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OXYGEN



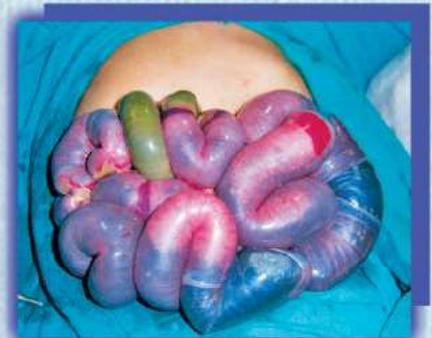
STEROID THERAPY



RHINOCEREBRAL



PALATAL



GASTROINTESTINAL



CUTANEOUS



CAUSES



DIABETIC KETOACIDOSIS



AMPHOTERICIN B

21

Mucormycosis and COVID-19 in India

India on developing COVID 19 Vaccine- Effectiveness and Ingredients

SANJAY AGRAWAL, TASHEE SIROHI

Vaccines are the most successful health intervention that significantly reduce infectious disease and its adverse effects. Over the years, the consequences of the quality of life have improved with Vaccination. More and more diseases are becoming vaccine-preventable with the rapid growth of technology. Concerning the current scenario, the second wave of the pandemic COVID-19 has made the world come under pressure one more time. The world has geared a step further with Vaccination, but how it affects saving lives is still a question to all!

India is eagerly awaiting information on the post vaccine side effects that are currently making the news. The world's biggest coronavirus immunization campaign has led to the suspension of Astra Zeneca Shots in many countries due to the possibility of blood clots. This is agreed upon by the top medical experts. The panels continuously monitor both Covishield and Covaxin's side effects.

Covaxin is a dormant vaccine. It is premeditated to destroy the COVID virus and is safe to administer into the body. India's National Institute of Virology isolates the samples. When the activated immune cell can identify

the lethal virus, the immune system can quickly produce anti-bodies to combat the virus outbreak.

Dating back to FDA approval, the vaccines were subjected to the same strict safety checks and efficacy requirements as all other vaccines. Health care workers on the front lines of patient care have also started receiving vaccines. Several stories are circulating online that the Vaccine is dangerous and ineffective. This isn't even close to being real. The Vaccine is made up of effective ingredients that keep humans healthy and stable.

Ingredients used in the Vaccine preparation

The Pfizer-BioNTech and Moderna vaccines are the only COVID-19 messenger-Ribonucleic acids (mRNA) vaccines officially approved for emergency use in the United States. Inactivated pathogens are used in traditional vaccines to elicit an immune response.

The COVID-19 mRNA vaccinations, on the other hand, took a unique approach. mRNA has been delivered into our cells to essentially provide genetic guidance for our cells to "momentarily" produce a "unique" viral protein. It further helps to activate an immune response.

The following ingredients make up the Pfizer-BioNTech COVID-19 vaccine:

mRNA (messenger ribonucleic acid) is the Vaccine's only active component. The mRNA molecules are formed by genetic information that gives our bodies' instructions. It is critical to understand how to

create a viral protein that triggers an immune response in our bodies. If we are exposed to COVID 19, the immune response causes our bodies to produce antibodies that protect us from infection.

Another latest COVID vaccine is a **Lipid**. The main aim is to secure the mRNA while also delivering a "greasy" exterior that allows the mRNA to glide within the cells for maximum strength.

- 1,2-Distearoyl-snglycero-3-phosphocholine
- (4-hydroxybutyl)azanediyl) bis(hexane-6,1-diyl)bis
- (2-hexyldecanoate), 2 [(polyethylene glycol)-2000]-N,N-ditetradecylacetamide
- cholesterol

Salts as a component of the Pfizer, Vaccine helps to regulate the body's acidity.

- dibasic sodium phosphate dehydrate
- sodium chloride
- monobasic potassium phosphate
- potassium chloride

The new COVID vaccine contains **Sugar** also known as sucrose. These molecules keep their form while they are frozen.

These ingredients are used in the **Moderna COVID-19 Vaccine** is very safe. The remaining components included are acids, acid stabilizers, salt, and sugar. All these work together to keep the Vaccine stable once it is manufactured. The ingredients are:

- Acids • Acid Stabilizers
- Tromethamine&Tromethamine hydrochloride

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- Acetic acid • Sucrose • Salts
- Sodium acetate • Sugar

Getting the Vaccine and staying healthy from COVID 19 is perfectly harmless. The SARS-CoV2 protein will not make you sick or nauseous. There will always be a focus on protection. When you develop a vaccine for the market, you have complete control over how viruses evolve and produce proteins in your body.

Immune cells will still be recognized with the deadly virus after administration, causing the body to produce antibodies against both pandemic viruses. The weakened strains of the common cold, known as adenovirus from chimpanzees, create the Covishield. It has been altered to resemble the corona virus. The efficacy of the Oxford-AstraZeneca vaccine has been seen in international clinical trials. Almost 90% of the people are given a half dose and then a full dose.

There is insufficient evidence to support the half-dose & full-dose concept. According to some unpublished results, a longer delay between the first and second doses would improve the Vaccine's overall efficacy. The vaccines were found to be 70% active after the first dosage in one sub-group.

To what extent are the vaccines useful?

Most vaccinations are linked to protection. What you see- and the immune response is all linked to or predicts. It's a question of whether you'll be immune to Covid or not! Most vaccines, such as those for measles, hepatitis B, and seasonal flu, had strong antibody responses throughout the precedent times. It was linked to the feeling of being safe. The Vaccine will produce neutralizing antibodies in reaction to the virus, preventing it from infecting the cell.

Currently:

In India, the situation turned out rigid in 2021 with the sudden surge of the Covid-19 cases. It is estimated around 22 662,410 cases, where the recovery rate is 18,665,266 and whereas the number of deaths is around 246,146. Regarding the Vaccines, India has administered around 160 million dosages of the coronavirus vaccine, predominantly shot. AstraZeneca Shot is locally produced as Covishield, and Bharat Biotech developed an indigenous vaccine called Covaxin.

From May onwards, the Vaccine is now available for people below 45 years. The issue that has created a lot of complaints is the shortage of vaccines. India is experiencing a devastating second wave, while shortage remains a matter of concern for all! The vaccination program is largely struggling to make an impact, and supplies are largely problematic. However, the country has halted vaccine exports in March to focus on domestic inoculations.

The commitment that was made to channelize vaccines among all is not yet to be deployed. Around 30 million people have to have a complete second dose of the Vaccine in India, which is still pending. The planning of the vaccine supplies is not yet assured and needs confirmation for the opening of the Vaccine for 940 million people.

Importing in India the vaccine made in Russia for the DCGI- a green signal is observed! Dr. Reddy, co-chairman and managing director GV Prasad, have partnered with the interim safety and immunogenicity data from Phase II/III to submit the safety data on the Russian vaccine. They made Sputnik V Vaccine with a due analysis of 15 days

and completed an ongoing clinical trial in the country.

The company presented a comparative phase III immunogenicity data of the Vaccine. These are produced in Indian and Russian studies regarding s-antibody, virus neutralization, cellular response, etc. The unblinded data of serious adverse events and RT-PCR positive cases continues. A lot of consistent data concerning clinical trial outcomes is formulated from Russian clinical trials and packages. The committee noted that the firm's protection and immunogenicity data from the Indian study are comparable to the provisional data gathered from the ongoing phase III clinical trial in Russia.

Dr. Reddy has teamed up with the Russian Direct Investment Fund (RDIF) to import and distribute the Vaccine in India, which was authorized for emergency use by the Drugs Controller General of India (DCGI) this month. The Vaccine must be stored at 18 degree Celsius and administered at the dosage of 0.5ml.

As per Dr. Reddy, the company has rolled out the Sputnik V Vaccine by May end or early June. The vaccine production will continue in India from May to go up to 50 million doses as committed by the BalaVenkatesh Varma, Indian Ambassador to Russia.

To conclude, there is no doubt about the Vaccine that is made in India. What matters in the process is to take active care and believe in staying good. Vaccines are largely available as per age. Getting yourself vaccinated is an ideal way of responding to the disease to beat it.

