

Poland's Syndrome

BIRTH DEFECT RESEARCH FOR CHILDREN



What is Poland's Syndrome?

Poland's Syndrome is a pattern of one-sided malformations characterized by the absence of the pectoralis major (chest) muscle and short, webbed fingers on the same side of the body. Poland's Syndrome can affect either side of the body but occurs more often on the right side. The syndrome was named after Alfred Poland, the person who first documented the abnormalities. It has also been called Poland Sequence, Poland Anomaly, and Poland Syndactyly.



Poland's Syndrome



How many children have Poland's Syndrome?

Poland's Syndrome is rare, affecting one in about 20,000-30,000 children. It is two-to-three times more frequent in boys than girls.

How do you know if your child has Poland's Syndrome?

Poland's Syndrome is evident at birth. The first distinguishing characteristic is the absence of the pectoralis major muscle, the main chest muscle that normally attaches to the breastbone. Nearby chest muscles on the same side of body may also be absent. In girls, the breast on the same side is usually absent. The second characteristic of the syndrome is the hand malformation of shortened, webbed fingers on the same side of the body as the absent chest muscle. In rare instances, more severe finger, arm, kidney, or spine problems may be present.

What causes Poland's Syndrome?

The cause of Poland's Syndrome is unknown. It occurs sporadically. Although there have been a few reported cases of multiple family members having some degree of the syndrome, it has not been determined to be hereditary. Researchers believe that the defects occur at about the sixth week of fetal development. Some theorize that diminished blood flow at this stage of development results in a reduction in oxygen supply to one side of the fetus, resulting in the pattern of unilateral defects typical of Poland's Syndrome.

How can you help a child with Poland's Syndrome?

Most children do not require surgery to correct the chest muscle or chest wall deformities. However, for cosmetic improvements, bioengineered cartilage may be implanted to give the chest a more normal appearance. Surgical correction of the chest area is usually performed during or after the teenage years. For girls, breast reconstruction and augmentation may be considered after full development. Surgery for the hand deformities generally improves their functional

capacity and cosmetic appearance. Hand surgery to separate the webbed fingers is usually initiated during the child's first year and completed by the time the child enters school.

What's in the future for a child with Poland's Syndrome?

The degree to which Poland's Syndrome is disabling depends on the severity of the conditions. Children with Poland's Syndrome do not suffer impaired intelligence and can expect to live a normal life span.

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