

Cleft Lip and Palate

What Is Cleft Lip and Palate?

Cleft lip (a separation in the upper lip) and cleft palate (a split in the roof of the mouth) are the most common types of conditions that affect the skull and face. Each year, the conditions affect one in every 600 to 690 babies born in the United States, according to [Cleftline](#).

During the fourth and eighth weeks of pregnancy, separate areas of a baby's face develop individually and then join. When the sides of the lip and roof of the mouth don't fuse as they should, the result can be a cleft in the lip, palate or both. More than 70 percent of babies born with a cleft lip also have a cleft palate.



What Causes Cleft Lip and Palate?

Although no one knows exactly what causes clefts, some medical specialists believe that family history and environmental factors (such as medications or vitamin deficiencies) play roles.

Genetic Factors

The likelihood of having a child who has a cleft increases slightly if a mother is older than 35 years old while she is pregnant. Either parent can pass on the gene or genes that cause clefts. Biological children of a parent who has a cleft have a 4- to 6-percent chance of also having clefts. When a child has a cleft but neither biological parent does, there's a 2- to 8-percent chance that biological siblings of the child will also have clefts. When a parent and a biological child both have clefts, the chances are even greater that the parent's future children will have clefts.

Prevalence

Clefts occur more often among the Asian population and among certain groups of Native Americans. They occur less frequently among African Americans. More males have cleft lip or cleft lip with cleft palate; however, more females have cleft palate alone.

Up to 13 percent of babies who have clefts have additional congenital conditions, some of which aren't readily apparent. Genetic testing can help determine if a child's cleft is part of an underlying condition.

Types of Cleft Lip and Palate

In most cases, cleft lips occur in the upper lip and don't affect the lower lip. Mild clefts might appear as a notch in the lip. Severe clefts can cause a large opening from the lip through the nose.

- **Unilateral cleft lip** occurs on one side of the lip. With a unilateral cleft lip, a gap appears under one nostril and the nose might slightly tilt or look lower than normal.
- **Bilateral cleft lip** occurs on both sides of the lip. With a bilateral cleft lip, a deep split might extend from the lip into both nostrils, causing the nose to look broader and shorter than normal.
- **Complete clefts** involve the entire lip, and often, the part of the jawbone that holds the teeth (also known as the alveolar arch).
- **Incomplete clefts** involve part of the lip.

Cleft palates can extend from the front of the mouth to the throat and range from mild to severe. Because the palate is inside the mouth, cleft palates are less noticeable than cleft lips. However, a cleft lip often accompanies a cleft palate.

Cleft Lip and Palate Symptoms and Effects

Beyond affecting how your child looks, clefts might cause other complications, including:

Feeding Difficulties

If your infant has a cleft lip, you might need to use a special bottle or nipple, or get special instructions for breastfeeding. If your infant has a cleft palate, sucking to eat might be a challenge—your baby might gag, choke, or breathe liquid into their lungs (aspirate) while feeding.

Ear Infections and Hearing Loss

If your baby has a cleft palate, ear infections and hearing loss are possible because fluid can build up in the middle ear. Getting your child proper treatment when they are an infant or young child can help avoid permanent hearing loss.

Speech and Language Delays

If your child has a cleft lip, you can expect they'll generally develop normal or near-normal speech by kindergarten or early elementary school.

If your child has a cleft palate, they might develop speech more slowly. A cleft palate impacts speech because the palate may not function properly to touch the back of the throat when speaking; therefore, air escapes and the voice sounds nasally. Your child might have difficulty producing some consonant sounds. After cleft-palate repair, most children eventually develop normal speech, although some need speech therapy or additional surgery.

Dental Problems

If your child's cleft extends into the upper gums (which contain the teeth), some primary and permanent teeth might be missing, abnormally shaped, or out of position. Some children with cleft palates also lack teeth. Dental and orthodontic care can help most children who have cleft palates.

Cleft Lip and Palate Diagnosis

In some cases, an ultrasound can diagnose cleft lip and palate before your baby is born. Craniofacial and plastic surgeons at Gillette Children's Specialty Healthcare offer prenatal consultations to talk about your baby's condition before they're born. We'll consult with you about cleft lip and palate, share information about current treatment options, provide appropriate counseling, and if you wish, help you plan a course of treatment.

Sometimes, a cleft isn't diagnosed until your baby is born. Cleft lip is easily noticeable because it affects the area between the lip and nose. Because cleft palate occurs inside the mouth, it may not be visible at first—and it might not be diagnosed until your baby has feeding difficulties or other symptoms.

No matter when your biological or adopted child is diagnosed, Gillette will work with you to discuss cleft lip treatment and cleft palate treatment that will help your child.

Cleft Lip and Palate Repair and Treatment

Cartilage molds easily during the first six weeks after birth. Before surgery, your baby might wear an OrthoCleft[®] retainer, which is a presurgical orthopedic appliance that helps to improve the effects of surgery. Estimates show that children who use presurgical appliances need 20 to 30 percent fewer reconstructive surgeries than those who don't.

The OrthoCleft[®] retainer brings gum segments together, reducing the gap in the mouth, stretching the lip muscles, and giving the nose a more even shape. The retainer also can improve sucking and eating abilities while your child waits for surgery.

The OrthoCleft[®] retainer is made of acrylic and wires. The parts that touch the mouth or nose are soft acrylic, making it easier for your baby to wear. An **orthodontist** customizes and fits the retainer when your baby is about a week old. Once a month—until the first surgery takes place, at about 3 months—we make a new appliance that fits as your child grows.

In most cases, proper presurgical treatment by a **craniofacial surgeon** and an orthodontist results in correction with a single surgery (rather than requiring multiple procedures over time). Undergoing fewer surgeries reduces risks and complications, such as those associated with anesthesia.

Surgery

The goal of **repair surgery** is to close the cleft lip or palate and repair related problems. Through surgery, we seek to improve your child's health, function, physical appearance and self-esteem.

Cleft Lip Repair

Cleft lip repair can often be done in one reconstructive surgery to restore the mouth's normal shape and muscle function. Cleft lip surgery typically happens when your baby is about 3 months old. In addition to improving appearance and function, goals of surgery include:

- Closing the cleft lip.
- Forming a cupid's bow (the curve at the center of the upper lip).
- Creating adequate distance between the upper lip and nose.

Cleft Palate Repair

By closing the opening in the roof of the mouth, this repair creates the floor of the nasal cavity. Cleft palate surgery improves your child's ability to speak, eat and possibly eliminate the need for modified bottles and feeding techniques. It typically occurs when your baby is 9 to 12 months old. Some children who have cleft palates will need additional surgeries as they develop—to help with speech, improve the appearance of the lip, close openings near the mouth or add bone to the upper gum to allow for proper gum development.

When the cleft also affects the shape of the nose, additional procedures after age four can help to:

- Improve symmetry between the nostrils.

- Create an adequate length of tissue separating the nostrils.
- Minimize the appearance of a flattened tip of the nose or a nose that pulls downward.

Therapy After Surgery

After cleft repair surgery, our [speech-language pathologists](#) will work with your child to improve speech. Your treatment plan might also include collaboration with [audiologists](#) and [ear, nose and throat \(ENT\) specialists](#) if your child has hearing problems.

Treatments for Older Children

If you've adopted an older child who has a cleft—Gillette can help with treatment during childhood, rather than infancy.

Whether your child needs a revision on a previous repair, or has never had surgery, we'll work with you to shorten the typical repair timeline to reduce the impact on your child's speech, dental and hearing development. Surgery schedules vary, depending on your child's age and the repairs needed.

Most older children who have clefts will need ongoing orthodontia care while permanent teeth come in, and speech and language therapy to improve speech abilities after repair surgery.

Integrated Care

When you come to Gillette for treatment of cleft lip and palate, your family will have access to the region's top experts in cleft lip and palate repair. You'll work with highly skilled surgeons and specialists that are always researching and developing the latest craniofacial techniques.

Our comprehensive treatment plans can start at birth or whenever your child arrives in your family. We'll help guide your family through the treatments your child needs as they grow and develop. Here are some of the specialties and services that might be part of your child's treatment plan for cleft lip or cleft palate:

- [Craniofacial and plastic surgery.](#)
- [Dentistry and orthodontia.](#)
- [Ear, nose and throat \(ENT or otolaryngology\).](#)
- [Audiology.](#)
- [Child life.](#)
- [Neurosurgery.](#)
- Nursing.
- [Speech and language therapy.](#)

[Make An Appointment 651-290-8707](#) [Refer a Patient 651-325-2200](#)

This information is for educational purposes only. It is not intended to replace the advice of your health care providers. If you have any questions, talk with your doctor or others on your health care team.

If you are a Gillette patient with urgent questions or concerns, please contact Telehealth Nursing at [651-229-3890](#).