What Ingredients are in the COVID-19 Vaccine?

Pfizer-BioNTech Vaccine

- **95% effective**
- **Number of shots:** 2 shots, 21 days apart
- Approved for use in people aged 12 and older
- **Ingredients:** messenger ribonucleic acid (mRNA), lipids (((4-hydroxybutyl)azanediyl)bis(hexane-6,1-diyl) bis(2-hexyldecanoate), 2 [(polyethylene glycol)-2000]- N,N-ditetradecylacetamide, 1,2-distearoyl-sn-glycero-3- phosphocholine, and cholesterol), potassium chloride, monobasic potassium phosphate, sodium chloride, dibasic sodium phosphate dihydrate, and sucrose
- **Explanation of ingredients:** - Lipids: Nanolipids, or tiny fat molecules, protect the mRNA and provide a “greasy” exterior that helps the mRNA slide inside cells. Nanolipid components in the Pfizer-BioNTech vaccine include: ((4-hydroxybutyl)azanediyl)bis(hexane-6,1-diyl)bis(2-hexyldecanoate), 2 [(polyethylene glycol)-2000]- N,N-ditetradecylacetamide, 1,2-distearoyl-sn-glycero-3- phosphocholine, and cholesterol - Salts: Helping to balance the acidity in your body, the following salts are included in the Pfizer-BioNTech vaccine: potassium chloride, monobasic potassium phosphate, sodium chloride, and dibasic sodium phosphate dihydrate - Sugar: Basic table sugar, also known as sucrose, can also be found in the Pfizer-BioNTech vaccine. This ingredient helps the molecules maintain their shape during freezing.
- **Does NOT contain:** eggs, preservatives, latex, rubber, or animal products (pork etc.)
- Learn more, read the FDA full Pfizer-BioNTech Fact Sheet: [www.fda.gov/media/144414/download](http://www.fda.gov/media/144414/download)

Moderna Vaccine

- **94% effective**
- **Number of shots:** 2 shots, 28 days apart
- Approved for use in people aged 18 years and older
- **Ingredients:** messenger ribonucleic acid (mRNA), lipids (SM-102, polyethylene glycol [PEG] 2000 dimyristoyl glycerol [DMG], cholesterol, and 1,2-distearoyl-sn-glycero-3-phosphocholine [DSPC]), tromethamine, tromethamine hydrochloride, acetic acid, sodium acetate, and sucrose
- **Explanation of ingredients:** - mRNA: Like the Pfizer BioNTech vaccine, Moderna’s also uses mRNA technology to build antibodies against COVID-19. - Lipids: Nanolipids help deliver the mRNA to the vaccine recipient’s cells. Nanolipid components of the Moderna vaccine include: (SM-102, 1,2-dimyristoyl-rac-glycero3- methoxypolyethylene glycol-2000 [PEG2000-DMG], cholesterol, and 1,2-distearoyl-sn-glycero-3-phosphocholine [DSPC]) - The remaining ingredients, including acids (acetic acid), acid stabilizers (tromethamine and tromethamine hydro chloride), salt (sodium acetate), and sugar (sucrose) all work together to maintain the stability of the vaccine after it’s produced.
- **Does NOT contain:** eggs, preservatives, latex, rubber, or animal products (pork etc.)
- Learn more, read the FDA full Moderna Fact Sheet: [www.fda.gov/media/144638/download](http://www.fda.gov/media/144638/download)
Johnson & Johnson/Janssen Vaccine

- **66% effective**
- **Number of shots:** 1 shot
- **Approved for use in people aged 18 and older**
- **Ingredients:** recombinant, replication-incompetent adenovirus type 26 expressing the SARS-CoV-2 spike protein, citric acid monohydrate, trisodium citrate dihydrate, ethanol, 2-hydroxypropyl-β-cyclodextrin (HBCD), polysorbate-80, sodium chloride
- **Explanation of Ingredients:** Recombinant, replication-incompetent adenovirus type 26 expressing the SARS-CoV-2 spike protein: a modified and harmless version of a different virus (Adenovirus 26) is used as a “vector” to deliver the DNA gene sequence to produce the coronavirus spike protein. Once the modified adenovirus vaccine enters into the cells, the body of the virus essentially disintegrates and the DNA material within it travels into the nucleus of the human cell where it is transcribed into mRNA. The coronavirus spike protein is then produced and displayed on the cell’s surface, prompting the immune system to begin producing antibodies and activating T-cells to fight off what it thinks is an infection. The Adenovirus 26 in the J&J vaccine does not replicate and does not change your genetic code.– Acids: citric acid monohydrate– Salts: trisodium citrate dihydrate– Sugars: 2-hydroxypropyl-β-cyclodextrin (HBCD), polysorbate-80, sodium chloride– Ethanol.
- **Does NOT contain:** eggs, preservatives, latex, rubber, or animal products (pork etc.)
- **Learn more, read the FDA full Janssen Fact Sheet:** https://www.fda.gov/media/146305/download?exitLinkName=janssen-fact-sheet

Getting vaccinated is one of many steps you can take to protect yourself and others from COVID-19.

For some people, COVID-19 can cause severe illness or death. Getting vaccinated not only protects you from COVID-19, it also protects those around you by preventing its spread. Stopping a pandemic requires using all the prevention tools available. Vaccines work with your immune system so your body will be ready to fight the virus. Other steps, like masks and social distancing, help reduce your chance of being exposed to the virus and spreading it to others. **Together, COVID-19 vaccination and following CDC’s recommendations to protect yourself and others will offer the best protection from COVID-19.**

**SOURCES**

www.hackensackmeridianhealth.org/HealthU/2021/01/11/a-simple-breakdown-of-the-ingredientsin-the-covid-vaccines