

Hypertension in Children

When you think about childhood illnesses, you probably think of colds, flu, tonsillitis, ear infections or croup. Hypertension, or high blood pressure, is not a condition usually associated with children. But approximately three percent of children – including infants – have high blood pressure. If left untreated, hypertension can eventually cause damage to the heart, kidneys and blood vessels.

High blood pressure makes the heart pump harder and puts greater strain on arteries to carry blood throughout the body. Many children do not experience any symptoms associated with high blood pressure, while others may have chest pain, fatigue, problems concentrating, headaches or difficulty sleeping. Conditions that can increase the risk of hypertension include premature birth, low birth weight, congenital heart disease, and certain urinary or kidney problems. Children who are overweight or African American, and have a family history of high blood pressure are more likely to develop hypertension.

There are two types of hypertension, primary (or essential) and secondary. Primary hypertension occurs without an underlying medical condition. This form of high blood pressure tends to appear in older children who are overweight, do not exercise regularly, eat too much salt, and have type 2 diabetes or high cholesterol. Secondary hypertension, which is more common, is caused by an existing medical condition, such as chronic kidney disease, lupus, type 1 diabetes, adrenal disorders, hyperthyroidism or heart problems.

Blood pressure is measured using a blood pressure cuff that is wrapped around the upper part of the arm and pumped up to create pressure. Two measurements are then taken: the systolic pressure, which is when the heart beats; and diastolic pressure, when the heart rests between beats. As children grow, what is considered normal blood pressure will be adjusted based on their gender, age and height. Readings are then classified by percentile, similar to the way height and weight measurements are charted for children's growth. A child is diagnosed with hypertension after at least three measurements show readings greater than the 95th percentile.

Treating an underlying illness could be enough to lower blood pressure to within a normal range. Lifestyle changes also may be recommended, such as:

- Helping children either lose weight or maintain the same weight as they get taller.
- Eating a healthy diet with plenty of fresh fruits, vegetables, and whole grains.

- Decreasing salt in the diet. The recommended sodium intake for children under three is 1,500 mg or less daily; children four to eight, not more than 1,900 mg; children nine to 13, not more than 2,200 mg; and children 14 and over, 2,300 mg or less.
- Encouraging physical activity. Children should get at least 30 to 60 minutes of exercise a day.

If lifestyle changes have not been effective in lowering blood pressure in four to six months, medications may be prescribed. Medicines such as diuretics, beta blockers, ACE inhibitors, and calcium channel blockers may be taken temporarily or indefinitely. For more information about hypertension in children, talk with your doctor or visit the National Heart, Lung, and Blood Institute website at www.nhlbi.nih.gov to review the blood pressure tables for children and adolescents.