Immunotherapy Doctor/Medical Advisor to COVID Act Now, Dr. Leo Nissola explains the difference on how J&J's Adenovirus vaccine works compared to the other mRNA vaccines on the market.

- Johnson & Johnson built its vaccine from a virus that causes the common cold known as an adenovirus. Adenoviruses are a family of viruses that have dozens, maybe hundreds, of members; most of them cause symptoms of a mild common cold. You could say that vaccines are the equivalent of a technical school for your immune system.

- Adenovirus-vectored vaccines are a different technology than mRNA-based vaccines. Like the mRNA vaccines, the main idea is to get genetic material that encodes sars-cov-2 genes into your cells and get your cells to make the virus proteins. The difference is in how they do this.

- Adenovirus vectored vaccines use a virus to act as a trojan horse. Instead of hiding Greek soldiers, or anything dangerous, the adenovirus releases genes that encode the sars-Cov-2 spike protein. Scientists developed a way to use strains of adenoviruses that don't cause disease as a delivery system for vaccines. So we're using one virus to deliver the vaccine against another. Fascinating science.

Let me know if you'd like to hear more from Leo. Thanks

LEO NISSOLA, M.D.
Immunotherapy Doctor/Medical Advisor to COVID Act Now

Leo Nissola, M.D. (pronounced: LEE-oh NEE-suh-lah) is a physician and scientist known for designing innovative clinical trials and working relentlessly to design data-driven models to address the COVID-19 pandemic in The United States. He is heavily involved in the COVID-19 pandemic response, advising US elected officials and health authorities. Dr. Nissola is an aggressive advocate for data transparency, and for the expansion of health care access. He served as a Medical Advisor to **COVID Act Now** and the **National Convalescence Plasma Project**. He is also a Cancer Immunotherapy Scientist and drug developer who has led, designed, and initiated multiple clinical trials for cancer patients in the United States. His work focuses on understanding and fighting advanced-stage cancers with the immune system. Dr. Nissola has also spent more than a decade researching and studying Lupus, an autoimmune disorder that affects over 5 million people worldwide. His **book** on Systemic Lupus Erythematosus is used by Medical Schools across the globe. A former Medical Oncology Fellow at the University of Texas MD Anderson Cancer Center in Houston, Dr. Nissola trained in surgical oncology, medical oncology, and worked at the forefront of patient care. He is passionate about social medicine, serving impoverished communities in South America and Eastern Europe, helping patients suffering from infectious diseases like HIV, Tuberculosis, and the highly pathogenic H1N1. Throughout the last influenza (H1N1) epidemic, Dr. Nissola served as a clinician and developed protocols and hospital guidelines to ensure patient safety and

appropriate care. Dr. Nissola, is fluent in English, Portuguese, Spanish, and Italian. He is a member of Association of Health Care Journalists and the Society of Professional Journalists.
Studio Location: San Francisco
Website: **DrLeoNissola.com**
Twitter: **@LeoNissolaMD**
Instagram: **@DoctorLeo**
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