**COVID Booster Update**
August 1, 2022
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 COVID booster shots do provide some level of increased protection. Each new variant is incrementally less sensitive to the vaccines because these variants have new proteins that replace some of the older ones that are in the original viral spike. Accordingly, we do not have antibodies against these new proteins, and therefore the vaccine is a little less effective with each variant.

We do, however, have antibodies from the vaccine against the remaining original proteins and each booster will increase these antibodies providing us at least some level of protection. Eventually, with subsequent variants, all the spike proteins will probably be replaced with new ones rendering our original vaccines ineffective.

Therefore, as long as Covid is a potentially serious infection, we will need new boosters from time to time with fresh mRNA coding for the newer variant proteins.

Currently, the 4th shot (the second booster) is considered fully immunized for people of the age of 60 and soon for most people. In late September 2022 we will probably have a new vaccine that covers Covid BA 0.5 /0.4 better. I fear that Covid BA 0.5 /0.4 will be winding down at that time and this “new vaccine” may be politically motivated with upcoming November elections. Better, more comprehensive boosters will likely be available in the spring 2023. Stay tuned regarding “new and improved vaccines”.

Much more exciting is the current testing of better vaccines against the nuclear core of the virus. They are very early in development but are being tested in mice and, very recently, in humans. These, if successful, will cover all new variants and should end the pandemic if it isn’t already over by then. In the end, COVID needs to be defeated everywhere to be defeated anywhere.

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