LET'S TALK ABOUT

SCOLIOSIS

A PATIENT GUIDE

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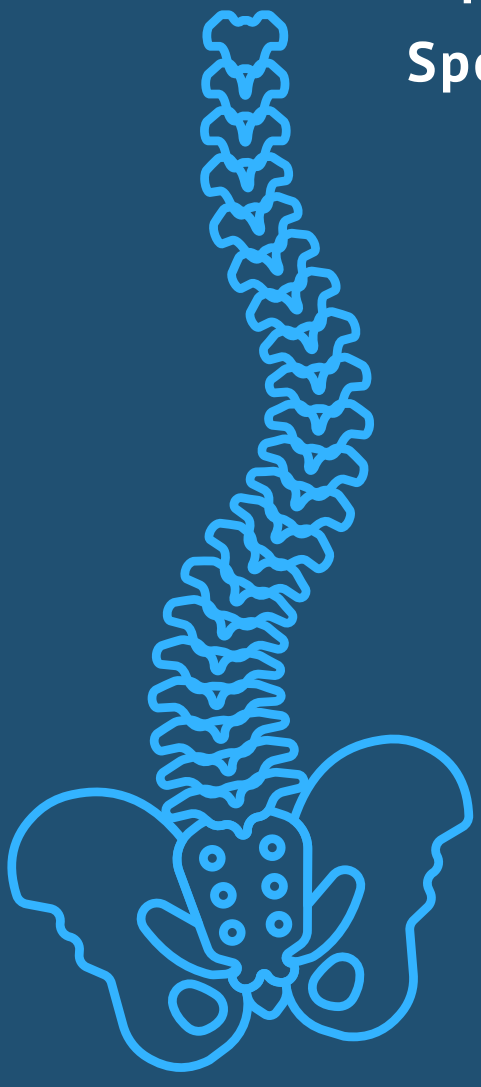

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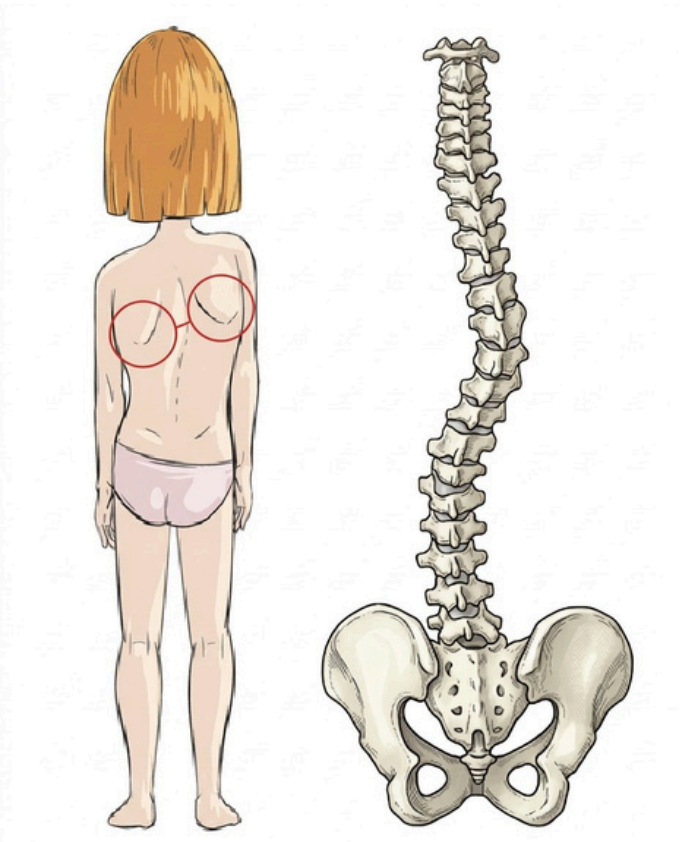
WHAT IS SCOLIOSIS?

Scoliosis is a three-dimensional change in the shape of the spine, thorax and trunk. The vertebrae rotate, laterally deviate and extend. In simple terms they twist, move sideways and lean back. There can be one curve or there can be multiple curves. Generally, there is one major curve and the secondary curves form as a compensation.

There are different types of scoliosis. The most typical types can be bracketed as idiopathic, congenital, neuromuscular, syndromic and degenerative. Adolescent idiopathic scoliosis (AIS) is the most common type. Idiopathic simply means that there is no clear cause or we can't determine the cause because it is multifactorial. This type of scoliosis develops during the rapid growing years of adolescence.



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WHO GETS SCOLIOSIS

The percentage of adolescence who have scoliosis is most often quoted in the literature as 2 to 3% of the population. It has also been suggested that the incidence changes according to latitude. Scoliosis more commonly affects females more than males.

Anyone can develop scoliosis. You can be born with it (congenital), develop it as a baby (early onset infantile), as a child (early onset juvenile), as a teenager (AIS) or as an adult (degenerative or de novo).

Some people will develop scoliosis as a consequence of another medical condition they have. Syndromic scoliosis and neuromuscular scoliosis would be examples.

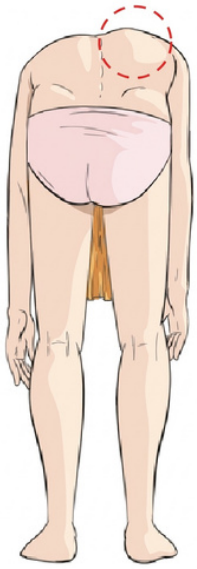
When compared with healthy controls, children with idiopathic scoliosis tended to be more hypermobile by comparison. This has been especially noted in single curves. However, there was no relation of hypermobility with the angle, rotation or curve type.

HOW TO IDENTIFY SCOLIOSIS

Scoliosis is identified by completing the Adam's forward bend test. First you should observe the individual's posture from the front and back and from each side. Often if someone has a scoliosis you may notice imbalances such as an elevated shoulder, a shoulder blade that sits differently or a pelvis that has moved to one side or seems to be raised.

To complete the Adam's bend test stand behind the person and ask them to reach both arms out in front and then, while keeping their knees straight, bend down towards their toes. If a scoliosis is there one side of their rib cage and/or one side of their lower back may appear to be raised higher. This demonstrates the rotated element of the curve.

Medical professionals assessing for scoliosis will often use a tool called a scoliometer. They may complete the test seated, standing or both. They may also take clinical photographs and take other measures such as height.



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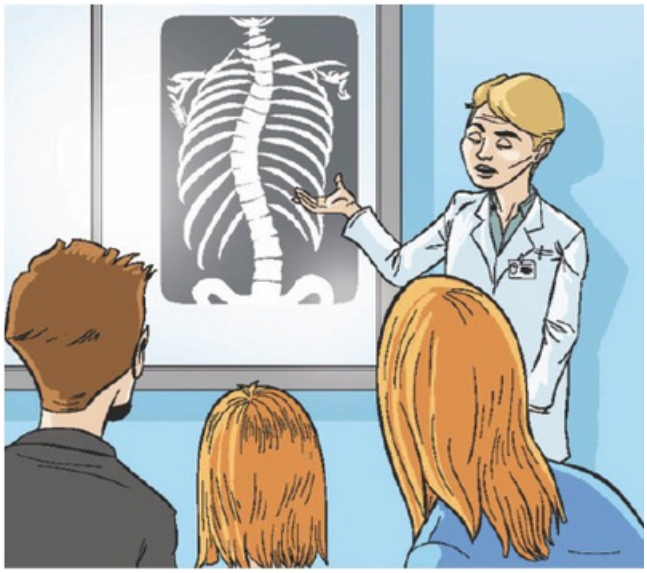
HOW IS SCOLIOSIS DIAGNOSED?



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Scoliosis is diagnosed via x-ray or EOS scan. A measurement is taken called the Cobb angle and it is reported in degrees.

This measure is then used to decide on treatment pathways taking other things into consideration such as the individuals stage of growth. The Scoliosis Research Society (SRS) states that the diagnosis is confirmed when the Cobb angle is 10° or higher and axial rotation can be recognized.

WHO NEEDS TREATMENT FOR THEIR SCOLIOSIS?

Not all scoliosis will get worse. Some curves get worse, some get better and some stay the same. This is why the wait and see approach is used. Two x-rays that have been taken months a part will be compared for progression. If the curve has progressed then a treatment plan can be put in place.

Even when curves are not progressive some individuals will choose to undergo treatment. Sometimes this is due to pain associated with their scoliosis or it may be that they wish to improve their global symmetry.

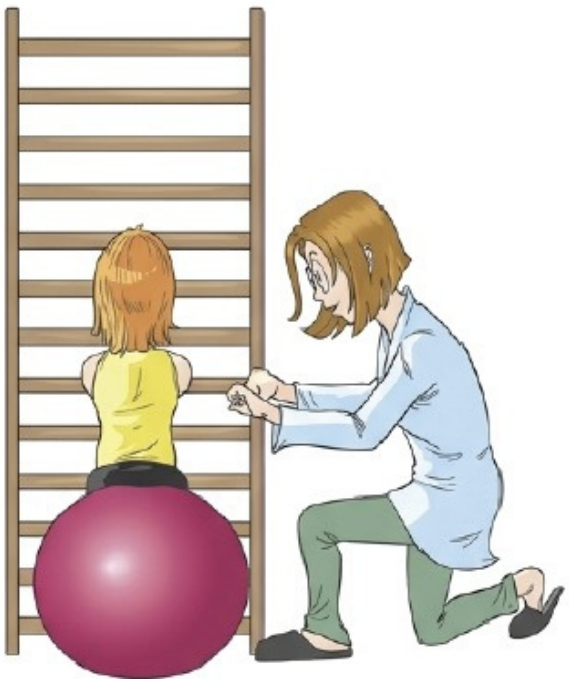
Generally, health professionals advocate for the individual to go through treatment if the scoliosis has been proven to be progressive or if there is a high risk for progression. There is a much lower potential for progression of idiopathic scoliosis when growth is complete. It is widely felt that scoliosis over 50 degrees will progress after growth, scoliosis that is 30 degrees or less won't progress but curves between 30-50 degrees can be a grey area. Not all scoliosis over 50 degrees will be progressive in adult life but it is impossible to predict which will and which will not.

WHAT TREATMENT EXISTS FOR SCOLIOSIS?

There are two categories of treatment for scoliosis. There is non-surgical (it's called conservative) treatment and surgical treatment.

There are different types of surgery but the most common type is spinal fusion with titanium rods. There are other forms of surgery such as Vertebral Body Tethering (VBT), Api-fix and different types of growth rods.

The main form of non-surgical method used is bracing. Physiotherapy Scoliosis Specific Exercise (PSSE) is another form of conservative method that can be used. It can be used independently for smaller curves but is generally a complimentary therapy to the brace. There are seven different schools that satisfy the criteria set by SOSORT to be classified as being PSSE and they are recognized by the PSSE International Association. Some of which derived from the original Schroth method. The method has been modified and adapted over the course of time and through the various schools.



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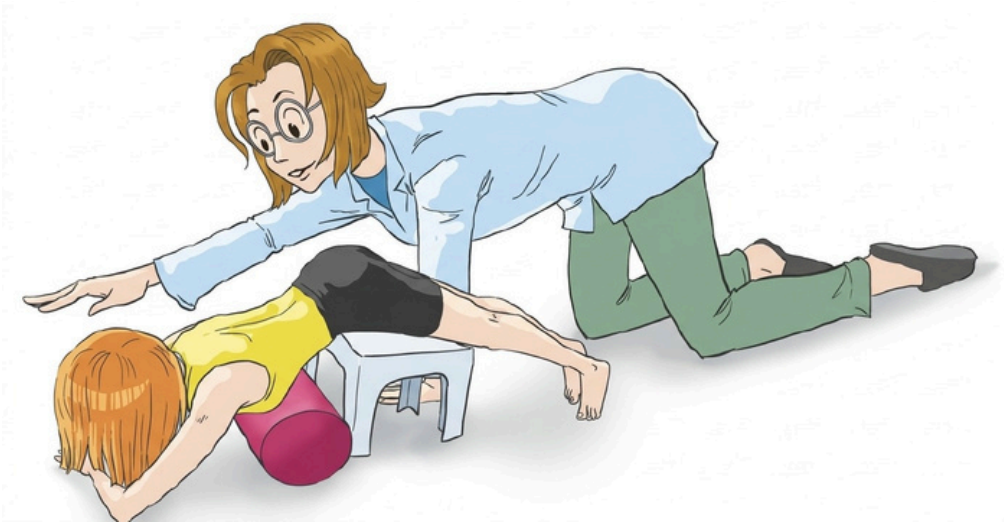
PHYSIOTHERAPY SCOLIOSIS SPECIFIC EXERCISE (PSSE)

To be considered PSSE the physiotherapy must include:

- Patient education
- 3D self correction
- Stabilization in self-correction
- Activity of daily living training

PSSE is often used to slow down the progression of a scoliosis and in some cases it can stabilize the curve or decrease the degree of the curve. It is also used in spines that are fully developed with an aim to decrease any potential pain and imbalance that may have developed over the years. PSSE can also be used both pre and post op. As a form of prehabilitation it will prepare your body ahead of scoliosis surgery so that you are as fit, strong and flexible as possible and so that the nervous system is prepared for the new position you will be in post-operatively.

PSSE is especially good to improve the global 3D balance of an individual and minimise the appearance of a scoliosis.



CAN I PARTICIPATE IN SPORT IF I HAVE A SCOLIOSIS?

Yes. Most medical and health care professionals working with people with scoliosis will encourage as much exercise and activity as possible. We know that if you keep your bones and your muscles strong it will have positive benefits on your spine.

Sport itself is unlikely to change the shape of the spine but the fitter and stronger you are the easier completion of PSSE will be.

If you have recently had surgery for your scoliosis your surgeon will have guidelines for you to follow for a safe return to your sports. There are some sports which are not advised post spinal fusion surgery such as rugby but this is a conversation to have with your own medical team.

NIAMH MCGOWAN

Niamh McGowan is a Spinal Specialist Physiotherapist focused on the conservative management of teenage spinal conditions such as scoliosis, kyphosis and spinal fractures. She is the founder and owner of McGowan Physio Clinic and McGowan Physio N.I. Niamh is an international teacher of the Rigo Concept (BSPTS) and Chair of the CPSMNG, the scoliosis niche group within the ISCP.

She is committed to delivering expert, patient-centred care and advancing standards in scoliosis treatment.

McGowan Physio:
www.mcgowanphysio.com

Do you want to know more?

The Rigo Concept (BSPTS) is an advanced, classification-based physiotherapy approach to scoliosis management. It is a recognised school of Physiotherapy Scoliosis-Specific Exercises (PSSE). It applies principles of three-dimensional correction, the expansion technique and neuromuscular retraining to specific curve patterns. The method integrates postural correction in functional activities. The Rigo Concept is a team-based approach to scoliosis management, in which the Rigo Brace is fundamental to the conservative treatment strategy. It is used internationally as part of evidence-informed care to address curve progression, optimise alignment and improve respiratory and functional outcomes.

Rigo website: https://bspts.net

Scolicomic: https://scolicomic.com