



# Delta Variant: Vaccine Effectiveness and the Path to Preventing Further Infections

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Vaccines are a powerful tool against COVID-19, yet vaccines alone are demonstrably not enough. It's not a case of either/or - risk management is additive. We need to help vaccines work best with a [layered strategy](#) including vaccines, masks, ventilation, distancing, hand hygiene, high-touch surface disinfection, unambiguous government messaging, and a system to test-trace-isolate with support within communities.

The COVID data from Israel shows [Pfizer](#) to be 64% effective against the Delta variant, compared to [original estimates](#) of 88%. Moderna, which like Pfizer is an mRNA vaccine, has been [believed to be similarly effective](#), but [current data](#) reflects lab studies of neutralizing antibody titres, not real-world case numbers, and thus is incomplete.

While the majority of breakthrough cases, like with the original virus, are classified as [mild](#), severe cases and deaths [do occur](#), and underreporting is a problem. A [University of Washington study](#) released in May estimated COVID deaths in the US to be 905,000, 61% higher than CDC estimates at that time of 561,594. The CDC is [not tracking](#) milder cases, thus hampering the collection of data that could better clarify the transmissibility of breakthroughs. This has been [downplayed](#) based on [faulty data](#), leading to [misguidance](#) on mask recommendations. Also worryingly, this severely limits our understanding of the likelihood of developing Long COVID after breakthrough, which is [estimated to occur](#) in greater than 10-35% of cases, both mild and severe, and across all age groups.

As the pandemic evolves, we have to deal with the fact that data is expected to be incomplete at any time. To issue optimally effective guidance, this must be taken into account, applying inferential reasoning as well as the precautionary principle to reduce infections, suffering, and deaths. What is currently known about the Delta Variant clearly underscores the need to resume wearing masks indoors with others, as [Israel](#) has done, and as advised by [WHO](#), as well as to pay attention to [ventilation](#). In a society where mask-wearing is based on an "[honor system](#)," in the absence of a standardized [vaccine verification](#) program or of any tools to help businesses and employers implement and enforce indoor mask-wearing by the unvaccinated, and in the absence of

enforcement of workplace [ventilation standards](#), where events, travel and tourism have opened back up with [no travel restrictions](#) between zones of higher or lower transmission, this is particularly imperative. The fact that children under age 12 will not be [vaccinated before the start of the school year](#) makes it even more so.

Using all available strategies to reduce transmission will reduce the virus' ability to further mutate and further evade vaccines as we work to address [vaccine inequity](#), [politicized vaccine refusal](#), and immunize as much of the population as possible.