

Obesity & Waning of COVID-19 Vaccines

Read the plain English summary at: <https://edin.ac/41pr97>
Read the paper at: <https://doi.org/10.1038/s41591-023-02343-2>
Image credit to Usher Institute, The University of Edinburgh



For study period
14 September 2020 -
19 March 2022

Looked at 3,588,350 adults in Scotland
who received 2 or 3 COVID-19 vaccines



10,983 hospitalised or died
from severe COVID-19

Compared to people with a normal BMI, people with **severe obesity** are...

76%

more likely to
experience
severe outcomes
of COVID-19



infected earlier post-vaccination



43%



increased risk
if they also have
type 2 diabetes

No risk for type 2 diabetes alone



SCORPIO study

Looked in detail at 2nd & 3rd dose vaccine response in obesity:



Compared to people with a normal BMI, people with **obesity** had...

lower levels of antibodies
6 months after second dose

for comparable levels,
less effective antibodies

Booster (3rd dose) vaccines
greatly improve antibody levels,
but wear off more quickly



People with obesity or severe obesity are at greater risk of serious COVID-19
after vaccination and therefore may need additional & more frequent booster doses

