone. Acute or chronic pain may be experienced in adolescence and pain and postural problems may occur in adulthood. This is due to compression in the vertebral column and general stiffness on the back which may be caused due to the subsequent change in shape of one or more vertebra. In the acute phase, anti-inflammatory treatment and a period of rest, avoiding excessive movement and sports is necessary. In later life, chronic stiffness and immobility can be helped by regular strengthening and stretching exercises as well as massage and manipulation therapy.

**Scleroderma**

Aches and pains in several joints or tingling, numbness, thickening and swelling at the finger tips may occur at the onset of this connective tissue disease. It is however, characterized by degenerative changes and scarring the skin. Symptoms may be more noticeable in cold weather or during times of stress.

**Scoliosis**

This is an abnormal curvature of the spine, involving side-bending and rotation of the spinal column. The curvature may diagnoses as ‘functional’, in that it has occurred due to muscle and joint imbalances, which may be corrected with osteopathic or chiropractic treatment or physiotherapy. Otherwise, it may be diagnosed as a ‘structural scoliosis’, which means that there is a fixed deformity in the spine, either due to a birth defect (such as a fused vertebra), or a developmental defect (such as a vertebral anomaly which has occurred during the growth phase). A difference in leg lengths can lead to either a functional or structural scoliosis, depending on how the spine has made compensations for this imbalance. 60- 80% of cases occur in girls.

**Sever’s Disease**

This is heel pain in children, due to cartilage damage. Before the heel bone (calcaneus) hardens completely between 8 and 16 years of age, an area of cartilage between to separate areas of bone may become inflamed or broken before they fully fuse to form the heel bone, due to excessive or vigorous activities. X-ray of the foot will not show the damaged cartilage, but will rule out fracture of a bone in the foot. Depending on the degree of damage and severity of pain, the area will heal with anti-inflammatory treatment, cushioning the heel and may also need to be immobilized.

**Shin Splints**

This condition occurs from muscle imbalance in the lower leg, overtraining on hard surfaces, or excessive rolling inwards (over-pronation) of the foot during training or sports. There are 2 types of shin splints:

1. Antero-Lateral Shin Splints, affecting the muscles at the front of the shin bone (tibia) and outer leg muscles. This occurs from the calf muscle at the back of the leg, exerting too much force which has the effect of overstraining the muscles at the front of the leg. It is important to avoid excessive weight bearing sports during the healing phase and continue with a programme of strengthening (the inner thigh, core and hip muscles) and stretching (especially, the calf muscle). Anti-inflammatory or analgesic drugs may be required and ultrasound and massage therapy may aid the recovery process.
2. Postero-Medial Shin Splints, affecting the muscles on the inner aspect of the lower leg and the deep muscles of the calf area, at the back of the leg. Pain may spread down into the foot if excessive weight bearing sports are continued, or if pronation problems are not corrected, i.e. with supportive footwear or orthotics. In severe conditions, the tendon may rupture, or pull away from the bone, requiring surgical repair. Commonly, the condition is treated with anti-inflammatory or analgesic drugs, ultrasound and massage therapy. A programme of strengthening (the core and hip muscles) and stretching (especially, the calf area) is advisable, to aid recovery and avoid reoccurrence of the condition.

**Sinus Tarsi Syndrome**

This is severe pain and inflammation on the inner aspect of the ankle between the heel bone (calcaneus) and the bone above it (the talus). It may occur following an ankle or foot sprains or ligament tears or may be associated with the additional demands on the ankles and feet with weight gain or pregnancy.

**Sjoegren’s Syndrome**

This chronic inflammatory disease, is characterised by the inflammation of mucous membranes, especially in the eyes and mouth. But , arthritis occurs in about 30% of people affected, and has similar affects to symptoms in Rheumatoid Arthritis although usually milder and less destructive.

**Slipped Femoral Epiphysis**

This condition mostly affects adolescent boys and usually starts with a stiff hip followed by difficulty in walking and hip pain which may extend down the inner thigh to the knee. The condition is caused by a slip (or dislocation) of the growth plate at the upper end of the thigh bone and may be corrected with surgery.

**Soft Tissue Inflammation**

A general term to describe the inflamed muscles, tendons, ligaments, and joint capsules, arising from injury or underlying joint problems and muscle imbalances.

**Spasmodic Torticolis**

With this condition, the neck muscles continually spasm, causing sharp neck pains.

Symptoms may be continuous or may occur intermittently. The hand, jaw, face, and the eye lids may be affected. Most commonly this occurs in adults between 30 and 60, but may also occur in new born babies if the neck muscles have been damaged in childbirth. In adults, causes include hyperthyroidism, infection, neck tumours and antipsychotic drugs (and related abnormal facial movements). Depending on the cause, the condition may be treated with drugs or injection therapy, surgical removal of nerves, massage or exercise therapy.

**Spinal Cord Compression**

The spinal cord may be compressed along its course, where it starts at the base of the brain and ends at the 2nd Lumbar Vertebrae. Compression may be caused by a degenerative arthritis, fracture, a ruptured disk, infection (spinal abscess), abnormal blood vessels (arteriovenous malformation), hematoma, cyst or tumour.

**Spinal Stenosis**

This is the narrowing of the canal which lies within the vertebra, which carries the spinal cord to the 2nd lumbar Vertebra, and which continues into the pelvis carrying the peripheral nerves for the lumbar and lower extremity regions. This may occur due to a ruptured disc or degenerative changes in the spine, and may lead to spinal cord or peripheral nerve compression, depending on the level of the spine where it occurs. Stenosis may also occur in a gap (foramina) where the facet of the upper vertebra meets the facet of the lower vertebra to form a facet joint. Compression of a peripheral nerve may occur as it exits the spine via the foramina, due to the formation of a cyst or degenerative changes.

**Spondylolysthesis**

This is the forward movement of one vertebra relative to the vertebra directly below it.  
Commonly in the mid-cervical and the upper lumbar spinal regions. Causes may be a spinal injury, degenerative changes, pregnancy, and hypermobility syndromes. A disk may also be affected and slip forwards together with the upper vertebra, causing compression of peripheral nerves, serving the legs and pelvic region.

**Spondylosis**

A degenerative condition of the spine, affecting middle aged to elderly people.  
The disks and vertebrae of the spine are affected. Spinal Cord or peripheral nerve compression may occur depending on what part of the spine is affected. Commonly, with mild cases, irritation of the soft tissues occurs, causing pain from tight or sore muscles.

**Spondylitis**  
Inflammation of the spine, affecting disks, vertebrae, facet joints and soft tissues, in the affected area of the spine. This may be linked to underlying Spondylosis, Rheumatological conditions, or hypermobility syndromes.

**Stress Fracture (of the foot)**

Excessive impact to the bones of the foot can result in a stress fracture. Running may but excessive strain on the midfoot area (the metatarsals), with the 2nd, 3rd and 4th metatarsal bones being the most vulnerable. Pain occurs at the front of the foot while training and may subside completely at rest initially. If not rested and allowed to heal, the pain will start earlier in the training programme, and eventually severe pain will ensue during training and may persist at rest. The fracture may not be visible on X-ray, but pain at the fracture site and pattern of symptoms can assist with the diagnosis. The bone at the fracture site thickens by 2-3 weeks after it occurs forming a callus. This can be palpated and confirms the diagnosis. Otherwise, a bone scan can confirm the diagnosis earlier, if necessary. The patient should do off-weight bearing exercises (especially for the core, hip and leg muscles) during the healing period, which may take between 1 to 3 months in a fit and healthy individual. If a cast is required, It should be removed within 2 weeks to avoid muscle wasting.

**Sudek’s Atrophy (Reflex Sympathetic Dystrophy)**

This condition is associated with severe injuries to the ankle and foot or other joints such as the wrist, where injury to the joint results in spasms in the neighbouring blood vessels. This limits blood supply to the area and results in muscle wasting. Often severe pain and inflammation of different areas of the foot and hand occur. Rehabilitation should include weight-bearing exercise, so as to maintain a healthy blood supply into the foot and maintain muscle strength as much as possible. Anti-inflammatory treatment or nerve block treatment may be required as well as analgesics.

**Systemic Lupus Erythematosus**

This autoimmune disease causes inflammation in joints, tendons and other connective tissues and organs of the body. Symptoms can range from very mild to debilitating and different symptoms occur in different people, making it initially difficult to diagnose. If the joints are mainly affected, symptoms may resemble Rheumatoid Arthritis. 90% of sufferers have joint inflammation, resulting in joint pain, stiffness and deformity. It occurs mostly in women between 18 and 30 years old.

T

**Temporal Arteritis**

This is a disease of the large arteries, which can affect people over 50 with a predominance of women being affected. Severe headache develops of the temples and across the back of the head.  
Some blood vessels may be obviously swollen and bumpy on the scalp. Visual problems, such as blurred or double vision, blind spots may occur and if left untreated permanent blindness will ensue. Pain in the jaw and tongue while eating is also common.

**Tendinitis**

This is inflammation of a tendon and usually occurs in young people who exercise vigorously, such as in dance and football, or in middle aged and elderly people as tendons become more vulnerable with increasing age, especially if the person suffers with an inflammatory condition, such as arthritis. Tendinitis of the hand is very common, such as Trigger Finger, when the swollen finger flexor tendon can no longer move smoothly inside the tendon sheath (see below). If forced, there is a sudden popping sensation, as the tendon is forced through the tendon. Symptoms will resolve with improving muscle balance at the joint, anti-inflammatory treatment, rest and avoiding overuse of the affected tendon and joint.

**Tenosynovitis**

Inflammation of tendon sheaths commonly occurs with inflammatory joint diseases, such as Rheumatoid Arthritis, Gout and Reiter’s Syndrome. Several joints may be stiff, painful and difficult to move, such as the fingers and a grating sensation may be felt. Symptoms will resolve with improving muscle balance (very gentle movement or stretching initially), at the joint, anti-inflammatory treatment, rest and avoiding overuse of the affected area.

UVWXYZ

**Warning:**  
This glossary is provided as supporting information to website users. Do not attempt to diagnose your own symptoms. Please see your medical practitioner if you are experiencing symptoms. Exercises and information provided on this website are not a substitute for seeing a medical practitioner for a diagnosis of your condition and having medical advice or treatment.

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