



Brittle Hair Syndrome

Gene involved: *TTDN1*

What is Brittle Hair Syndrome?

Brittle hair syndrome is an inherited condition that causes brittle hair, short stature, mild learning problems, and anxiety. Children are born with Brittle Hair syndrome and do not grow out of it.

What are the early signs and symptoms?

- Most babies with Brittle hair are healthy at birth
- Children with Brittle hair syndrome tend to have fine or coarse hair
- They might be shorter than their siblings
- They may have delays in speech

What Happens as Children Get Older?

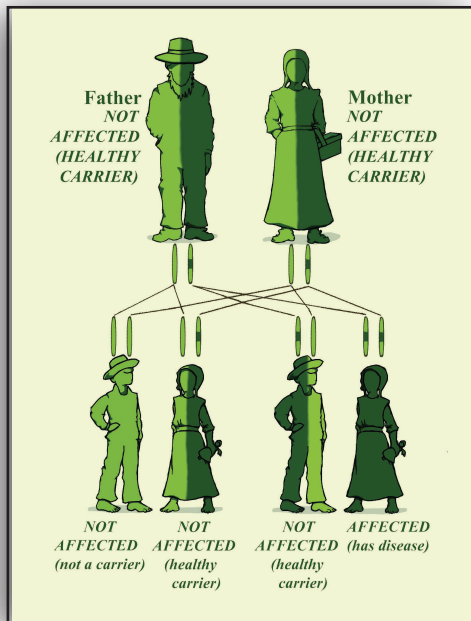
- People with Brittle hair syndrome may have difficulty in school
- They can have difficulties adjusting to change, making new friends, or communicating
- They are usually shorter than their unaffected siblings
- Despite learning difficulties, most people are able to work outside the home and get married
- Hair is often fine and thin in females who do not cut their hair, but often thicker and coarser in males who get regular haircuts
- Fingernails may be normal or abnormally brittle
- People with Brittle hair syndrome may have difficulty having children

Management

There is no cure for Brittle hair syndrome, but symptoms can be managed. Children can benefit from support in school and understanding from their loved ones.

Diagnosis

A gene test is required to make the diagnosis. To arrange this, please see the contact information below.



Lily Stoltzius

Autosomal Recessive Inheritance

Genes are instructions for growth and development. We have two copies of each gene. One copy is inherited from our mother, and one copy is inherited from our father. Children with Brittle Hair Syndrome have a spelling change in BOTH copies of their *TTDN1* genes. This means they have no working copy of the *TTDN1* instruction.

People with one normal copy of the *TTDN1* gene and one misspelled copy are called "healthy carriers".

When two healthy carrier parents have a child, there is a:

- 1 in 4 chance the child will have Brittle Hair Syndrome, a
- 1 in 2 chance they will be a healthy carrier
- 1 in 4 chance they will inherit two normal copies of the *TTDN1* gene and be neither affected nor be a carrier

This informational pamphlet is a project of New Leaf Center - a member of the Plain Community Health Consortium (PCHC)



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Center for Special Children (La Farge, WI) **608-625-4039**
Central Pennsylvania Clinic (Belleville, PA) **717-935-2065**
Clinic for Special Children (Strasburg, PA) **717-687-9407**
DDC Clinic (Middlefield, OH) **440-632-1668**
Midwest Genetics Network (Okemos, MI) **517-324-8300**
The Community Health Clinic (Topeka, IN) **260-593-0108**
UPMC Children's Hospital of Pittsburgh (Pittsburgh, PA) **412-692-5070**
WeCare Clinic - Medical Care for Special Needs (Pembroke, KY) **270-962-7383**