

Bone/Joint Conditions



And what they are

Osteoarthritis

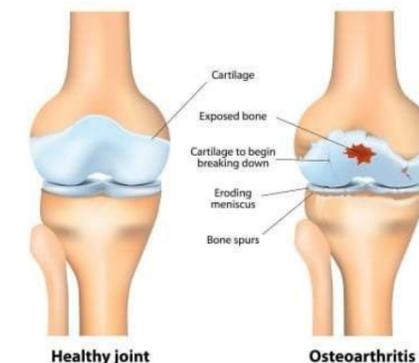
Osteoarthritis is a condition that causes joints to become painful and stiff. It's the most common type of arthritis in the UK. As part of normal life, your joints are exposed to a constant low level of damage. In those cases the body will repair itself so you experience no symptoms. However in the case of osteoarthritis the protective cartilage on the ends of your bones breaks down.

Symptoms of osteoarthritis

According to the NHS and people who experience the condition the main symptoms of osteoarthritis are the following:

- ◇ Swelling and redness
- ◇ tenderness
- ◇ grating or crackling sound when moving the affected joints
- ◇ limited range of motion
- ◇ muscle weakness
- ◇ bony growths can develop

However it is important to note that the severity of osteoarthritis symptoms can vary greatly from person to person, and between different affected joints. In some people the symptoms can be mild and can appear to come and go, however in others it can be continuous and severe making it difficult to carry out activities. Whilst osteoarthritis can be found in any joint, it mostly causes problems in knees, hips and the small joints in the hands.



Causes of osteoarthritis

The exact cause is not known, but several things are thought to increase your risk of developing osteoarthritis, these include:

- ◇ **joint injury – overusing your joint when it has not had enough time to heal after an injury or operation**
- ◇ **other conditions (secondary arthritis) – osteoarthritis can happen in joints severely damaged by a previous or existing condition, such as rheumatoid arthritis or gout**
- ◇ **age – your risk of developing the condition increases as you get older**
- ◇ **family history – osteoarthritis may run in families, although studies have not identified a single gene responsible**
- ◇ **obesity – being obese puts excess strain on your joints, particularly those that bear most of your weight, such as your knees and hips**
- ◇ **being a woman – osteoarthritis is more common in women than men**

How is it diagnosed?

It is down to a GP to determine whether you may have osteoarthritis or not. It normally involves being asked questions and also looking at factors of your life. This will include:

- ◇ **you're aged 45 or older**
- ◇ **you have joint pain that gets worse the more you use your joints**
- ◇ **the stiffness in your joints is not there in the mornings, or lasts less than 30 minutes**
- ◇ **Family history**

Further tests – such as X-rays or blood tests – are not usually necessary, but may be used to rule out other possible causes, such as rheumatoid arthritis or a fractured bone.

Treating osteoarthritis

Osteoarthritis is a long-term condition and unfortunately cannot be cured, however it doesn't necessarily get any worse over time and it can sometimes gradually improve. A number of treatments are also available to reduce the symptoms. The treatment is dependant on how mild or severe the symptoms are. The treatments are as listed:

- ◇ **regular exercise**
- ◇ **losing weight if you're overweight**
- ◇ **wearing suitable footwear**
- ◇ **using special devices to reduce the strain on your joints during your everyday activities**
- ◇ **Painkillers**
- ◇ **structured exercise plan with a physiotherapist.**

In some cases if these have no worked or the damage to a joint is severe surgery may be done to repair, strengthen or replace a damaged joint.

Osteoporosis

Osteoporosis is a health condition that weakens bones, making them fragile and more likely to break. It develops slowly over several years and is often only diagnosed when a fall or sudden impact causes a bone to break (fracture). There is also a stage called osteopenia, this is when a bone density scan shows you have lower bone density than the average for your age, but not low enough to be classed as osteoporosis. However this doesn't always lead to osteoporosis but it is something to be aware of so you can try heading off the likelihood of developing osteoporosis.

Symptoms of Osteoporosis

The following are symptoms of the condition :

- ◇ **Bones that break more easily**
- ◇ **Loss of height over time**
- ◇ **A stooped or hunched posture**
- ◇ **Back pain, which can be severe if a spinal fracture occurs**

There is much information out there about other symptoms but these are the ones that are reported when researching information about the condition.

Causes of osteoporosis

Whilst losing bone density is a normal part of ageing , there are people who lose bone faster and this is something that can lead to osteoporosis and an increased risk of broken bones. Osteoporosis can affect men and women and children but it seen to especially take affect of women who are in early menopause (perimenopause) or in their early years of it which is when they lose bone anyway. Women who have also had their ovaries removed can also be at risk. There are however other factors that can lead to the condition. These include :

- ◇ **taking high-dose steroid tablets for more than 3 months**
- ◇ **other medical conditions – such as inflammatory conditions, hormone-related conditions, or malabsorption problems**
- ◇ **a family history of osteoporosis – particularly a hip fracture in a parent**

- ◇ long-term use of certain medicines that can affect bone strength or hormone levels, such as anti-oestrogen tablets that many women take after breast cancer
- ◇ having or having had an eating disorder such as anorexia or bulimia
- ◇ having a low body mass index (BMI)
- ◇ not exercising regularly
- ◇ heavy drinking and smoking

How is osteoporosis diagnosed?

A doctor is someone who will suspect the condition based on symptoms and will work out future risk of breaking a bone online programme, such as FRAX or Q-Fracture. However the main way of diagnosing the condition is through a bone density scan otherwise known as a DEXA scan. This is to measure your bone strength. It's a short, painless procedure that takes 10 to 20 minutes, depending on the part of the body being scanned. Your bone density can be compared to that of a healthy young adult.

Explaining the DEXA scan

According to NHS the difference is calculated as a standard deviation (SD) and is called a T score.

Standard deviation is a measure of variability based on an average or expected value. A T score of:

above -1 SD is normal

between -1 and -2.5 SD shows bone loss and is defined as osteopenia

below -2.5 shows bone loss and is defined as osteoporosis

Treatment of Osteoporosis

Treatment for osteoporosis is actually more based on treating and preventing broken bones, and taking medicine to strengthen your bones. This will likely be through medication to strengthen the bones. There is not much else that is said about the treatment as it relies on many factors like age, sex and a DEXA scan result.



Dupuytren's contracture

Dupuytren's contracture is when 1 or more fingers bend in towards your palm. The affected fingers can't straighten completely and knots of tissue form under the skin. They eventually create a thick cord that can pull the fingers into a bent position. The condition gradually gets worse with time.

Symptoms of Dupuytren's contracture

There are early symptoms of the condition and there are the advanced symptoms of the condition. The early symptoms are :

- ◇ **Nodules:** Small, firm lumps form in the palm, most often near the base of the ring and little fingers. They may be tender initially, but the soreness usually subsides.
- ◇ **Puckered skin:** The skin on the palm may become dimpled or pitted.
- ◇ **Thickening:** The nodules can thicken and form tough cords of tissue beneath the skin.

The advanced symptoms are:

- ◇ **Contracture:** The cords tighten and pull the fingers inward toward the palm, making it difficult to straighten them.
- ◇ **Functional limitations:** This can make everyday tasks difficult, such as opening your hand or gripping objects. The ring and little fingers are most commonly affected, but any finger can be involved.
- ◇ **Inability to flatten hand:** A common test is to see if you can lay your hand flat on a table, palm down. If you can't, it's a sign of contracture.

Dupuytren's contracture mainly affects the ring and little fingers. It's common to have it in both hands at the same time. It tends to get slowly worse over many months or years. It's not usually painful, but it can affect how you use your hand.

Causes of Dupuytren's contracture

The exact cause of the condition is not known but according to the NHS there are factors and they are the following:

- ◇ having a family history of the condition
- ◇ smoking
- ◇ drinking lots of alcohol
- ◇ having diabetes or epilepsy

It is also unknown if you can prevent it or stop it from returning.

Diagnosing Dupuytren's contracture

Diagnosis of the condition is typically confirmed through observation and palpation, and further tests are rarely necessary unless other conditions are suspected. A Physical examination will consist of:

- ◇ **Visual inspection:** The doctor will look for changes in the palm, such as thickening of the skin, pitting, nodules (lumps), and cords (thick bands of tissue).
- ◇ **Palpation:** They will feel for the firmness and location of any nodules and cords.
- ◇ **Functional assessment:** A key part of the diagnosis is testing the ability to straighten the fingers. The doctor may ask you to perform a "tabletop test," where you try to place your palm flat on a hard surface.
- ◇ **Measurement:** If there are contractures (fingers bent towards the palm), the doctor will measure the degree of deformity

No specific tests are usually needed: The diagnosis is based on the physical signs alone. Blood tests or X-rays: These may be ordered to rule out or check for other conditions, such as diabetes or liver disease, which are associated with Dupuytren's contracture.

Treatment of Dupuytren's contracture

Dupuytren's contracture does not usually need any treatment in the early stages. If it's severe and you cannot straighten your fingers or use your hand normally, a GP may refer you to a specialist for treatment.. You will have advice on exercises to do. It is important to note that your finger may not be completely straight after treatment, and might not be as strong and flexible as it used to be. The contracture could also come back after a few years. There are 3 main types of treatment:

- ◇ **surgery to remove the affected tissue in the hand (fasciectomy)**
- ◇ **using a needle to make small cuts in the affected tissue (needle fasciotomy)**
- ◇ **surgery to remove the affected tissue and skin (dermo fasciectomy)**

Fasciectomy- Surgery to straighten the finger which includes a cut is made along your palm and finger so the surgeon can straighten it. Recovery time is 4-12 weeks.

Needle fasciotomy-Using a needle to straighten the fingers which includes a needle is inserted into several places along your palm and finger to loosen and straighten it. Recovery time is about 2 weeks.

Dermo fasciectomy- Using surgery and a skin graft to straighten the fingers which is Similar to a fasciectomy, except an additional area of skin is removed; a skin graft from elsewhere in the body is used to replace the removed skin. 2 procedures are needed so longer recovery time.

Fasciectomy and dermo fasciectomy are two procedures that have a low risk of the condition of coming back. All require either are general anaesthetic or a local and for at least the first two on the list you are normally only in hospital for the day.

Tricompartmental Osteoarthritis

Tricompartmental osteoarthritis is a type of severe form of knee arthritis where the cartilage in all three compartments of the knee joint has worn away. It is the most complex type of knee osteoarthritis and affects only 1.5% of knee osteoarthritis sufferers.. There are 3 compartments:

- ◇ **The patellofemoral compartment is in the front of the knee where the kneecap and thigh bone are.**
- ◇ **The medial compartment refers to the inside compartment of the knee joint.**
- ◇ **The lateral compartment refers to the outer compartment of the knee.**

Osteoarthritis can affect any of these compartments, or any combination of them, although it's most common in the medial (inner) compartment. When one compartment of the knee is affected, this is called Unicompartmental OA. When all 3 compartments of the knee are affected, this is tricompartmental osteoarthritis.

Symptoms of Tricompartmental Osteoarthritis

The main symptom of tricompartmental osteoarthritis in the knee is that the pain that worsens over time. It may be most uncomfortable and stiff in the morning when you wake up. You also might not be able to move your knee as freely as you used to, and you may notice a scraping or crunching feeling (called crepitus).

Other symptoms of it includes

- ◇ **Swelling**
- ◇ **Trouble with stairs**
- ◇ **More pain in rainy weather or after hard exercise**
- ◇ **Difficulty straightening your leg all the way**
- ◇ **A feeling of buckling in the knee**
- ◇ **Appearance that your knees have shifted in (knock-kneed) or out (bow-legged)**

Causes of Tricompartmental Osteoarthritis

Normal wear and tear is a big part of the reason you get osteoarthritis, especially after age 50. But an injury, or constant lifting, jarring, or bending also might cause it or make it worse. Your genes, smoking habits, and body weight can also affect your risk for tricompartmental OA. Other contributing factors are

- ◇ **Gender: Women, particularly after menopause, are more likely to develop knee osteoarthritis.**
- ◇ **Metabolic diseases: Conditions like diabetes and hemochromatosis (excess iron) are associated with a higher risk of osteoarthritis.**
- ◇ **Developmental abnormalities: Being born with bone deformities, such as knock knees or bowlegs, can place abnormal stress on the joint, leading to cartilage loss.**
- ◇ **Other conditions: Some sources mention that autoimmune disorders can also be a trigger.**
- ◇ **Posture and gait: Poor posture and an abnormal walking pattern can put uneven stress on the knee joint over time.**

Diagnosis of Tricompartmental Osteoarthritis

Your doctor will ask about your health history and symptoms. They might take a sample of your blood to check for levels that suggest arthritis. Imaging of your knee with X-rays or CT scan or MRI can help to zero in on the problem area and make a diagnosis, but they'll also do the following :

- ◇ **Test your knees' range of motion**
- ◇ **Feel for tenderness or bony lumps**
- ◇ **Watch how you stand and walk**

Treating Tricompartmental osteoarthritis

Treatment for tricompartmental osteoarthritis focuses on managing symptoms and preventing further progression, as there is no cure for the condition. The options are as follows:

- ◇ **Meds for pain and swelling, like nonsteroidal anti-inflammatories (NSAIDs)**
- ◇ **Knee brace**
- ◇ **Physical therapy**
- ◇ **Ice and heat therapy**
- ◇ **Injections of hyaluronic acid into your knee (viscosupplementation)**
- ◇ **Weight management: Losing weight reduces pressure on the knee joint.**
- ◇ **Low-impact exercise: Activities like swimming, cycling, walking, and tai chi help strengthen muscles and improve flexibility without stressing the joint.**

Surgical options include:

- ◇ **Replacement of cartilage on the bone by grafting tissue**
- ◇ **Replacement of all or part of the knee joint -- bone and cartilage (arthroplasty)**

Degeneration/Herniated Disc

Degenerative Disc Disease

This occurs when the cushioning in your spine begins to wear away. After age 40, most people experience some spinal degeneration. But the condition doesn't always cause symptoms. When it does, neck and back pain can be intense. DDD can cause mild to severe pain, either acute or chronic, near the involved disc, as well as neuropathic pain if an adjacent spinal nerve root is involved.

Herniated Disc

This is when a soft cushion of tissue between the bones in your spine bulges outwards. It's painful if it presses on nerves. It can occur in any part of the spine but mostly in the lower back. Depending on where the herniated disc is it can result in pain, numbness or weakness in an arm or a leg.

Symptoms of DDD and Herniated disc

The most common symptoms are neck and back pain. You may experience the following :

- ◇ **Comes and goes, lasting for weeks or months at a time**
- ◇ **Radiates down your lower back and buttocks, thighs, arms or hands**
- ◇ **Worsens with sitting, bending or lifting**
- ◇ **Stiffness, numbness, tingling and muscle weakness**

As you can see they have both have similar symptoms with the difference being that a herniated disc can sometimes have no symptoms.

Causes of DDD and Herniated disc

Disc degeneration is caused by aging and genetics, but is accelerated by risk factors such as obesity, smoking, and physical strain from heavy lifting or repetitive movements. Other contributing factors include acute injuries, poor posture, and a sedentary lifestyle, which can weaken spinal support muscles and cause wear and tear over time.

A herniated disc can happen due to the following:

- ◇ **ageing**
- ◇ **exercising too hard**
- ◇ **lifting heavy objects the wrong way**
- ◇ **sitting down or driving for long periods of time**
- ◇ **being inactive or overweight**

Again you can see that there are many similarities to what can cause these two conditions as well as their symptoms.

Diagnosing DDD and Herniated Disc

Diagnosis of disc degeneration involves a combination of medical history, a physical exam, and diagnostic imaging like X-rays, CT scans, or MRIs to evaluate spinal discs and surrounding nerves. A doctor will assess your symptoms, range of motion, reflexes, and muscle strength, then use imaging to confirm the findings and identify any nerve compression or bone spurs. In some cases, a doctor may order a provocative discogram, where a dye is injected into a disc to make it more visible on an X-ray and help pinpoint a painful disc.

A herniated disc is diagnosed through a combination of a physical examination, medical history, and imaging tests like an MRI or CT scan. During the physical exam, a doctor will assess your nerve function, strength, and pain response by observing movements like walking, sitting, or lifting your legs. Imaging tests are then used to confirm the diagnosis and pinpoint the exact location of the affected disc.

Another test is the Straight Leg Raise (SLR) test: This is a common test where you lie down and the doctor lifts your leg straight. Pain in the back or down the leg within a certain range of motion can indicate a herniated disc. Another test they do is Myelogram: this is when a dye is injected into the spinal fluid before a CT scan to better visualize the spinal cord and nerves. Electromyography (EMG) and nerve conduction studies is another test done for cases: These tests measure the electrical activity in your muscles and nerves and can help confirm nerve damage and pinpoint its location.

Treatment of DDD and Herniated Disc

Usually, your healthcare provider will recommend non-invasive degenerative disc disease treatment options first. Your treatment may include: Physical therapy, medications: Taking nonsteroidal anti-inflammatory drugs (NSAIDs), acetaminophen, neuromodulation medication or steroids. Steroid injections: Injecting medicine near your spinal nerves, discs or joints to reduce inflammation and pain. Radiofrequency neurotomy: Using electric currents to burn sensory nerves and prevent pain signals from reaching your brain. Surgery can be suggested if pain is persistent and the following surgeries will be :

- ◇ **Discectomy:** Removing part of a spinal disk to relieve pressure on your nerves
- ◇ **Foraminotomy:** Expanding the opening for your nerve roots by removing tissue and bone
- ◇ **Laminectomy:** Taking out a small portion of bone from your lower spine (lamina)
- ◇ **Osteophyte removal:** Removing bone spurs (osteophytes)
- ◇ **Spinal fusion:** Connecting two or more vertebrae to improve stability

The same type of treatments also go for herniated disc treatment. Non-invasive treatments listed above. The difference between the two is normally the electric currents and the use of different types of medication. The other difference is surgery for herniated disc is In nearly all cases, surgeons can remove just the protruding portion of the disk. Rarely, the entire disk must be removed. In these cases, the vertebrae might need to be fused with a bone graft. Rarely, your surgeon might suggest the implantation of an artificial disk.



Costochondritis

Costochondritis is inflammation where your ribs join the bone in the middle of your chest (breastbone). It can cause sharp chest pain, especially when moving or breathing. It usually gets better on its own over time.

Symptoms of costochondritis

Costochondritis may cause sharp pain in the front or side of your chest.

- ◇ **The pain may be worse when:**
- ◇ **moving your upper body**
- ◇ **lying down**
- ◇ **breathing deeply**
- ◇ **you press the middle of your chest**

Those sections of cartilage are your costochondral joints. They're stiff and strong to help your ribcage protect organs like your heart and lungs. The inflammation can make breathing or moving your chest very painful. The pain can start suddenly or develop slowly and spread (radiate) across your chest.

Symptoms of costochondritis

Everyone experiences pain differently. Costochondritis usually feels like a low ache in your chest near your affected ribs. The pain might feel suddenly sharp or stabbing when you move your chest or torso. This pain can worsen for reasons such as:

- ◇ **Breathing, especially taking deep breaths or breathing heavily.**
- ◇ **Coughing, sneezing or vomiting.**
- ◇ **Twisting your torso.**
- ◇ **Reaching overhead (like grabbing something off a high shelf).**
- ◇ **Hugging someone.**
- ◇ **Exercising.**
- ◇ **Lying down on your affected side.**

Causes of costochondritis

According to NHS it is not always known what causes the condition but there are some causes like :

- ◇ an injury to your chest
- ◇ repetitive upper body movements, like lifting
- ◇ coughing a lot
- ◇ Infection

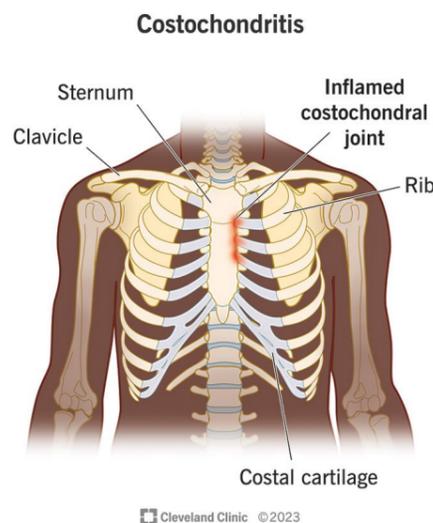
Sometimes it may be caused by a problem with the joints in the back, or another underlying condition like fibromyalgia or rheumatoid arthritis.

Diagnosing costochondritis

Diagnosing costochondritis is usually a diagnosis of elimination. This means a healthcare provider might do an exam and perform tests to rule out other, more serious conditions before diagnosing costochondritis. A physical examination will consist of a doctor feeling your chest and ribs. They might press on your chest to feel how sensitive you are and to pinpoint where your pain is most intense (localized). They'll examine your torso for other signs of injuries or conditions that might be causing your symptoms. A blood tests will be carried out to check for infections or other issues. Other tests like x-ray, MRI,, CT will be done to rule out other rib pains.

Treating costochondritis

Costochondritis usually gets better on its own, over time. It can last for a few weeks to several months. Painkillers that help with inflammation, like ibuprofen, may be recommended to help with the pain. If you have very bad pain that does not get better over time, you may be offered a steroid injection to help reduce inflammation or local anaesthetic to ease the pain. Some people with costochondritis get better without treatment, but don't assume it'll go away on its own.



Information provided by

www.nhs.uk

medlineplus.gov

en.wikipedia.org

my.clevelandclinic.org

mayoclinic.org

Important : Please see your GP about any of these conditions if you think you may have them. We are not doctors so always see your own doctor about any health concerns. This is an information leaflet made easy for people to access and all using information researched and personal experience. We are here to help as a support group as that is what we are. Thank you.

