



Hinchingsbrooke School Science Department

KS3 Homework Task

Life and Living Processes HW2 – Vitamin D keeps you young

Date set:

Date Due in:

On the following page is information related to the task. You may need to do additional research to achieve the maximum level possible.

- Answer all questions, if you use PowerPoint please print off and stick in your book
- Fill in your details below

Name:	Form:
Teacher:	Science Set:

Feedback from teacher:

Student comment:

Vitamin D keeps you young



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Vitamin D is found naturally in foods such as oily fish and eggs. Other foods such as breakfast cereals, bread and margarine are usually fortified with vitamin D (i.e. they have vitamin D added to them). Vitamin D is also made in the body when the skin absorbs sunlight. Researchers at King's College London are not actually claiming that vitamin D will keep you young, but they do say that vitamin D may delay the ageing process of cells and tissues. Part of the DNA – the genetic material – inside our cells and tissues changes slightly each time the cells reproduce; it is as though our cells have a 'clock' built into them that is able to tell our age. The study involved more than 2000 women between the ages of 18 and 79. Researchers compared the signs of ageing in the women's white blood cells (used for fighting infections) with the level of vitamin D in their blood. After

adjusting the results to allow for the different ages of the volunteers, they found that women with higher levels of vitamin D in their blood showed fewer signs of ageing in their cells.

One researcher said: 'This could help to explain how vitamin D has a protective effect on many ageing-related diseases, such as heart disease and cancer.'

Another researcher said: 'It's possible that the same sunshine that may increase our risk of skin cancer may also have a healthy effect on the ageing process in general.'

However, the researchers also say that their research does not prove that vitamin D slows down the ageing process. It could be that some other factor was causing the slowing down in the ageing process that they observed, and that this other factor also affects the way the body makes and uses vitamin D.

QUESTIONS

- 1 Where does vitamin D come from in our diet? Where else can it come from?
- 1 Are the King's College researchers claiming that vitamin D will keep you young?
- 2 Why is it important to have a lot of people in the study?
- 3 Why is it important to have people of a wide range of different ages in the study?
- 4 Explain in your own words why the researchers say that their research does not prove that vitamin D slows down the ageing process.
- 5 Do you get enough vitamin D? Describe how you could use the 'nutritional information' on food packaging to help you find out.
- 6 Design a poster to show the benefits and risks of being in sunshine, and offering some advice to help people decide how to get the benefit while reducing the risk.