**What is Tay-Sachs Disease?**

Tay-Sachs disease is a disease which occurs in infants of 4 to 8 months of life and causes severe mental and developmental retardation. The enzyme in the body which breaks down the fatty acid ganglioside (GM2) called Beta-hexosaminidase A is absent, causing a buildup of GM2 in the cells of the nervous system. Chromosome 15 holds the gene for hexosaminidase A, and the disease is caused by the child inheriting the mutated gene from both of the parents. When the couple is said to be a “carrier couple”, there is a 1 in 4 chance the baby will have Tay-Sachs. The disease can be found most fluently in Ashkenazi Jews, and 1 in 25 Ashkenazi Jews are said to be carrying the disease. (Mount Sinai Medical Center)

**Where to get help**

- [www.mssm.edu/jewish_genetics/diseases/tay-sachs.shtml](http://www.mssm.edu/jewish_genetics/diseases/tay-sachs.shtml)
- [www.psych.med.nyu.edu/conditions-we-treat/conditions/tay-sachs-disease](http://www.psych.med.nyu.edu/conditions-we-treat/conditions/tay-sachs-disease)
- [http://www.csmc.edu/5566.html](http://www.csmc.edu/5566.html)
- [http://www.umm.edu/ency/article/001417sym.htm](http://www.umm.edu/ency/article/001417sym.htm)
- [http://www.mc.maricopa.edu/dept/d46/psy/dev/Fall98/Prenatal/Pren.html](http://www.mc.maricopa.edu/dept/d46/psy/dev/Fall98/Prenatal/Pren.html)

**Tay-Sachs Disease**

^This figure is showing a healthy neuron with a lysosome acting as a waste processor, and the Tay-Sachs neuron which make the lysosome unable to get rid of waste, causing ganglioside (fatty cell products) to kill the cell.

Josh Vardaman
Common symptoms of Tay-Sachs disease include:

- Deafness
- Blindness
- Paralysis
- Delayed mental and social skills
- Dementia
- Irritability
- Listlessness
- Loss of motor skills
- Seizures
- Slow growth
- Red spots in the retina of the eye
- Increased startle reaction

Diagnosis and Cures for Tay-Sachs Disease

Doctors at the time of delivery check for Tay-Sachs by looking in the eyes of the infant. What he or she is doing is searching for a cherry red spot on the retina which can sometimes signal the disease. Also, the doctor will do a blood test to search for hexosaminidase A.

There is presently no cure for Tay-Sachs disease. Although there is not a cure, research is being done into different physical therapies.

History of Tay-Sachs

Tay-Sachs disease first appeared in Europe in the 1800’s. British physician Waren Tay and American physician Bernard Sachs were the first to record the symptoms. It was not until 1969 when researchers discovered the disease was due to a lack of hexosaminidase, and soon the researchers developed new ways to detect the disease, and even gave way to research to try and find a cure for the disease.

(Developmental Psychology Student Netletter)