



VACCINES QUIZ

HCA PLT 12/4/18

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1. What does a vaccine contain ?

A) Weakened or killed forms of Microbes, toxins, or surface proteins

B) Liquid in the form of an injection

C) Vitamins and minerals



- ❖ *A vaccine is a biological preparation that improves immunity to a particular disease.*
- ❖ *A vaccine typically contains an agent that resembles a disease-causing microorganism, and is often made from weakened or killed forms of the microbe, its toxins or one of its surface proteins.*
- ❖ *The agent stimulates the body's immune system to recognize the agent as foreign, destroy it, and "remember" it, so that the immune system can more easily recognize and destroy any of these microorganisms that it later encounters. (WHO) 2018*

2. When were vaccines first introduced in the UK?

A) 17th Century

B) 19th Century

C) 20th century



- ❖ *Since the 1940s mass vaccination programmes have formed important elements in the governmental provision of healthcare services to children.*
- ❖ *They have reduced the incidence and severity of numerous childhood diseases. T*
- ❖ *The NHS became the central instrument for providing childhood vaccinations free of charge to the public.*
- ❖ *While mass vaccination pre-dated the NHS, the launch of the NHS coincided with the considerable increase in the types of diseases for which vaccination programmes were developed and introduced in Britain.*
- ❖ *Vaccinations against diphtheria, pertussis (whooping cough), tuberculosis and polio were all provided to children by 1956*
- ❖ *See your handout on Historical Vaccine Development uk*

3. What is a live vaccine?

A) A vaccine that contains a preservative

B) A vaccine to kill a virus only

C) A vaccine derived from a bacteria or a virus which has been weakened under lab conditions



- ❖ *Available since the 1950s, live attenuated vaccines (LAV) Live attenuated vaccine (LAV) A vaccine are prepared from living micro-organisms (viruses, bacteria currently available) that have been weakened under laboratory conditions.*
- ❖ *LAV vaccines will replicate in a vaccinated individual and produce an immune response but usually cause mild or no disease. Can you think of any examples of a live vaccine?*
- ❖ *Can you name any Live vaccines that we currently use in General Practice ?*

4. Which of the following vaccines are given to a baby before their first Birthday

A) Diphtheria, tetanus, pertussis (whooping cough), polio, *Haemophilus influenzae* type b (Hib) and Hep B. Pneumococcal (13 serotypes) Meningococcal group B Rotavirus gastroenteritis

B) BCG only

C) Shingles



- ❖ *Eight weeks old* Diphtheria, tetanus, pertussis (whooping cough), polio, *Haemophilus influenzae* type b (Hib) and hepatitis
- ❖ *B. Pneumococcal (13 serotypes)*
- ❖ *Meningococcal group B (MenB)*
- ❖ *Rotavirus gastroenteritis Rotavirus*
- ❖ *Twelve weeks old* Diphtheria, tetanus, pertussis, polio, Hib and hepatitis B
- ❖ *Rotavirus*
- ❖ *Sixteen weeks old* Diphtheria, tetanus, pertussis, polio, Hib and hepatitis B
- ❖ *Pneumococcal (13 serotypes)*
- ❖ *MenB*

5. What health problems could Polio cause?

- A) Deafness
- B) Speech and learning difficulties
- C) Muscle weakness, shrinking of the muscles (atrophy), deformities, such as twisted feet or legs



- ❖ *Polio is a serious viral infection that used to be common in the UK and worldwide. It's rare nowadays because it can be prevented with vaccination. In less than 1% of cases, the polio virus attacks the nerves in the spine and base of the brain. This can cause paralysis, usually in the legs, that develops over hours or days.*
- ❖ *These can include:*
- ❖ *muscle weakness*
- ❖ *shrinking of the muscles (atrophy)*
- ❖ *tight joints (contractures)*
- ❖ *deformities, such as twisted feet or legs*

6. What causes Tetanus?

- A) Low Vitamin D
- B) Bacteria getting into a wound. The Bacteria is found in soil and the manure of horses and cows
- C) Poor nutrition



- ❖ *Tetanus is a serious but rare condition caused by bacteria getting into a wound.*
- ❖ *From January to December 2016, there were only four cases of tetanus in England. The number is low because an effective tetanus vaccine is given as part of the Childhood vaccines programme*
- ❖ *If the bacteria enter the body through a wound, they can quickly multiply and release a toxin that affects the nerves, causing symptoms such as muscle stiffness and spasms.*

7. Why do some parents refuse the MMR vaccine

- A) Due to adverse publicity that it could cause Autism
- A) Because it's a live vaccine
- B) It could cause convulsions



- *The jab has been linked to autism since 1998, when a study of 12 children published in The Lancet linked the measles, mumps and rubella (MMR) jab to the development of autism. That research has since been discredited and two major studies have been published subsequently which also failed to show any link.*

8. What is Diphtheria infection

- A) A mild skin infection
- B) An infection of the pancreas gland
- C) Diphtheria is an acute infectious disease of humans that affects the upper respiratory tract and occasionally the skin



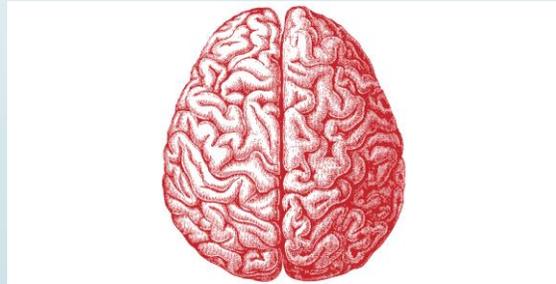
- ❖ *Diphtheria is a serious and life-threatening infectious disease.*
- ❖ *It is very contagious and can be passed on easily between people.*
- ❖ *Even with full medical treatment, it causes death in up to 1 in 10 of those who get it. Diphtheria is dangerous because the bacteria which cause it produce a powerful toxin (poison)*
- ❖ *The toxin kills cells in the mouth, nose and throat. The dead cells quickly build up and form a membrane which can attach to the throat and lead to death by choking.*
- ❖ *Diphtheria can also affect the heart (causing heart failure and death) and the nerves (causing neurological damage including weakness and numbness of limbs).*

Q9. What are some of the possible complications of meningitis infection?

A) Diabetes and Heart problems

B) Asthma and breathing problems

C) Hearing loss, epilepsy, amputation



- ❖ *Meningitis is an infection of the protective membranes that surround the brain and spinal cord (meninges).*
- ❖ *It can affect anyone, but is most common in babies, young children, teenagers and young adults.*
- ❖ *Meningitis can be very serious if not treated quickly. It can cause life-threatening blood poisoning ([septicaemia](#)) and result in permanent damage to the brain or nerves.*
- ❖ *A number of vaccinations are available that offer some protection against meningitis.*

Q10 What vaccine protects against Rubella infection

- A) MMR
- B) BCG
- C) Hib/MenC



- *Rubella (german measles) is a viral infection that's now rare in the UK. It's usually a mild condition that gets better without treatment in 7 to 10 days.*
- *Rubella usually only becomes a serious concern if a pregnant woman catches the infection during the first 20 weeks of her pregnancy.*
- *This is because the rubella virus can disrupt the development of the baby and cause a wide range of health problems, including:*
- *eye problems – such as cataracts (cloudy patches on the lens of the eye)*
- *deafness*
- *heart abnormalities*
- *brain damage*

Resources

- ▶ <https://www.nhs.uk/conditions/rubella/>
- ▶ [https://assets.publishing.service.gov.uk/government/uploads/system/uploads/attachment_data/file/696501/Complete immunisation schedule April2018.pdf](https://assets.publishing.service.gov.uk/government/uploads/system/uploads/attachment_data/file/696501/Complete_immunisation_schedule_April2018.pdf)
- ▶ <https://www.gov.uk/government/collections/immunisation>