

5 Exciting Medical Breakthroughs Outside of COVID-19

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Physicians and other medical professionals need to be noticed more for their heroic efforts in finding new treatments and discovering breakthroughs. However, it is easy to overlook and forget all their exemplary accomplishments when all you read about is COVID-19. With all the Omicron variant news dominating our social media/news channels, it's hard to focus on the uplifting side of healthcare. We all need a mental break from reading the wrench COVID-19 has thrown into our daily lives. The list of breakthroughs in healthcare goes on and on and on. If we could list all of them, this would be an extremely long article, so today, we would like to highlight our own set of positive news that has recently occurred in our nation and other countries.

Nasal Vaccine for Alzheimer's Disease

Medical researchers have developed new medications to treat and slow Alzheimer's, the most common cause of dementia. According to **WBUR**, Boston's NPR news station, human trials for the nasal vaccine Protollin have begun on "people between the ages of 60 – 85 who have early symptoms of Alzheimer's."¹ Vaccines have been very controversial in our society. A lot of people argue that, in general, vaccines have harmful effects on humans, but at least someone is trying to treat and possibly prevent one of the world's deadliest diseases. We can only hope that these trials will be successful so that they can enroll more people and allow further studies into the vaccine's effectiveness.

SGLT2 Inhibitors for Heart Failure

SGLT2 inhibitors, a medication originally used to treat diabetes, were recently discovered to help people with heart failure condition called reduction ejection fraction. According to a meta-analysis conducted by the **European Journal of Preventive Cardiology**,² the research team brought together data from studying 10,000 patients and discovered that "patients who took SGLT2 inhibitors were 22% less likely to die from heart-related causes than those taking placebo," said Professor Vassiliou from UEA's Norwich Medical School and an Honorary Consultant Cardiologist at the Norfolk and Norwich University Hospital.³ This is a fantastic discovery as there have been many failed attempts in treating heart failure conditions, and this became the first medication discovered to treat reduction ejection fraction. It has given many physicians hope in revolutionizing the treatment offered to heart failure patients.

Milvexian Pill for Preventing Blood Clots

Another discovery is an oral pill called Milvexian that was proven effective in "preventing blood clots in 1,242 patients from 18 countries – all who enrolled in knee replacement surgery between June 2019 and February 2021."⁴ The **New England Journal of Medicine** stated that patients who took a "daily dose of 100 mg or more was effective in preventing venous thromboembolism (blood clot) and was associated with a low risk of bleeding," compared to Enoxaprin, a controlled drug. This is another amazing

breakthrough that could lower the rate of blood clots, as "venous thromboembolism is the third leading vascular diagnosis after heart attack and stroke, affecting between 300,000 to 600,000 Americans each year."⁵

New Telehealth Diet and Exercise Program for Knee Pain and Weight Loss

In Australia, about "415 people between the ages of 45-80 years with symptomatic knee osteoarthritis and obesity"⁶ participated in a trial that was funded by Medibank, the Medibank Better Health Foundation Research Fund, and the National Health and Medical Research Council (NHMRC) Centre of Research Excellence. As the result of these trials, the telehealth-delivered exercise and diet program, Better Knee, Better Me™, improved pain in patients with knee osteoarthritis (OA) and obesity at 6- and 12-month follow-up.⁷ This development proves telehealth can be used for more than a conversational virtual visit.

Mental Health Awareness is on the Rise

Although we have a long way to go before we can see positive results on using mental health services and their effectiveness, it is reassuring that many organizations are taking the initiative to increase mental health awareness. The World Health Organization (WHO) and the US Centers for Disease Control and Prevention (CDC) are just a few among many other organizations promoting it even more this year through public service campaigns and working hard to encourage people to get help for their mental health. There are many excellent programs out there offered to medical professionals who are burned out, depressed, stressed, or on the brink of suicide, ArMA's Virtual Doctors' Lounge⁸ is one of them. The program allows Arizona physicians to share concerns with someone who understands the personal and professional stresses that a physician experiences. It is not just used for severe mental illnesses or crises. It can be used to talk about anything bothering a physician, even if they are having one bad day at work. We have a long way to go before we can remove this stigma of getting mental help, but at least more people are paying attention to it.

We listed a few recent breakthroughs that only show a tiny fraction of the heroic efforts of medical professionals. That is because their accomplishments are a never-ending list that could take hours, or even days, to read through. While it is not 100% guaranteed that these developments will not cause undesired effects — some are still being tested for effectiveness and safety— they have proven that our medical professionals are heroes for their efforts. Whether you have heard about the nasal vaccine for Alzheimer's or the breakthrough of blood clot protection, we hope this article's positive data and messages will resonate with you and many other readers.

If you know someone in the healthcare industry, please take a moment to remind them of their importance when feeling down from their hectic schedule, especially during these challenging times.

Sources:

¹ <https://www.wbur.org/news/2021/11/16/human-trials-for-nasal-alzheimers-vaccine-to-begin-in-boston> WBUR NEWS

² <https://academic.oup.com/eurjpc/advance-article/doi/10.1093/eurjpc/zwab189/6447088>

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³ [The diabetes medication that could revolutionize heart failure treatment -- ScienceDaily](#) Science Daily

⁴ <https://www.nejm.org/doi/10.1056/NEJMoa2113194> The New England Journal of Medicine

⁵ [What is Venous Thromboembolism \(VTE\)? | American Heart Association](#) American Heart Association

⁶ <https://www.acpjournals.org/doi/10.7326/M21-2388> ACP Journals

⁷ [Better Knee, Better Me™: effectiveness of two scalable health care interventions supporting self-management for knee osteoarthritis – protocol for a randomized controlled trial \(nih.gov\)](#) National Center for Biotechnology Information (NCBI)

⁸ [Home | Virtual Doctors Lounge \(mdlounge.org\)](#) The Virtual Doctors' Lounge