



About Connor: 15 years old.

Genetic disorder: Duchenne Muscular Dystrophy

Likes: Competing in the national wheelchair slalom championships, computer games, the cinema.

Dislikes: His little brother taking all his things, shops without wheelchair access, people ignoring him.

Home town: Liverpool

Mum: Donna

Stepdad: Michael

Unaffected siblings: Adam (age 1)

Affected siblings: Luke (age 4)

DUCHENNE MUSCULAR DYSTROPHY

• A **progressive muscle-wasting** condition caused by a faulty gene on the **x-chromosome**.

• Babies **appear normal at birth**, but by the **age of 8-11** they can **no longer walk** and by their **late teens or early 20's** the condition is severe enough to be **life threatening**.

• Usually **only affects boys**. Girls can be **carriers**, which means that for this condition they could have **subtle signs** but won't develop the **full-blown disorder**.

• Around **100 boys** with DMD are **born in the UK** each year.

• There's **no cure**, but many scientists are **cautiously optimistic** that one could become available in the near future.

GENETIC DISORDERS

• **Genes** are made out of **DNA** and most contain **instructions for making proteins**.

• A **genetic disorder** happens when a **change** in one or more genes causes **vital proteins** in the body to be **missing or faulty**.

• Most disorders are **recessive**, occurring when someone inherits **two copies** of the faulty gene – one from each parent.

• Others are **dominant**, meaning a **single copy** of the faulty gene is enough to cause the condition.

• **X-linked** disorders are caused by a faulty gene on the **x-chromosome**, of which **girls** have two (**XX**) and **boys** only one (**XY**).

• **Genetic disorders** are the **biggest cause of death** for children **aged 14 and under**.

• Some other examples of genetic disorders include **Cystic Fibrosis**, **Sickle Cell Anaemia**, **Huntington's Disease** and **Haemophilia**.

USEFUL LINKS

Muscular Dystrophy Campaign:

• www.muscular-dystrophy.org

More on living with muscular dystrophies.

Kids Health: <http://kidshealth.org>

• Easy to understand information about a range of conditions including Duchenne Muscular Dystrophy.

CURRICULUM LINKS

• **KS3 Science:** Variation and classification; Inheritance and selection.

• **GCSE Science:** Genetics and inheritance; Ethical and social issues in science.

• **KS3/4 PSHE and Citizenship:** Identities and diversity; Prejudice and discrimination; Human Rights; Community cohesion.

FOR MORE RESOURCES LIKE THESE AND TO SIGN UP FOR JEANS FOR GENES DAY, VISIT US AT WWW.JEANSFORGENES.ORG

CREATED IN COLLABORATION WITH **nowgen**

A Centre for Genetics in Healthcare

