

SPONDYLOLISTHESIS

— Definition and cause

Spondylolisthesis is a **progressive displacement of one vertebra** on top of another. It can occur after bone breakage from one of the attachments that connect the vertebrae to each other (**isthmic lysis**), and in this case produce symptoms in young adults (15-45 years), or it may be the consequence of a form of osteoarthritis that deforms the joints between the vertebrae as well as leading to lumbar spinal stenosis, usually after the age of 60. This second case is dealt with in the lumbar spinal stenosis section.

— Evolution

The fracture or isthmic lysis that causes the spondylolisthesis often **occurs in childhood** and usually goes unnoticed. The person can live with this fracture symptom-free for many years before low back pain appears. Once the symptoms appear, the pain **tends to get worse** over time.

— Symptoms

In rare cases, isthmic lysis can be diagnosed at the time of its occurrence, i.e. in childhood or adolescence. It then gives rise to sharp low back pain. In all other cases, the fracture appears progressively and silently; this is called a stress fracture. In most people, spondylolisthesis is diagnosed much later through a simple X-ray performed as part of a check-up for **low back pain** that does not respond well to treatment with analgesics. Sciatica, often limited to the buttocks or back of the thighs, is also a symptom. If the vertebra's displacement is significant, there is a deformation of the lower back and pelvis that may be visible. In some rare cases, paralysis of the legs can occur.

— Examinations

A **simple X-ray of the lumbar spine** is usually enough to diagnose spondylolisthesis. A **lumbar scan**, which is the best examination to view fractures and general bone contours, is an indispensable part of the medical examination. An MRI is an important part of the examination, as it will give a precise understanding of the disc between the vertebrae that are being displaced, as well as the condition of the overlying discs.

— Treatment possibilities

Low back pain treatment is always medical to start. This can be done by a general practitioner, often collaborating with a rheumatologist, a physiotherapist or a pain physician. This treatment will include **rest during flare-up periods, analgesic and anti-inflammatory** medication prescribed in increasing doses, physiotherapy and **kinesiotherapy** care and sometimes **injections** or even immobilisation with a corset brace. Most backaches respond to these treatments well, even if flare-ups do not disappear completely. A more in-depth examination and the opinion of a spinal surgeon are indicated if the pain does not respond well to these treatments, and if the **symptoms, developing over at least 6 to 12 months** and often much longer, cause major invalidity in everyday life.

— Principle of surgical treatment

Surgery for chronic back pain due to spondylolisthesis can only be envisaged **after the failure of a medical treatment** as long and complete as possible. The principle behind the surgery is to cause fusion (**arthrodesis**) between the two unstable vertebrae, since the natural methods of joining these vertebrae are no longer enough. This bone fusion should occur once the displaced vertebra has been **put back in the right position** so that there is no deformation of the back, which could lead to premature degeneration in the disc above it.

— Surgery

Spondylolisthesis surgery is a surgery whose twofold aim is to **correct spinal deformation** (spondylolisthesis reduction) and **fusion of the vertebrae** (arthrodesis). Several surgical techniques can be used that do not have exactly the same purposes, so their results are not always comparable. The technique used at CCV Montpellier is the technique that enables us best to achieve the two objectives indicated above. The treatment includes **two successive interventions** performed the same day under general anesthetic. The first intervention is performed **via the abdomen** to put the least amount of pressure possible on the nerve roots at the back of the disc. This is a **minimally invasive technique**, since on a thin subject the surgeon will make an incision measuring 5 to 7 cm, through which he will perform an ablation of the disc and insert an implant (**fusion cage**) attached to the 2 vertebrae. During this surgery, the spondylolisthesis is put back into place and the spine is rebalanced to avoid having the problem affect the overlying discs in the future.

Then comes the second surgery, which is a simpler surgery, also minimally invasive and **percutaneous**, for attaching the metal fixation implant (**osteosynthesis**) through the back, to give vertebral fusion the best possible chance of success. Precise **positioning of the screws** is made easier by the prior insertion of guide pins **under a scanner** (scanning preimplantation phase) in collaboration with our **interventional radiologists**. This guiding **technique** was developed **exclusively at CCV Montpellier**. Its precision is ensured by maximum security in placing the implants and provides total preservation of the **paraspinal muscles**.

Like for disc prosthesis surgery, spondylolisthesis surgery is a very demanding surgical technique, but one that is very respectful of the body's anatomy, which gives rise to **very little post-operative pain** in the vast majority of cases.

— Clinical post-operative care

You can **first get out of bed a few hours after the operation**. The physiotherapist teaches you the gestures that you will need to apply during your convalescence: how to get up, go to bed, bend down, pick up objects off the floor, personal hygiene. Starting on the first day, you will recover a certain **degree of autonomy in performing these everyday gestures**. A corset brace is necessary during the first weeks after surgery. This is a removable plastic corset adapted to you that is custom moulded. It should only be worn when moving; it is not necessary to wear the corset when lying down. You will be able to **go home 2 to 4 days** after surgery. Prescriptions are given when leaving, including bandages, pain medication and sick leave up until the check-up consultation.

Only an experienced practitioner can make a precise spinal pathology diagnosis. The practitioner's role is to determine whether a disc or spine anomaly discovered during an imaging exam is pathological in nature. They will then have to determine the risk and potential evolution involved, a key component in therapeutic decision-making. The diagnosis will make it possible to identify, from among these anomalies, those that are not responsible for the symptoms, that do not entail any risk and therefore do not require any particular treatment.

— Convalescence

Once back home, the ideal pace of life combines rest in a comfortable position (in a semi-recumbent position with the back at a 45° incline, legs slightly bent at the knees), alternating several times a day with quiet walking on a flat surface, initially for 10-15 minutes and increasing up to an hour or two.

For the first few days, do not try to return to your everyday activities (housework, grocery shopping, driving, carrying even light loads). Then, starting in the 2nd or 3rd week, you will be allowed to return to these activities very progressively, listening to your body and any pain when exerting an effort, which you should take as your limit. Renewed pain during convalescence is often the consequence of excessive activity and will tend to disappear when at rest.

Physical therapy will begin after the 3rd week, starting with massages of scar tissue and painful or contracted areas in the spine. Once your body is prepared, rehabilitation will start with movement to loosen up your body and to strengthen the spinal cord and lower limbs. You can go back to work and sports activities between the 4th and 6th months, unless you are having any particular pain.

Over the long term, there are no particular contraindications and you will be able to lead an active life and practice sports perfectly normally.

Images of our surgical techniques?
Visit the [Spondylolisthesis](#) page on our website.

