Raising Deaf Kids

A world of information about children with hearing loss

[This page prints out on 2 sheets]

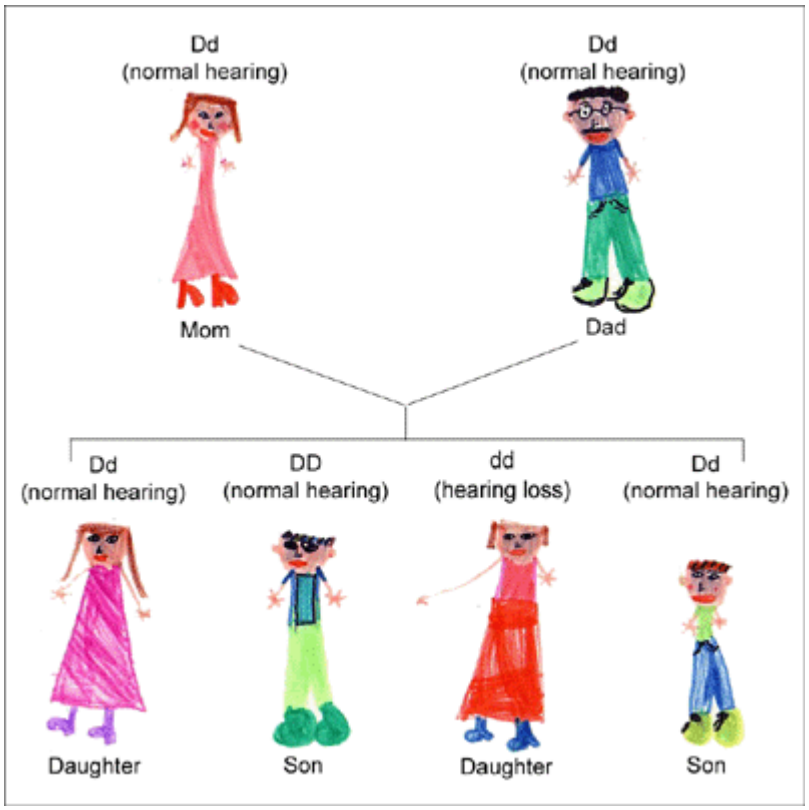
Autosomal Recessive Inheritance

Read this page to find out how parents with normal hearing can have a child with genetic hearing loss.

You might think, “How can my child have a genetic hearing loss if both his father and I have normal hearing?”

Very often when there is genetic hearing loss, both parents have normal hearing. They may not even know of anyone in their families with hearing loss. This is possible when each parent has just one recessive gene for hearing loss. If 1 of their children gets 2 recessive genes (1 rom each parent), he would have hearing loss.

Here’s a picture that shows how it works. In this picture the small “d” stands for the recessive gene for hearing loss. The large “D” stands for the dominant gene, which means no hearing loss. Each parent has “Dd,” which means no hearing loss. A child would only have hearing loss if he got “dd.” Each child has a 1 in 4 chance of getting dd, and having hearing loss.



Autosomal Recessive Inheritance

How can my child's hearing loss be genetic if there are no other people with hearing loss in our families?
Since the gene is recessive, it can pass through many generations without ever causing hearing loss. Only when a person with a recessive gene has a baby with another person with the same gene will the baby have hearing loss.

A parent with hearing loss could also have the recessive gene.
If a parent has a recessive form of hearing loss, she would have two copies (dd). That means all of her children would get one copy from her. They would have to also get a recessive gene from the other parent to have the hearing loss.

Recessive genes that cause hearing loss
The mutation that causes the most common type of autosomal recessive hearing loss is in a gene called **connexin 26**. Children who get 2 copies of the mutated connexin 26 gene will probably have:

- Hearing loss present at birth or soon after
- Severe to profound hearing loss
- No signs of a syndrome
- No other known cause

Many genetics clinics will test for the connexin 26 gene mutation. There are also many other recessive genes that can cause hearing loss. But there aren't tests for most of these genes. So if your child doesn't have the connexin 26 gene mutation, you may not find out what is causing his hearing loss.

If you think you might want to find out if your child has genetic hearing loss, read more about getting genetic counseling testing (http://www.raisingdeafkids.org/hearingloss/genetics/counseling.jsp).

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You can find this page online at:
http://www.raisingdeafkids.org/hearingloss/genetics/inheritance/recessive.jsp