



YOUR GUIDE TO OSTEOARTHRITIS (OA)

MUSCULOSKELETAL

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Introduction

This guide is based on the latest medical research in the field and to the best of our knowledge contains the best advice available.

This guide is complimentary to other medical services and is not intended as a substitute for a health care provider's consultation. Never disregard medical advice or delay in seeking it because of something you've read in this guide.

Many people have found quick and lasting relief from their pain by acting upon the information provided, but everyone decides for themselves what to do with this information. If you are uncertain about any of the information or advice provided in this guide, please consult your GP or Health Professional.

When consulting your health professional, it is wise to take this guide with you to show them.

Overview

Osteoarthritis (OA) is a common degenerative condition affecting the joints in the body. It is one of the most common types of arthritis.

An estimated 8.5 million people in the UK suffer from osteoarthritis, and around 60-70% of people over the age of 70 years old will have some OA symptoms.

Osteoarthritis usually starts with changes in the components that form part of the joint, such as a loss of cartilage, thickening of the bony parts, which in turn causes swelling (inflammation) and pain.

UNDERSTANDING THE JOINT

A joint is where two bones meet, allowing for movement and flexibility in the body. The muscles and tendons around the joint cause the bones to move.

The cartilage is a smooth, hard tissue that covers the end of the bone. The cartilage helps to act as a shock absorber which minimizes friction between two bony ends. There is a fluid called synovial fluid which is found in the space between two bones. This helps to lubricate the joint, allowing for smooth movement. The synovium is a tough outer capsule of tissue surrounding the joint. The synovium, together with the surrounding muscles and ligaments help to provide stability and support to the joint.

WHAT HAPPENS IN AN OSTEOARTHRITIC JOINT?

Osteoarthritis is commonly known as a 'wear and tear' condition; however it is still uncertain as to how the joint damage occurs.

Changes that occur in a joint with osteoarthritis include:

- Progressive damage and wear to the joint cartilage.
- New pieces of bone form on the edge of the bone. These are called osteophytes, and cause joint pain and inflammation.
- The space between the two bones, or the joint space, becomes narrower, allowing less freedom for movement.
- The joint capsule may thicken
- Due to the pain, we often try to protect the area, which can lead to weakening of the surrounding muscles. This weakening means the muscles cannot then effectively support the joint.

Osteoarthritis can occur in one or more joints in the body.

The most common ones affected include the hips, knees, back and smaller joints such as the fingers.

What Causes Osteoarthritis?

The changes within the joint cause the pain and swelling that is felt when suffering from osteoarthritis, however it is still uncertain what leads to these joint changes occurring. It may result from the normal aging process, or from no known cause. It has been associated with the following recognised factors:

Obesity: Extra weight can place extra stress and strain on a joint, especially on the weight bearing joints such as the hips and knees.

Age: OA becomes more common with increasing age. Our body's mechanism of repair may become less efficient as we get older which contributes to the onset of OA.

Genetics: There may be a family history or inherited tendency to develop OA. This could be linked to the unique collagen components within the cartilage and the bone density that we inherit with our genes.

Trauma: A previous injury or fracture may lead to premature OA

Activity: High impact sports and occupations that require frequent bending or heavy manual labour can increase the risk of developing OA.

WHO IS AT RISK?

Primary OA develops when there is no specific underlying cause, and it mostly occurs in people over the age of 50 years old. It develops in previously healthy joints. Most people over the age of 65 will have some form of OA and it is related to, but not caused by, age.

Secondary OA develops in previously abnormal or injured joints, and this is usually the cause of the OA. This type of OA can occur in younger people. Examples of this type include OA caused by congenital disorders, inflammatory diseases, serious injuries or deformed joints.

OA seems to be more common in women than in men (although this gets less as we get older), and hip OA occurs more frequently in Europeans than in Black or Asian populations.

DIAGNOSIS

There is no definitive test that is used to diagnose Osteoarthritis, however your GP will be able to make a diagnosis by asking you questions regarding your symptoms and by carrying out an examination of your joints. Your GP may suspect that you have OA if you:

- are over 45 years of age
- have morning stiffness that lasts about 30 minutes, or goes away with movement
- have persistent joint pain, which worsens with movement
- increase in joint pain in colder weather

Further tests such as X-rays or blood tests can be done to confirm the diagnosis, and is often used to rule out any other type of arthritis or injury that could be causing these symptoms.

Signs and symptoms

Osteoarthritis symptoms usually develop slowly and gradually. OA commonly affects the hips, knees, fingers, thumb joints, and the lower spine. It can affect the shoulders, elbows, wrists, ankles and toes, but this is less common. In many cases, OA will develop in just one or two joints, but can develop in many joints.

In some cases of OA you will not experience any symptoms at all. Changes in the joint would appear on an X-ray but there would have been no pain or symptoms occurring.

When symptoms do occur, the main symptoms experienced may include one or more of the following:

Pain - This may worsen if you haven't moved the joint for a while (i.e.: after sitting for a prolonged period).

Stiffness - This is often worse first thing in the morning, but improves within about 30 minutes once you start to move about. Stiffness can also lead to decreased movement.

Loss of movement - If the joints are badly affected, this can affect mobility and movement.

Grating or cracking - a sound or sensation within your joint during normal movement and not just when the joint is forced for example: 'clicking' your fingers.

Weakness - of the surrounding muscles if the joint has been too painful to move, or when we are too scared to exercise because of the pain. This is why it is important to always remain active and exercise when possible.

Swelling - this can occur in the smaller joints of the fingers or toes, but is actually not very common in the larger joints. If you do notice unusual swelling in the larger joints (for example the knee or hip), it is wise to consult your GP.

How severe is the OA?

Osteoarthritis is classified into 5 stages or 'Grades':

Grade 0

- Normal knee joint
- No loss of cartilage and no deformation

Grade 1 (mild)

- Some cartilage loss
- Joint space narrowing
- Osteophytes (small growths on the bone) may be seen

Grade 2 (mild)

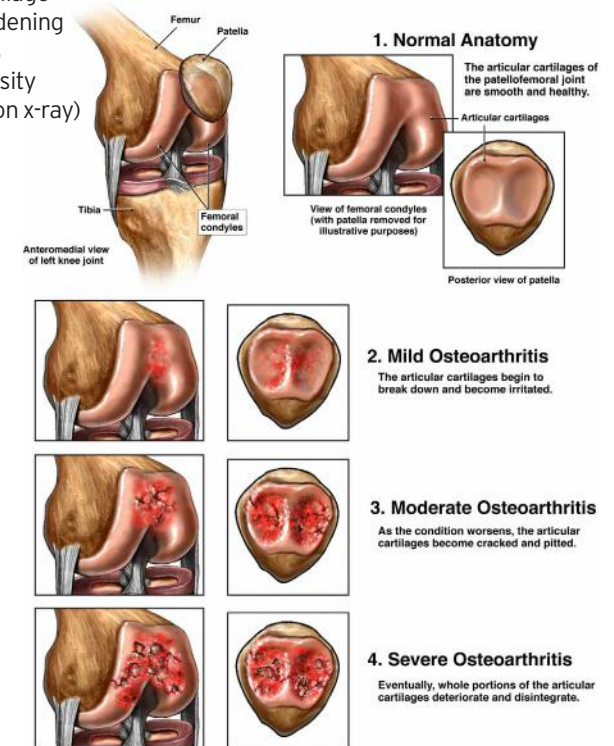
- Increased changes in the bone under the cartilage
- Increased bone hardening (sclerosis) and cysts
- Change in bone density (whitening of bone on x-ray)

Grade 3 (moderate)

- Some deformations on the edge of the bone
- Rough edges
- Increased joint space narrowing

Grade 4 (severe)

- Complete loss of joint space
- Definite deformity of bone ends
- Changes in joint shape can cause the bone contour to be altered



What treatment will I receive?

Treatment is aimed at controlling pain and swelling, while maintaining movement. The primary treatment options include exercise and medication, which is aimed at easing symptoms and preventing OA from affecting your everyday life. If your symptoms are mild to moderate, you may not need any treatment other than exercise and making small changes to your lifestyle.

Unfortunately, OA cannot be cured, or prevented, but small lifestyle modifications and adjustments can have a huge impact on minimising the effect of OA in activities of daily living.

1. Exercise is aimed at treating and managing OA by keeping the joints healthy, maintaining movement and strengthening surrounding muscles to lessen the strain on the joints, and improving posture. The benefits of exercise are best felt when the exercise is done regularly (3-4 times a week) and for 20 - 30 minutes (although this can be cumulative, such as doing 10 minutes of exercise at three different times during the day). If you are not used to exercising, always remember to start slowly so that you should feel just a little bit tired at the end. You can always build up and do more on the next session. This will also help to prevent any unnecessary flare ups of your symptoms.

Try to include aerobic exercises (exercise which gets your heart beating faster) such as cycling, swimming and walking, which are safe and easy on your joints. Strengthening exercises can be carried out using small weights or tubing. These help to improve muscle strength to minimise the stress and strain on your joints. Classes such as yoga and pilates are also safe forms of exercising, but remember to keep within your own capabilities.

If you do not usually participate in any sport, then it is advisable to start with sports such as bowls, badminton, tennis or golf, which are relatively easy on your joints. Try to avoid high impact, competitive sports such as rugby or football, especially if they are new to you as these could lead to injury or symptom flare-ups.

For grade 4 and 5 OA it is recommended to start with exercises which are non-weight bearing. Start performing certain exercises in a swimming pool while there is no weight on the joints. Increase this to weight bearing exercises once you are ready.

2. Lifestyle Modifications There are a number of ways in which you can help to ease your symptoms. One way is by maintaining a healthy body

weight. If you are overweight, more stress and strain is put on your joints. If you need to lose weight, a good way to achieve this would be to start exercising regularly and adopting a healthy eating plan. The benefits of a healthy body weight go far beyond relieving the symptoms of OA.

Other lifestyle changes can include wearing insoles, or having a pair of shoes that provide effective support. In more severe cases, the use of a walking aid, or support brace (like a knee brace) can help to ease symptoms.

Using aids such as cold packs and ice massage is effective in reducing pain, and there is some evidence for the use of TENs machines (transcutaneous electrical nerve stimulation), although this is not conclusive.

3. Physical Therapy may include cold treatments, massage, stretching and traction. It is also aimed at giving advice on lifestyle changes, and many of the treatments can be carried out at home, enabling self management in the long term.

4. Medication such as analgesics, provide short term pain relief, and anti-inflammatory drugs are used to reduce the swelling in the joint. In addition, a local corticosteroid injection may occasionally be given to

reduce pain and swelling. Your GP will be able to prescribe the best medication for you.

5. Dietary Considerations and supplements such as Glucosamine, Chondroitin, Omega-3 fatty acids, and various vitamin supplements (Vitamin C, E, D, D3, B9) have been shown to have some benefit in reducing OA symptoms, although the significance and effect of these supplements in the treatment of OA still remains uncertain.

6. Surgery is rare in OA sufferers. However on occasions where the joint is severely damaged, the joint may need to be replaced with an artificial joint. Knee and hip replacements can occur in people with OA, and the success rate for this type of surgery is very high. However, surgery still brings some risk, and will only be carried out in severe cases, or where conservative treatment has failed.

Helpful hints

OA can go through phases of minimal symptoms to painful flare ups. For obvious reasons, it is better to prevent the pain, or at least minimise it, rather than try and treat it when it flares up. This mainly involves keeping active, but also protecting the joint from excessive and painful movements. Joint protection is important whilst you are at home and work, and when you are active (incl. Walking, driving, shopping)

- Avoid strain on hands which pushes fingers towards the little finger, i.e. resting head on hands, using knuckles to push up from a chair.
- Avoid gripping things too tightly.
- Spread strain over as many joints as possible i.e. use both hands to carry objects or use a trolley.
- Be aware of the position of your joints whether resting or working.
- Use labour saving aids and gadgets. These not only alleviate strain on your joints but also enable you to be as independent as possible.

PERSONAL ACTIVITIES OF DAILY LIVING

Dressing

- Handles on items such as toothbrushes and razors can be enlarged to reduce grip required and therefore strain through your hands.

- Products such as pump action toothpaste tubes and roll on deodorants may be easier to use than conventional tubes and aerosol canisters.
- If bathing or showering is a problem there are several bathing aids which are available. A non-slip mat is a good start.
- Take care when choosing garments – think before you buy! Loose fitting clothes will be easier to take on and off.
- Fastening may be difficult. Front fastenings may be easier to grip. Hooks, elastics and velcro are available if you have difficulty doing up buttons or laces.

Washing

- Ensure you do not stoop over the wash basin, especially if you have pain/stiffness in your neck. If necessary sit at the sink.
- Long handled brushes/sponges are available to assist washing/drying. A converted towel with a loop on each end is particularly useful if you have painful shoulders.
- If you have difficulty handling soap, think of alternatives e.g. pump dispenser, soap on a rope.
- Invest in a towelling robe to wear after a bath or shower to reduce the need to towel yourself dry.

DOMESTIC ACTIVITIES

You may find that some tasks of your daily living may become a little difficult. Here are some hints or ideas to make these tasks a little easier.

Household Tasks

- Avoid heavy housework tasks if at all possible. Light weight steam irons are available and adjustable ironing boards all make ironing a little easier. There is no reason why you should not sit and iron.
- It may be easier to use push on pegs rather than using pegs with a spring mechanism.
- Whatever the activity, it is advisable to do a little at a time and take frequent breaks.

Kitchen tasks

- The layout of the kitchen is important in reducing the amount of walking, stretching to cupboards and bending.
- Position regularly used items together for easier access.
- Be aware when choosing electrical goods. See that you can operate them easily i.e. ensure control buttons are large enough to grip effectively and that the object is not too heavy. Also check that it is easy to clean.
- Avoid using a twisting motion with the hands when opening jars, or

wringing out cloths. It is best to use jar-opening gadgets and wring-out cloths by wrapping them around the tap.

- Swivel blade vegetable peelers will reduce wrist movement and those with a large handle will provide a comfortable grip.
- Light weight cooking pans/kettles are much easier to use and reduce strain through your joints.
- Padding handles on cutlery and utensils will encourage a large, more comfortable grip and reduce pressure required for use.
- There are a number of easier methods of chopping vegetables which also reduce strain through your joints.
- Using electric equipment such as mixers and tin openers all help to reduce the work involved, and save your energy for other activities.
- Other small pieces of equipment are available to assist with kitchen tasks. These include: Kettle tipper; Electric can opener; Jar opening gadgets; Easy opening scissors; Adaptable cutlery; Lightweight crockery.

REMEMBER!
LOOK AFTER YOUR JOINTS
AND KEEP YOUR MUSCLES
STRONG!

What is the outlook (prognosis)?

Although Osteoarthritis cannot be cured, it does not have to be a limiting factor in our daily lives!

Rest and exercise must be balanced. Too much rest will weaken the muscles surrounding the affected joint, causing additional pain and stress on the joint. On the other hand, repetitive activities at home or in your job can cause additional stress and overuse of the affected the joints.

Emotional reactions to the pain and limitation can lead to feelings of depression and anxiety, which make

it more difficult to cope with or overcome symptoms of OA. Your GP will be able to refer you to a suitable health professional should you need it. Depending on the joints affected, the severity of the OA, results of treatment, and the individual's job duties, it can lead to temporary disability (lasting anything from a couple of days to permanent disability). Disability in OA sufferers is not common, and most will learn to successfully adapt their lifestyle and activities to overcome the effects of OA.

FURTHER HELP

Arthritis Care Helpline: 0800 800 4050 www.arthritiscare.org.uk

Contact us

This guide is designed to assist you in the self-management of your injury/condition.

We are here to assist your recovery in the shortest but safest possible time. If you have any uncertainties or queries regarding the information, please do not hesitate to contact us on:

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