

Congenital Differences of the Upper Extremity

What are they?

Congenital abnormalities (also called congenital anomalies) of the upper extremity are differences from normal that are present at birth. The differences can range from mild to severe. Examples of congenital abnormalities in the hand include: having more than or fewer than five fingers; fingers that won't bend; fingers that are too short, crooked, or webbed; and constriction bands on the fingers and/or hand. Examples of congenital abnormalities in the arm include: an arm that is bowed, bones and joints that have not formed normally, and a part of or whole arm that has not formed at all. Some of these differences are known to happen along with other problems, while some are isolated differences.

What causes them?

There are many causes of congenital abnormalities. Some can be explained and others have no known causes. The process of development of a baby from a fertilized egg involves millions of complicated steps, any of which can go wrong. The upper limbs form between the fourth and seventh week of pregnancy; the baby is less than an inch long during this phase of development. It is estimated that one in 20 babies born will have some imperfection, major or minor.

Some congenital problems are inherited, just like eye or hair color for example. Some of these inherited problems may skip generations or show up in the children of parents who each pass on a trait to the child. Some genetic problems are new occurrences where the new baby is the first to have the condition, but that child may pass it on to his or her children.

Other congenital problems have non-genetic cause. Certain drugs, such as thalidomide and chemotherapy agents, are known to cause birth defects. Street drugs, tobacco, and alcohol all affect the development of a baby but are not generally connected with specific upper extremity problems. Congenital constriction bands, where threads of the amniotic membrane separate from the lining and become wrapped around the fingers and/or hand, can cause deformity in some babies during pregnancy. Although we understand how constriction bands happen, the cause is mostly unknown.

Congenital problems sometimes happen with no explanation as to when, why, or to whom. One of the many steps in the development of the baby went wrong and changed the arm or hand. Your physician can help you find answers to your questions about what happened and, if possible, why it happened. Your physician may refer you and your child for more studies and possibly a visit to a geneticist to help with a specific diagnosis and determine whether the condition is hereditary.

Coping with your emotions

Shock, anger, and guilt are normal emotions after the birth of a child with a congenital abnormality. All of your dreams of the perfect baby did not take place, and now each family member must cope with their feelings. Rarely is there anything parents could have done differently— yet they blame themselves.

Your newborn doesn't realize that he or she is different. The baby has all the normal needs of any newborn. The way the baby has formed is normal for him or her; without pain and without a sense of loss. After your grief has eased, questions will follow: Is there any treatment for this problem? Will surgery help? Will my child be able to tie shoes or hold a pencil? Talk to your pediatrician and hand surgeon about resources available such as support groups, therapists, and caring physicians to help you and your child.