

# COVID vaccine saves lives regardless of body weight

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[COVID vaccination](#) is highly protective against severe disease in people

of all body weights, new British research finds.

The study of over 9 million adults found that those who'd received two doses of a COVID-19 [vaccine](#) were strongly protected against hospitalization or death from the disease. And the effectiveness was just as great for obese people as those with a healthy weight.

That had been a concern, as there is evidence the [flu vaccine](#) is less effective for people with obesity, said lead researcher Carmen Piernas-Sanchez, from the University of Oxford.

"This prompted us to look into COVID vaccines," she explained.

Based on the findings, the vaccines are similarly effective for people who are normal weight, overweight or obese. But, Piernas-Sanchez said, more research is still needed to understand why obesity appears to make people more vulnerable to becoming severely ill when they do contract COVID.

For now, she and other experts stressed the importance of vaccination, including [booster shots](#).

"The vaccines aren't perfect, and you can still get COVID. But they are very effective against [severe disease](#)," said Dr. Aaron Glatt, chief of infectious diseases at Mount Sinai South Nassau, in Oceanside, N.Y.

The latest study looked at the pre-Omicron era, but Glatt said the vaccines remain highly effective against severe COVID.

Dr. Lalitha Parameswaran, an infectious disease specialist at NYU Langone Hospital Brooklyn, agreed.

"Vaccination remains the most important method to avoid severe illness

and death from COVID, and this has remained true in the [Omicron](#) era," Parameswaran said.

Booster doses, she added, offer protection against mild to moderate illness, and "further enhance the protective response to [severe illness](#)."

The findings, published recently in *The Lancet Diabetes and Endocrinology*, are based on medical records from over 9 million British adults. Between December 2020 and November 2021, over 566,000 tested positive for COVID; about 33,800 were hospitalized, while just under 14,400 died.

Overall, the study found, people who received two doses of any COVID vaccine given in the United Kingdom—AstraZeneca, Pfizer or Moderna—were much less likely to fall seriously ill.

Vaccination cut the risk of hospitalization by almost 70% among overweight, obese and normal-weight adults, compared to their counterparts who were unvaccinated. There was a similar reduction in the risk of dying from COVID-19.

People who were underweight showed somewhat less protection: Vaccination lowered their risk of being hospitalized for COVID by half, and their risk of dying by 40%, the investigators found.

It's not clear why, according to Piernas-Sanchez. But she noted it's possible that some underweight people had [health conditions](#), including [cancer](#), that lower the [immune response](#) to vaccines.

The researchers also found that when vaccinated people did get COVID, those who were obese faced a greater risk of landing in the hospital or dying than people in the [normal-weight](#) range.

It's been recognized since early in the pandemic that obese people are at increased risk of severe COVID-19. Experts believe there are several reasons: Obesity can impair immune function and make people more prone to [clotting](#) and breathing problems, for example.

"Given the high effectiveness of the vaccines, the absolute number of severe cases was reduced massively," Piernas-Sanchez said. "But among the fewer severe cases that are happening, those with low or high body weights are at increased risks, compared with people of a healthy weight."

It all suggests that achieving a healthy weight will help protect people from severe COVID-19, Piernas-Sanchez said.

What about [booster](#) shots? In this study, few people of any [weight](#) got severely ill after a COVID booster dose.

But, the researchers said, more studies are needed to know whether booster doses erase the excess risk linked to obesity.

That said, all three experts advised people to get the recommended booster doses. The U.S. Centers for Disease Control and Prevention is advising a second booster shot for adults age 50 and older, and some younger people who are immune-compromised.

The study also found that underweight adults were less likely than everyone else to be vaccinated: About one-third were unvaccinated as of November 2021.

Again, the reasons are unknown. But the researchers speculate that public health messages, which emphasize the risks tied to [obesity](#), might give thin people the idea that they have nothing to worry about.

**More information:** The U.S. Centers for Disease Control and Prevention has more on [obesity and COVID](#).

Carmen Piernas et al, Associations of BMI with COVID-19 vaccine uptake, vaccine effectiveness, and risk of severe COVID-19 outcomes after vaccination in England: a population-based cohort study, *The Lancet Diabetes & Endocrinology* (2022). DOI: [10.1016/S2213-8587\(22\)00158-9](https://doi.org/10.1016/S2213-8587(22)00158-9)

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