

Should we or shouldn't we?

Testing times

Jill and Frank Smith live in Cardiff. Frank is average size, while Jill has always struggled with her weight and she is now obese. They have three children, James, Craig and Bonnie aged 5, 9, and 13. Jill worries about her children and as both her sisters are overweight, Jill thinks that a weight problem may run in the family. She is also concerned about her children getting other health problems, for example, heart disease and diabetes.

Scientists have found many different types of genes that may affect our weight. Recently, Jill has heard of a company that offers to carry out a genetic test to look at these types of genes. The company will then provide advice about lifestyle and nutrition.



You will debate this question and come to a decision. Our experts will help you consider all the issues involved:

Science

... the techniques used and how they work

Ethics

... thinking about rights and wrongs, benefits and costs

Law

... what are the laws in this area

Dilemma

Jill wants to test her children to see if they are susceptible to obesity. Do you think it is right to test children for what they might develop in the future?

The Science

Nearly every cell in the human body has a nucleus that contains chromosomes made of DNA. Along the chromosomes are sections of DNA called genes. Genes determine the colour of our hair, eyes and other characteristics.

Every day, the body sheds many cells. This happens to the cheek cells inside our mouth. To test the children, all that is needed is a few of these cells because cheek cells contain the same DNA as every other cell in the body. The cells are taken with a swab that looks like a mascara brush. The DNA is extracted from the cheek cells and tested to look at the genes that may affect weight. A company have offered to carry out this test for the family. Jill will also need to fill out a questionnaire about eating and exercise habits of the family. The company will then provide the family with advice about lifestyle and diet.

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