Metabolic disorders

Reye's syndrome	Wilson disease	Hemochromatosis
Extremely rare	autosomal recessive ***ATP7B gene***	autosomal recessive ***HFE gene*** at the short arm of chromosome 6
Affect brain & liver	Prevents the body from removing extra copper	Absorbing more iron (5 to 20 times than the normal) excess iron is stored in *liver, heart, pancreas*
Most commonly in children (4-14) in recovery from viral infection “”using aspirin in treating viral infection can cause Reyes syndrome	About 1 in 40,000 people get Wilson disease. equally in men and women, Symptoms usually appear between ages 5 to 35	The HFE protein regulates the production of a protein called **hepcidin** manufactured in the liver, and it determines how much iron to absorb & release The most known mutation of HFE is C282Y
Mitochondrial dysfunction This leads to cerebral edema and increased intracranial pressure (ICP)	**Kayser-Fleischer rings** is the most unique sign of the disease as a result from buildup of copper in the eyes. They appear **as a rusty-brown ring** around the edge of the iris and in the rim of the cornea In Liver or spleen: swelling, yellowing of the skin and whites of the eyes. Rarely, acute liver failure In CNS: problems with speech, swallowing, or physical coordination	Phlebotomy, which means removing blood the same way it is drawn from donors at blood banks.
No cure, But can be managed by protecting the brain against irreversible damage(by reducing brain swelling, preventing complications in the lungs, and anticipating cardiac arrest)	initially : The removal of excess copper using drugs like (d-penicillamine and trientine), reduction of copper intake, treating of any liver or central nervous system damage.	Initially : you may have a pint (about 470 milliliters) of blood taken once a week