How Scoliosis Impacts the Whole Body

Scoliosis is a highly variable 3-dimensional growth deformity. The type and degree of curvature and rotation differ in every child. Scoliosis is far more than a matter of appearance. Scoliosis poses a threat to the function of the child's entire body, from skeleton to internal organs. Keep in mind that the human body will do whatever is necessary to keep the head in line with the pelvic structure, including spontaneous spinal fusion.

ISOP runs on Parent Power, and parents are uniquely qualified to take note of how scoliosis affects their child. Photographs are a great way to document the visible changes in your child's spine. Remember that your observations are vital.

Severe scoliosis (80+degrees) obviously impacts the spine and rib cage, but also the heart, lungs, and other internal organs. Children with severe scoliosis frequently adopt compensating postures to alleviate pain and imbalance, which lead to abnormal postural habits, walking gaits, and additional problems.

Lungs

Severe scoliosis endangers a child's lungs. In cases of early onset scoliosis, consultation with a pulmonologist is required. In the thoracic spine (upper back), severe scoliosis can cause chest wall deformities, restrict lung capacity and force the lungs into abnormal shapes. Thoracic curves can also interfere with the position of the bronchi (the two tubes that carry air into the lungs) which prevents maximum, balanced, lung volume and may result in stunted lung growth. In extreme cases, restricted and unused portions of lung tissue may die off permanently. Abnormally restricted lungs inhibit the circulation of oxygen in the blood, resulting in the need for supplemental oxygen. Critical cases may require tracheotomy surgery and ventilator dependence. Fluid can pool in restricted lung areas inviting infection and/or pneumonia. A pulmonologist may prescribe Chest Percussion Therapy (CPT) which breaks up secretions, allowing the child to cough them out, thus preventing infection. Bi-Pap and breathing exercises can promote lung health and improved capacity.

Heart

Severe thoracic scoliosis is also dangerous for children previously diagnosed with heart complications. The imbalance in posture, restricted air intake, and decreased oxygen supply in the blood stresses the heart. In addition, the restrictive shape of the lungs and the shifting of other internal organs can crowd the heart. If a child has had heart surgeries and, subsequently, experiences a high degree of thoracic spine curvature, a progressive curve can jeopardize the valuable work done to repair the heart.

Posture

Scoliosis influences overall balance and body alignment and can result in abnormal postures that allow the child to be comfortable sitting, standing, walking, and running. To compensate for the abnormal curvature and rotation of the spine, a child may: tilt the head, hunch the shoulders, hug one arm to the body, lean over to one side, stand with one foot flat and with one foot on tip-toes, pivot the waist to one side, and turn the feet in different directions. Physical therapy can aid alignment, muscle tightness, and weakness.

Infantile Scoliosis Outreach Program
A program of Ability Connection Colorado

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