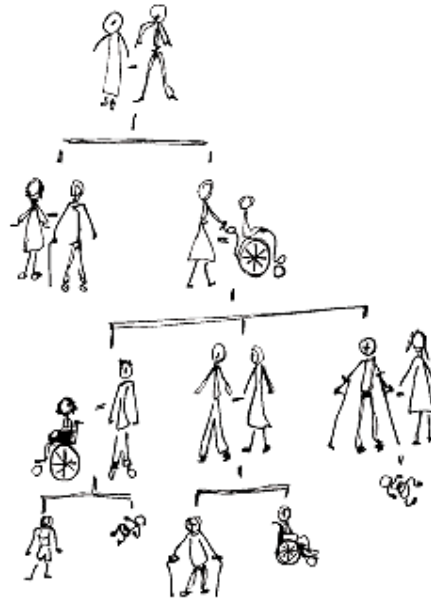


CROSS-CURRICULAR MATERIALS FOR KEY STAGE 4
(SCOTTISH CERTIFICATE OF EDUCATION - STANDARD GRADE)



Genes and You

Teaching about genetics from a human perspective

by Gill Mullinar

GENETIC INTEREST GROUP

*

THE WELCOME TRUST

Helping medical science to flourish

*

Published by the Wellcome Trust

The Genetic Interest Group is a registered charity, no.803424

The Wellcome Trust is a registered charity, no. 2107S3

GENETIC CHROMOSOMAL CONDITION CARDS

GENETIC CHROMOSOMAL CONDITION CARDS ON THE FOLLOWING:



GALACTOSAEMIA

Galactosaemia

WHAT IS GALACTOSAEMIA?

Galactosaemia (pronounced ger-lak-ter-see-meeya) is an inherited metabolic condition in which the body cannot convert galactose into glucose. Galactose is the sugar which we usually get from lactose, the major sugar in milk and milk products. If the body cannot use galactose it builds up in the blood and tissues, is converted into harmful by-products and can cause severe damage within the body.

HOW IS GALACTOSAEMIA PASSED ON?

The pattern of inheritance for Galactosaemia is autosomal recessive. A person who inherits one faulty gene for Galactosaemia will be a carrier. Carriers are usually unaffected but can pass the faulty gene onto any children they may have. If one or both parents is a carrier, there is a 50% (1 in 2) chance that each child of theirs will also be a carrier.

A child who inherits two copies of the faulty gene (one from each parent) will have Galactosaemia. If both parents are carriers, there is a 25% (1 in 4) chance of this happening.

A PERSON WITH GALACTOSAEMIA MAY BE AFFECTED BY SOME, OR ALL, OF THE FOLLOWING:

- Early diagnosis within the first two weeks of life is vital or problems can arise.
- These can include damage to the liver and to the ovaries (in girls) and the formation of cataracts in the eyes which affect the baby's vision. If diagnosis is seriously delayed, most babies with the condition will die of liver failure or infection.
- A person with Galactosaemia will need to eat a lactose-free diet for life. This means they must avoid all milk and milk products (eg butter, most cheese, whey, casein etc). Lactose is also found in many processed foods and used in tablets and capsules.
- Children on a galactose-free diet may feel awkward if they can't eat what their friends are eating. When adults eat out, they may need to ask which, if any, dishes contain lactose and to read labels carefully when they are shopping.
- Some people with Galactosaemia develop speech, language and/or learning difficulties. They are often slower at processing and responding to information. Quick question and answer sessions can also be difficult for them. There may also be problems with movement which leads to slowness in completing tasks. At school, some may be teased or bullied for being 'slow'.
- Females with galactosaemia also have hormonal problems, many do not go through puberty at the right time. Many are infertile or go through a very early menopause. Both males and females risk developing osteoporosis through lack of calcium in their diet.

OTHER INFORMATION GALACTOSAEMIA

If you are interested in finding out more about Galactosaemia, you can write to: Mrs. Susan Bevington, Galactosaemia Support Group, 31 Cotysmore Road, Sutton Coldfield B75 6BJ Email: sue@gsgl.freeserve.co.uk