

A minimally invasive surgical approach for correction of adolescent scoliosis.

The ApiFix System - Patient Information

The Adolescent Idiopathic Scoliosis (AIS) denotes a deformation of the spine in adolescence, between 10 and 18 years. The cause of it is unknown.

The severity of scoliosis is measured in degrees-called Cobb angle. The scoliosis in adolescents that is up to 20° is treated by Physiotherapy.

For scoliosis between 20 and 35 degrees the recommended treatment is a corset, where the goal is to stop curve progression. Surgical treatment of scoliosis with Long Spinal Fusion is recommended for Cobb angle of 45° or more, as at that severity level there is a high risk of deformity progression in the course of a life.

The ApiFix concept

ApiFix offers the Internal Brace System, which is a minimal invasive, non-fusion, option for AIS patients having Cobb angle between 40 and 55 degrees. The procedure is aimed to reduce the curve to the point where the risk for deformity progression is very low. The ApiFix correction procedure basically consists of 2 phases.

The first phase is Implantation of the ApiFix System, which in comparison to the conventional surgical procedure is much less invasive.

The second phase is the postoperative gradual correction of the deformity by means of a physiotherapy treatment, done by the patient at home.



1 Implantation of ApiFix System



2 Postoperative Physiotherapy and gradual correction of the scoliosis along time

Typical X-rays of long spinal fusion for correction of AIS

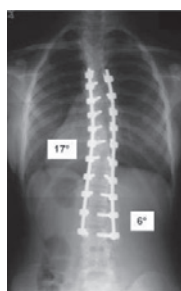


Figure 1- after ApiFix procedure

Figure 2- longer scar after standard surgical correction of adolescent scoliosis.

The benefits of Long Spinal Fusion with pedicle screws system are the good curve correction and the good clinical results.

Disadvantages of Long Spinal Fusion surgery:

In addition to the significant operation trauma, there is a permanent long spinal fusion. This adversely affects the mobility of the spine and the adjacent discs are subjected to the risk of damage and accelerated degeneration process. The procedure is very aggressive and results long hospital stay and long healing process. Cosmetically this treatment is associated with a long scar.



X-ray of ApiFix system after implantation

Hospitalization after the ApiFix operation usually takes approximately 2-4 days. Two weeks after the surgery the patient will be educated to do, at home, 5-6 simple exercises based on the Schroth method.

physiotherapy is continued until sufficient correction is gained, typically 3 to 6 months.

The ApiFix implant has a simple mechanism which maintains any minor correction gained by the patient.

After any minimal gradual correction the soft tissues are allowed to adapt to the new situation. Physiotherapy is continued until sufficient correction is gained.

In contrast to the long spinal fusion operation with intraoperative correction of the spine at one aggressive operation, where some spinal mobility is permanently lost, with the ApiFix system the mobility of the individual vertebra is maintained.

	Typical standard Scoliosis surgery	ApiFix typical case
Length of the skin incision	~45 Cm	~10 Cm
Duration of operation	4-6 hours	1 hours
Hospitalization	6-7 Days	2-3 days

Is the ApiFix method also suitable for me?

The ApiFix method fits patients who have a Cobb angle up to 55° and a flexible curve, as confirmed by Lateral Bending X-rays.

For more information about centers that offers the ApiFix system look at: www.apifix.com



Example of course of treatment with the ApiFix system:

Fig.1: Pre-operative Cobb angle of 53°

Fig.2: Physiotherapy starting after 2 weeks

Fig.3: After 12 weeks, reduction of scoliosis from 53° to 26°

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If you are interested to get more information please visit us www.apifix.com to get in touch.

The ApiFix system is being clinically used since the beginning of 2012 and with the award of the CE certificate it is allowed in EU for the treatment of scoliosis.