

Malignant spinal cord compression (MSCC)

This information is about a rare condition called malignant spinal cord compression (MSCC). It affects people with certain cancers that have spread to the bones in the spine, or have started in the spine.

What is malignant spinal cord compression?

Malignant spinal cord compression (MSCC) occurs when cancer cells grow in, or near to the spine, and press on the spinal cord and nerves.

This results in swelling and a reduction in the blood supply to the spinal cord and nerve roots. The symptoms of spinal cord compression are caused by the increasing pressure (compression) on the spinal cord and nerves.

Any type of cancer can spread to the bones of the spine, which may lead to spinal cord compression. However, it is more commonly seen in people with cancers of the breast, lung, or prostate, and people who have lymphoma or myeloma.

Remember, MSCC only occurs in a small number of people.

Signs and symptoms

If your doctor has told you that you are at risk of MSCC, or you think you might be, let your doctor know immediately if you have any of the following symptoms:

- Back pain (the first symptom is usually any unexplained back pain, which may be mild to begin with, and which lasts for more than one or two weeks). The pain may feel like a 'band' around the chest or abdomen, and can sometimes radiate over the lower back, into the buttocks or legs.
- Numbness or 'pins and needles' in toes and fingers, or over the buttocks.
- Feeling unsteady on your feet, having difficulty with walking, or your legs giving way.
- Problems passing urine (these may include difficulty controlling your bladder, passing very little urine, or passing none at all).
- Constipation or problems controlling your bowels.

These symptoms can also be caused by a number of other conditions. It is very important to let your doctor know if you have any of these symptoms so that they can be investigated.

The earlier MSCC is diagnosed, the better the chances of the treatment being effective.

How it is diagnosed

Before your doctor can be sure whether these symptoms may be caused by spinal cord compression, a number of tests will have to be done. These may include:

MRI (magnetic resonance imaging) scan

This test uses magnetism to build up a detailed picture of areas of your body. During the scan you will be asked to lie very still on a couch inside a long tube for about 30 minutes. It is painless but can be uncomfortable, and some people feel a bit claustrophobic during the scan. It is also noisy, but you will be given earplugs or headphones.

Some people are given an injection of dye into a vein in the arm, but this usually does not cause any discomfort.

CT (computerised tomography) scan

A CT scan takes a series of X-rays to build up a three-dimensional picture of the inside of the body. The scan is painless and takes from 10-30 minutes. CT scans use a small amount of radiation, which will be very unlikely to harm you and will not harm anyone you come into contact with. You will be asked not to eat or drink for at least four hours before the scan. A CT scan may be used to find exactly where the tumour is or to check for any spread of the cancer.

Most people who have a CT scan are given a drink or injection to allow particular areas to be seen more clearly. This may make you feel hot all over. Before having the injection or drink, it is important to tell the person doing this test if you are allergic to iodine or have asthma.

Bone scan

This scan does not diagnose MSCC but may be done to check if there are any abnormal areas inside the bone itself.

Treatment

Treatment should be started as soon as possible after diagnosis. This is to prevent permanent damage to the spinal cord, which can result in paralysis.

The choice of treatment depends on several factors, including the type of cancer, the area of the spine affected, and your general fitness. The most common treatment is radiotherapy, although surgery and chemotherapy are also sometimes used.

There are some risks associated with treatment to the spine and your doctor will discuss these with you. They will usually ask you to sign a form saying that you give your permission (consent) for the hospital staff to give you the treatment. No medical treatment can be given without your consent.

The aim of treatment is to shrink the tumour and to relieve pressure on the nerves. You are free to choose not to have the treatment and the staff will explain what may happen if you do not have it. You don't have to give a reason for not wanting to have treatment, but it can be helpful to let the staff know your concerns so that they can give you the best advice.

Treatment usually involves a combination of the following:

Bedrest

Your doctor will usually advise complete bedrest, and at first you may need to lie flat on your back. This is to prevent any further damage to the spinal cord being caused by unnecessary movement. During, and after treatment, you will have frequent physical examinations by your doctor. This involves a detailed check of your nervous system (examining your range of movement, reflexes and sensation to touch). This helps the doctor to see any improvement in your symptoms, as well as to decide when it is safe to start getting up and about again.

Steroids

High doses of a steroid called dexamethasone are usually started immediately if spinal cord compression is suspected. The steroids help to reduce pressure and swelling around the spinal cord, and can quickly relieve symptoms such as pain. They are gradually reduced over time, depending on the improvement of symptoms, and after starting other treatment such as radiotherapy and surgery.

Radiotherapy

Radiotherapy is the use of high-energy rays to destroy the cancer cells and is the commonest way to treat spinal cord compression. It is usually used on its own, or occasionally alongside other treatments such as surgery. It is given by directing radiotherapy rays at the tumour from outside the body – known as external radiotherapy. Radiotherapy is given as a short course of treatment, usually over one or two weeks. It may be given for up to four weeks for myeloma and lymphoma. Radiotherapy will be started as soon as possible after MSCC is diagnosed.

Surgery

Only a small number of people will need to have an operation to treat their spinal cord compression. This will depend upon several factors, including the type of tumour, where it is situated and how unstable the spine may be.

The aim of surgery is to remove as much of the tumour as possible and relieve pressure within the spinal canal.

Surgery may involve removing several parts of the bones that make up the spine (vertebrae), as well as removing as much of the tumour as possible, without weakening the spine. The common surgical techniques used in this situation are called anterior stabilisation and debulking of tumour, or decompression laminectomy. This surgery may also involve stabilising the spine further by using metal rods or bone grafts. Your doctor or nurse will explain the operation in more detail if surgery is appropriate for you.

Radiotherapy is sometimes given after surgery to treat any remaining tumour that cannot be removed by surgery, or if the tumour comes back after initial treatment.

Chemotherapy

Chemotherapy is the use of anti-cancer (cytotoxic) drugs to destroy cancer cells. It is occasionally used to treat spinal cord compression. It may be used for tumours that are sensitive to chemotherapy such as lymphoma or small cell lung cancer.

Chemotherapy and hormone therapy can also be used after radiotherapy/surgery for certain cancers, such as breast and prostate.

Coping with symptoms

Pain control

If you are experiencing pain, your doctor or nurse will discuss ways of controlling this with you. You may be given different drugs to help with pain and these will be assessed regularly to make sure they are effective.

Bladder symptoms

Your doctor and nurse will monitor how well your bladder is working. If you are having problems passing urine, a thin flexible tube (catheter) may be used to help drain urine from the bladder.

Bowel symptoms

You may be given medication to help with constipation, or if you are having difficulty controlling your bowels.

After treatment has finished

Spinal cord compression can affect people differently. The care you need after treatment will depend on the result of treatment, and your ability to walk with or without help.

Some people who have lost the ability to walk, or lost movement before treatment, may not get this back. In this situation, treatment would usually be followed by a period of rehabilitation and further care.

This will involve a rehabilitation team of healthcare professionals, including a doctor, nurse, physiotherapist, occupational therapist and social worker.

They will work closely with you and your family to organise a plan of care and rehabilitation to suit your needs.

Your further care may be at your cancer centre or your local hospital. The rehabilitation team will monitor your progress and help you to become as independent as possible.

Before you leave hospital, the staff should organise any care you will need while at home. This may include nursing care and physiotherapy. Adaptations to your home, to make things easier for you, such as ramps or wider door frames to allow wheelchair access, can also often be arranged. Any equipment you may need, such as wheelchairs, special mattresses or lifting aids, will also be supplied.

Where can I get more information?

If you have any questions about your care you should discuss this with your doctor, nurse or radiographer.

Your doctor is: _____

Your nurse is: _____

Your radiographer is: _____

Your physiotherapist is: _____

Your occupational therapist is: _____

You can also speak to one of Macmillan's support service nurses. Phone the freephone helpline on 0808 808 000 (Monday to Friday, 9am–8pm). The helpline number is also free from these mobile phone networks: 3, O2, Orange, T-Mobile, Virgin and Vodafone when calls are made from the UK.

References

This booklet has been compiled using information from a number of reliable sources, including:

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- Parker et al. Spinal cord compression syndrome. In: ***Radiation Oncology for Cure and Palliation***. Springer-Verlag Publishers. New York. 2002.
- Dewald C J. Spinal cord compression. In: ***Surgical Oncology; An Algorithmic Approach***. Springer-Verlag Publishers. New York. 2003.
- Dougherty L. & Lister S.(eds) Spinal cord compression

This information was first produced by Macmillan Cancer Support in 2009 and has been reformatted by Guy's and St Thomas' NHS Foundation Trust for use here.



Dimbleby Cancer Care provides cancer support services for Guy's and St Thomas'. We have a drop-in information area staffed by specialist nurses and offer complementary therapies, psychological support and benefits advice for patients and carers.

Dimbleby Cancer Care is located in the Welcome Village of the Cancer Centre at Guy's. **t:** 020 7188 5918 **e:** DimblebyCancerCare@gstt.nhs.uk

Pharmacy Medicines Helpline

If you have any questions or concerns about your medicines, please speak to the clinical nurse specialist or other member of staff caring for you or call our helpline.

t: 020 7188 8748 9am to 5pm, Monday to Friday

Your comments and concerns

For advice, support or to raise a concern, contact our Patient Advice and Liaison Service (PALS). To make a complaint, contact the complaints department.

t: 020 7188 8801 (PALS) **e:** pals@gstt.nhs.uk

t: 020 7188 3514 (complaints) **e:** complaints2@gstt.nhs.uk

Language and Accessible Support Services

If you need an interpreter or information about your care in a different language or format, please get in touch:

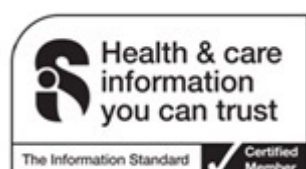
t: 020 7188 8815 **e:** languagesupport@gstt.nhs.uk

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