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BACCALAUREAT GENERAL ET TECHNOLOGIQUE

EPREUVE SPECIFIQUE MENTION « SECTION EUROPEENNE OU DE LANGUE ORIENTALE »

Académie de Nantes, binôme : Anglais/SVT

Thème 3 - Corps humain et santé

3-A – Le maintien de l'intégrité de l'organisme : quelques aspects de la réponse immunitaire

Vaccination

Explain how an immunization jab (= injection) makes you immune to a disease. Explain why the misinformation about the MMR jab had dangerous consequences.

Document 1: smallpox (from abpischools.org.uk)

Smallpox was a terrible disease which killed millions of people. It disfigured and disabled millions more all over the world. In the 18th century 'the pox' was common in Britain – around 20% of all deaths were caused by smallpox.

Edward Jenner was a country doctor who worked with the farmers in Gloucestershire in the late 18th century. He noticed that the girls who milked the cows often caught cowpox, which gave them spots rather like smallpox spots on their hands. He also noticed that milkmaids rarely caught smallpox.

In the 18th century no-one knew how infectious diseases were spread or how the immune system works. However Jenner began to wonder if deliberately infecting people with cowpox might protect them against smallpox.

10 <u>Document 2: Jenner (1749 – 1823) inoculated smallpox to James Phipps.</u> (From abpischools.org.uk)

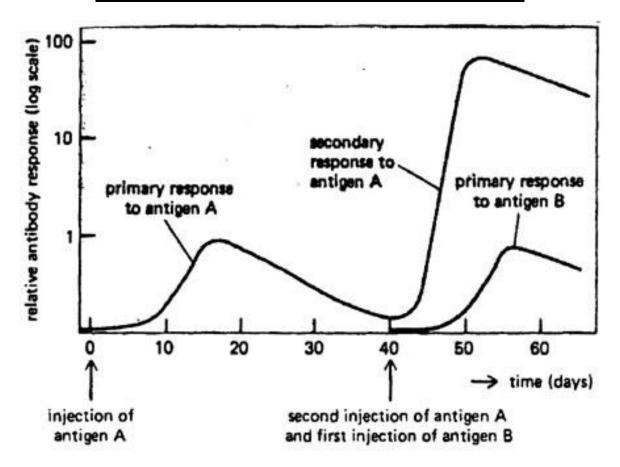
Finally in 1794 Jenner decided to try out his idea. He took pus from the cowpox spots of a milkmaid and scratched it into the skin of a healthy young boy called James Phipps, who then developed cowpox.

Two months later Jenner scratched pus from a smallpox victim into James's arm. The little boy showed no signs at all of the deadly infection. Jenner's idea met with quite a lot of opposition but in the end the technique was so successful that protecting someone against a serious illness by exposing them to a similar but mild illness became widely accepted. The technique was called vaccination to link it with Jenner's work on cowpox (the Latin word for cow is vacca!).



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Document 4: The MMR controversy.

In 1998, a team of scientists claimed in an article that the MMR* vaccine caused children to develop **autism**, a personality disorder. Some parents refused to let their children have the MMR jab. This meant that many children were not immune to the diseases, and so could pass them on and cause an epidemic.

Extensive studies have now proved that there is no link between MMR vaccination and autism.

(When children failed to have the MMR jab, mumps cases increased.)

In Collins revision GSCE Science.

Percentage of	No. of	
children having	mumps	
MMR jab	cases	
92	94	
92	180	
91	119	
88	372	
88	703	
87	777	
84	502	
82	1549	
(no figure	8104	
available)		
	children having MMR jab 92 92 91 88 88 87 84 82 (no figure	

^{* =} MMR: measles, mumps and rubella (rougeole, oreillons et rubéole).