

VACCINES & YOU

WHAT EVERYBODY OUGHT TO KNOW
ABOUT VACCINES ESPECIALLY THE COVID-19
VACCINE

In this issue:

VACCINES

Find out what exactly vaccines are.

COVID-19 VACCINE

Vital information you should know before getting your jab.

BOOKING FOR YOUR COVID-19 VACCINATION IN NIGERIA

The easy and fast way to receive your COVID-19 vaccination across Nigeria.

HPV VACCINE

The easiest means to prevent cervical cancer every woman should know.

HEPATITIS B VACCINE

The vaccine that helps people globally prevent liver cancer secondary to hepatitis B infection, learn more about it.

VACCINES

➔ What are vaccines?



A vaccine is a product containing one or more microbial antigen that induces protective immunity in your body.

Immunity is the ability of your body to resist infection or disease. This can be achieved either via vaccination or a natural infection for example when people contract chickenpox they naturally become immune to the virus.

Through vaccination smallpox was eradicated around the world, and presently, polio is at the brink of extinction. Vaccines have helped countless number of people prevent diseases such as hepatitis A&B, measles, rotavirus, typhoid fever, cervical cancer, and other life-threatening diseases.

➔ Why are vaccines important?



Vaccines are the most cost-effective public health intervention after clean water.

Across countries globally, vaccination programs have saved and continues to save millions of lives. Vaccines are the best means of disease and infection prevention. It trains the body's immune cells which act as soldiers to detect, attack and get rid of pathogens before they even cause diseases.

In sum, the goal of vaccination is to induce antibodies and T cells to protect you from future infection.

➔ What's in a vaccine?



Vaccines contain antigens which may either be a part of a microorganism, a weakened pathogen, a preservative, or an adjuvant.

In some situations, natural infection cannot confer immunity to your body but vaccination will. For example typhoid fever natural infection will not give lasting immunity, this is why people repeatedly fall ill as a result of typhoid fever disease. On the other hand, typhoid vaccination offers protection for at least 2 years.

To understand this, we will look at adjuvants. Adjuvants are non-toxic substances that awakens the immune system to respond to the antigen in a vaccine product prolonging the interaction between the antigen and immune cells. Examples of adjuvants are aluminum hydroxide salts, oil in water emulsion, bees wax just to mention but a few.



TYPES OF VACCINES

Whole-Cell Vaccines

Vaccines under these class are either **inactivated** (killed) or **attenuated** (live, but not disease-causing). Inactivated vaccines are effective as they induce the body to produce antibodies but do not adequately stimulate cell-mediated Immunity, thus they don't give long time protection and requires booster doses because with time the antibodies formed fades-off from the body. Example of such vaccine is Hepatitis A vaccine.

In contrary, **attenuated vaccines** stimulate both cell-mediated immunity and antibodies formation, and they give long term protection because even when antibodies wanes from your body, the stimulated immune memory cells will still be available to protect you from the specific pathogen. Example of such vaccine is chickenpox vaccine.

Acellular or Subunit Vaccine

A part of the microorganisms which cause a disease or the toxins they produce are purified to form the vaccine. There are three forms of such vaccine: capsular polysaccharides e.g. typhoid fever vaccine; recombinant surface antigens e.g. hepatitis B vaccine; and inactivated exotoxins known as toxoids e.g. tetanus toxoid.

Recombinant vector, and others

Genes that encode major antigens are separated from a pathogen for example the COVID-19 virus, these genes are then inserted into a safe virus or bacteria (the vector). When such vectors infect body cells after vaccination, they release this gene into your cell protein-making machinery, which reads the code, and manufacture the specific antigens. The immune cells then attack and form antibodies that gives protection against the real pathogen if you get exposed later. For example the AstraZeneca COVID-19 vaccine.

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➔ Who can take the vaccine?

The vaccine is limited in supply so priority is given to frontline health workers, older people, people with underlying health conditions such as obesity, cardiovascular diseases, respiratory disease and diabetes.

Should a pregnant woman take the vaccine?

Pregnancy puts women at higher risk of severe COVID-19, as their immune system is weak. Since pregnant women are not used for clinical trials, very little data is available on this, however, a pregnant woman may receive the vaccine if the benefit of vaccinating her outweighs the potential vaccine risks or side effects.

Who can't take the vaccine?

The vaccine is not recommended for persons younger than 18 years of age pending further data from clinical trials.

In addition, people with a history of severe allergic reaction to any component of the vaccine should not take it.

COVID-19 VACCINE

Introduction

The coronavirus disease (COVID-19) vaccine helps prevent COVID-19 caused by the SARS-CoV-2 virus (a new strain of corona virus). There are several types of the vaccines but we just focus on the AstraZeneca vaccine for now.

What's it and how does it work?

The vaccine is a non-replicating viral vector vaccine that uses a modified but safe virus (the vector) to deliver genetic code (genes) for the COVID-19 spike protein (the antigen) found on the surface of the virus, into your body cell.

Once administered these viral vectors infect your body cells, take control of their protein machinery, and instruct them to produce large amounts of the COVID-19 spike protein (the antigen) which then triggers an immune response in your body. The vaccine mimics what happens during natural infection, however, this triggers a stronger cellular immune response by your body T cells as well as antibodies production by B cells thus giving you lasting protection when compared to natural infection by the virus.

Will the vaccine change my genes and harm me?

No! The viral vector used is harmless and has been stripped of any disease-causing genes and genes that can enable them to replicate. They just serve as a vehicle or delivery system for conveying the messages to your body cells, invading them, and then instructing them to manufacture antigens the body can mount an immune response against which then offers you future protection.

What's the recommended dosage?

The recommended dosage for now is two doses (0.5ml each) given at the muscle of the upper arm (deltoid muscle) spaced apart by at least 12 weeks apart.

What side-effects can occur from taking the vaccine?

The likely side-effects are mild weakness and muscle aches, typical of most vaccinations.

How do I book for my COVID-19 vaccination?

To register for your COVID-19 vaccination in Nigeria kindly visit the portal <https://nphcdaict.com.ng/publicreg/>

After my COVID-19 vaccination should I still wear a mask and practice social distancing?

Yes! The vaccine is in limited supplies for now thus not everyone will get vaccinated. Until we vaccinate at least 70% of our population, and achieve herd immunity, please wear a mask and practice social distancing so others that are not yet vaccinated stop keeping to the disease-preventive measures by imitating you.

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➔ What are the complications of not managing hepatitis B infection?

If not managed, hepatitis B might lead to complications such as liver failure, liver injury (cirrhosis), liver cancer, and ultimately death. However, not everybody infected with the hepatitis B virus will require active management using antiviral medications, others will have to manage the condition using healthy lifestyle measures and nutrients in the form of liver support supplements that helps the liver carry its normal functions especially detoxification. These however, depends on the outcomes of three major tests; the hepatitis B DNA viral load, hepatitis B serology, and liver function test.

Who can take the vaccine?

Anyone not yet vaccinated is advised to take the vaccine because over 24 million persons are infected and living with viral hepatitis B in Nigeria, if you are not yet vaccinated you are at risk of contracting the virus. An exception is people who react to components of the vaccine.

What is the dosage?

Adults take 1ml which contains 20mcg of the hepatitis B surface antigen, at the deltoid muscle of the upper arm. Children take 0.5ml which contains 10mcg of the hepatitis B surface antigen at the vastus lateralis muscle of the thigh.

What is the vaccination schedule like?

The first jab is given at the start date, the second jab should be received one month after the first jab was administered, and the last jab should be received at least 8 weeks after the second jab was administered. You must complete the series consisting of 3 vaccinations to be immune against hepatitis B.

What are the side-effects?

If you experience any, it is usually mild, and it might be slight bleeding and swelling at the injection site, and maybe muscle aches. These subsides within two days but usually don't lasts more than a week.

For further assistance?

For information on vaccination, counseling, hepatitis B management & linkage to care kindly contact us on 08160962414.

HEPATITIS B VACCINE

Introduction

The hepatitis B vaccine is a safe and effective vaccine that helps prevent Hepatitis B virus infection. The hepatitis B vaccine is also known as the first "anti-cancer" vaccine because it prevents hepatitis B disease, the leading cause of liver cancer worldwide.

How do someone get hepatitis B?

The hepatitis B infection is gotten from blood and body fluid of an infected person. Most people contract chronic hepatitis B infection from their mothers' during the process of child birth. Other ways people get the virus is through unprotected sexual intercourse with an infected person, sharing of needles and other sharp objects with an infected person, blood transfusion, sharing of personal care items amongst others.

It is important to know that hepatitis B virus can remain on a surface for more than seven days still infectious.

How do I know if I have the virus?

The only way to know is through the hepatitis B surface antigen test, which detects if the virus is present in the body. Most persons live with the virus for more than 20 to 30 years without knowing because most times it doesn't show signs and symptoms, and this is why it is referred to as 'a silent killer'. However, when it does, some persons experience body pain, fever, weakness, yellowing of the white part of their eyes (the sclera), darkening of urine, abdominal pain especially in the right upper part of the stomach.

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HUMAN PAPILLOMAVIRUS (HPV) VACCINE

Introduction

The HPV vaccine helps protect you against certain types of HPV infections that can lead to cancers or genital warts. There are over 150 strains of HPV virus. The available HPV vaccines protects you against:

HPV types 16 and 18 — both cause 80% of cervical cancer cases.

HPV types 6 and 11 — which cause 90% of genital warts cases.

HPV types 31, 33, 45, 52, and 58 — lead to cancer of the cervix, anus, vulva/vagina, penis, or throat.

What's it and how does it work?

The HPV vaccine is a non-replicating and non-infectious subunit vaccine that contains a hollow virus-like particles made from a protein found in HPV, this serves as an antigen. The vaccine also contains adjuvants that triggers your body immune system to detect and respond to the antigen leading to immune response in the form of antibodies formation against HPV and formation of memory cells thus conferring immunity in your body against the specific HPV strains the vaccine covers when you get vaccinated. A point to note is that since they contain no live pathogen, and so lack the genetic information needed to replicate, they are proven safe even in people with weakened immune system.

➔ Who can take the vaccine?

HPV vaccine is indicated from the age of 9 years for the prevention of persistent infection, cervical, vulvar, vaginal, anal cancer, and genital warts.

Females 9 to 14 years require two doses of the vaccine 0.5ml each at the deltoid muscle.

Females from 15 years and above require three doses of the vaccine 0.5ml each at the deltoid muscle.

What's the schedule for the vaccine?

For people taking two doses; they receive the first jab on the start date, and the next jab will be six months later.

Whereas, for persons on the 3 doses regimen; they take the first jab on the start date, the second jab one month later after the first was received, and the last jab is administered at least 5 months from the date the second jab was given.

What's the side-effects of the vaccine?

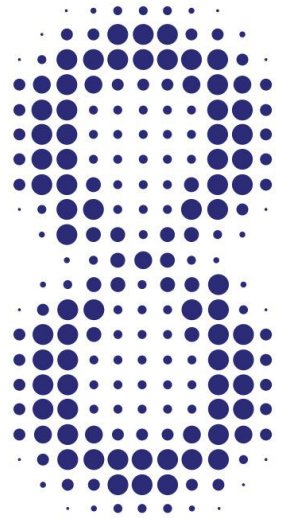
The likely side-effects you might experience are muscle aches, slight bleeding and swelling at the injection site.

For further assistance?

For information regarding how to get vaccinated, where to do a pap smear screening, any where in Nigeria, kindly reach us on 08160962414.

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