

“SCOLIOSIS”

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Scoliosis is a curve in the spine from side to side. Mild curves are rather common, and usually require no treatment. Curves that progressively worsen often require medical intervention. Ninety five percent (95%) of all curves require no treatment other than periodic monitoring. Eighty to ninety percent (80% - 90%) of scoliosis cases have no known cause, and they tend to run in families.

Most cases of scoliosis occur for no apparent reason. This is typically seen in adolescent girls more commonly than boys, and is called “idiopathic scoliosis” because there is no known cause. Rarely, spinal deformities are caused by abnormal bones or nerves, or in certain neurological diseases such as Cerebral Palsy or Muscular Dystrophy. It can even be caused if one leg is longer than the other. In all cases, the cause is sought for, even though most have no good reason for occurring.

Significant scoliosis is usually obvious to the trained eye, as it often causes one shoulder to be high, the waist to be uneven, and one side of the back to be more prominent when the individual leans forward. These abnormalities are looked for during the annual “scoliosis school screening” in most junior high schools. About four percent (4%) of young people will have some of these signs, but only a few of these ever need treatment. Progression of “idiopathic scoliosis” curves usually occurs during the adolescent growth spurt. Not all idiopathic curves progress, but generally speaking, the highest risk curves are those discovered in younger children early in their adolescence. For girls, this would include spinal curves found before menstrual periods have begun. Curve progression decreases rapidly once menses have begun in girls, and once axillary hair is apparent in boys, because by then the growth spurt has almost stopped.

Without intervention, progressive curves can become cosmetically unsightly, cause clothes to fit poorly, and can even compress the heart and lungs if the deformity is severe. With appropriate treatment, these progressive curves can be prevented from developing into severe deformities. Each curve is different, and no one can predict which ones will definitely progress, nor how much he or she will progress. However, we can statistically estimate the chances of significant progression based on physical appearance, whether or not menses have begun in girls, and various findings on the x-rays. For instances, in a 10-year old girl with a curve of 25 degrees who has not yet started her periods, the chance of progression of her spinal curve is nearly seventy percent (70%). The same curve in a 15-year old girl who has begun having periods for 2 years already has only a ten percent (10%) risk of further curve progression.

All curves need to be monitored, but not all curves need treatment – only progressing curves and those curves that are severe when first discovered. Early treatment, when indicated, is most effective treatment. Small curves are monitored with repeated exams and x-rays to determine if the curve is progressing to the point of needing intervention. The only interventions proven effective in treating scoliosis are bracing and surgery. Back braces are used for smaller, progressing curves. If brace treatment has failed, or a large curve has developed before treatment was begun, an operation can be done to correct some of the deformity. The role of

early, non-operative treatment is to prevent curve progression and thus avoid surgery. As a general rule, bracing is used for curves between 20 and 40 degrees, and surgery is used for curves over 50 degrees.

Often parents and children ask if there is anything else that can be done to treat scoliosis. Many other forms of treatment have been tried, but nothing has statistically been shown to have any affect on scoliosis except for bracing and surgery. This includes various forms of exercises, electrical stimulation, and chiropractic manipulations. Often these "alternate", unproven therapies only delay the needful intervention during the early states when surgery could have been prevented.

When bracing is indicated and Orthopaedic surgeon fits the brace and follows the patient through the course of treatment until the patient has reached skeletal maturity and there is no more risk of the curve progression. There are a variety of braces, but most are plastic body jackets that are custom made for each patient, and are worn under the clothes for several hours every day.

Surgery, when required, is called "spinal fusion", and involves placing metal rods along the spine to internally realign and hold the spine straight by fusing selected vertebrae. This usually corrects much of the curve, and prevents it from progressing further. The surgery usually involves a hospital stay of several days. After surgery, the child who has had spinal fusion usually has no physical limitations, and can participate in normal school and athletic activities.

It is reassuring to remember that nearly all cases of scoliosis do not adversely affect the person's adult life. Women with scoliosis can get married, become pregnant, and raise children even if they have had spinal fusion. The vast majority of women with any degree of curvature have no problems getting pregnant or carrying their children. Most curves do not worsen during pregnancy. A normal lifestyle and normal life expectancy in any occupation is usually possible.