

THE LIVER

The liver is the largest solid organ in the body, located under the rib cage in the upper right abdomen. Weighing between 3 and 3.5 pounds, it plays a crucial role in maintaining health by performing over 500 vital functions. These functions include filtering the blood to remove toxins, such as alcohol and drugs, regulating blood sugar levels, and producing bile to help digest fats and remove waste. The liver also creates essential nutrients and regulates blood clotting. It consists of four lobes, each divided into smaller sections and lobules, and is reddish-brown in color, shaped like a cone or wedge.

REYE'S SYNDROME

National Institute of Neurological Disorders and Stroke

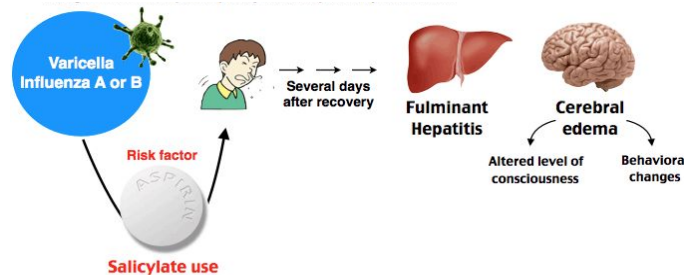
Reye's syndrome (RS) is a rare disorder that affects all organs of the body but is most harmful to the brain and the liver—causing an acute increase of pressure within the brain and, often, massive accumulations of fat in the liver and other organs. Reye syndrome is defined as a two-phase illness because it generally occurs during recovery from a viral infection, such as the flu or chickenpox. It also can develop three to five days after the onset of the viral illness. The diagnosis is often based on the clinical presentation of symptoms, especially the sudden onset of vomiting, confusion, and lethargy. Doctors may perform blood tests, liver function tests, and brain imaging to help confirm the diagnosis.

PATHOPHYSIOLOGY

National Library of Medicine

Jennifer Chapman; Justin K. Arnold

The exact pathophysiology of Reye syndrome is not precisely known; however, it appears to involve mitochondrial injury in the setting of a viral illness. Aspirin may cause or perpetuate damage to cellular mitochondria resulting in inhibition of fatty-acid metabolism. The neurologic features of Reye syndrome likely result from hepatic mitochondrial dysfunction causing elevated ammonia levels. Hyperammonemia may induce astrocyte edema resulting in diffuse cerebral edema and subsequent elevated intracranial pressure. Pathology studies have revealed astrocyte edema, loss of neurons, fatty degeneration of kidneys, and a swollen and a reduced number of mitochondria.



National Reye's Syndrome Foundation

Reye's Syndrome, a deadly disease, strikes swiftly and can attack any child, teen, or adult without warning. All body organs are affected with the liver and brain suffering most seriously. While the cause and cure remain unknown, research has established a link between Reye's Syndrome and the use of aspirin and other salicylate containing medications, over the counter products, and topical use products.

Reye's Syndrome tends to appear with greatest frequency during January, February, and March when influenza is most common. Cases are reported in every month of the year. An epidemic of flu or chickenpox is commonly followed by an increase in the number of cases of Reye's Syndrome.

TREATMENTS/THERAPY

NHS - Reye's Syndrome

If your child has Reye's syndrome, they'll need to go into hospital straight away for treatment.

Treatments for Reye's syndrome may include:

- help with breathing using an oxygen machine
- fluids given directly into a vein to help prevent dehydration
- medicines to help treat and manage symptoms

Most children with Reye's syndrome make a full recovery if it's treated quickly. But some children can have long-term brain problems.

Other Risk Factors

Inborn errors of metabolism

- Medium-chain acyl-coenzyme A dehydrogenase (MCAD) deficiency
- Other fatty acid oxidation disorders
- Urea cycle disorders

**SCAN FOR MORE
INFORMATION ON
SYMPTOMS**

