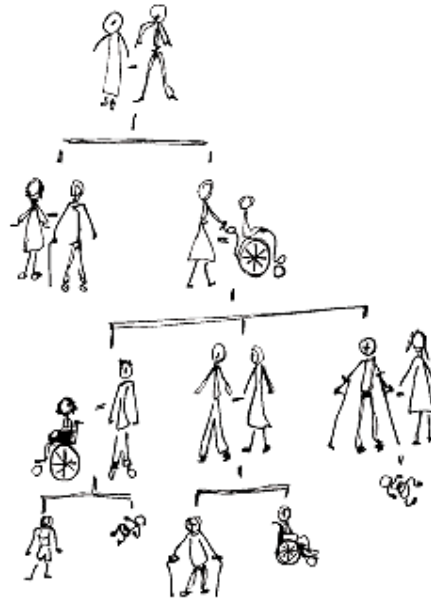


CROSS-CURRICULAR MATERIALS FOR KEY STAGE 4
(SCOTTISH CERTIFICATE OF EDUCATION - STANDARD GRADE)



Genes and You

Teaching about genetics from a human perspective

by Gill Mullinar

GENETIC INTEREST GROUP

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GENETIC CHROMOSOMAL CONDITION CARDS

GENETIC CHROMOSOMAL CONDITION CARDS ON THE FOLLOWING:



CYSTIC FIBROSIS (CF)

Cystic Fibrosis (CF)

WHAT IS CYSTIC FIBROSIS?

Cystic Fibrosis is an inherited condition which particularly affects the lungs and the pancreas. Thick, sticky mucus builds up in these organs causing infections and damage in the lungs and making digesting food difficult. The male reproductive system is usually also affected.

HOW IS CYSTIC FIBROSIS PASSED ON?

The pattern of inheritance for Cystic Fibrosis is autosomal recessive. A person who inherits one faulty gene for Cystic Fibrosis 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 Cystic Fibrosis. If both parents are carriers, there is a 25% (1 in 4) chance of this happening.

A PERSON WITH CYSTIC FIBROSIS MAY BE AFFECTED IN SOME, OR ALL, OF THE FOLLOWING WAYS:

- They usually look perfectly normal, as the lungs and the digestive system are invisible.
- They may cough a lot. This cough is not infection (you cannot 'catch' it).
- They may be small for their age and puberty may be delayed.
- They will make regular visits to a CF Specialist Centre or Clinic to check how they are and for further treatment.
- As they get older, they may develop further complications, such as Cystic Fibrosis Related Diabetes, osteoporosis and liver disease.

To stay well, most people with CF need to take special enzymes with each meal to help them digest their food. Most will also take prescribed vitamin supplements and oral antibiotics. Most have to take courses of nebulised or intravenous antibiotics from time to time. Physiotherapy and exercise are strongly recommended to keep the lungs clear of mucus. When the lungs become severely damaged, the only option is a lung transplant.

OTHER INFORMATION

Cystic Fibrosis is the UK's most common life-threatening inherited disease. Every week another five babies are born with the condition.

CF is most common in people of European origin.

It is estimated that approximately 1 person in 25 in the UK is an unaffected carrier (i.e. about 2 million people or 4% of the population).

There is no cure for Cystic Fibrosis. But treatments are improving and people with CF are living longer into adult life.

Gene therapy (where working copies of the gene are introduced into the lungs of people with CF) holds hopes for the future.

Liver and lung transplants have also improved the quality of life of some people with CF.

If you are interested in finding out more about Cystic Fibrosis, you can write (enclosing an A5 stamped addressed envelope) to:
Cystic Fibrosis Trust, 11 London Road, Bromley, Kent BR1 1BY. Tel: 020 8464 7211. E-mail: enquiries@cfrust.org.uk.
www.cfrust.org.uk