MMR vaccine can help fight sepsis in Covid patients

- A new paper suggests that live attenuated vaccines such as MMR (measles, mumps and rubella) may prevent the severe lung inflammation and sepsis associated with Covid-19 infection. The paper is published online in the journal mBio.

A live attenuated vaccine is derived from a disease-causing pathogen, which has been weakened in the laboratory so that it does not cause severe illness when a person is vaccinated with it.

- The new research paper refers to growing evidence that live attenuated vaccines can activate certain immune cells to train leukocytes (the white blood cells of the immune system) to mount a more effective defence against unrelated infections.
- The researchers used a live attenuated fungal strain and demonstrated, in the lab, that vaccination with it trained innate protection against sepsis (blood poisoning) caused by a combination of disease-causing fungi and bacteria.
- The authors proposed that the protection is produced by cells called MDSCs. They stressed that this live attenuated MMR vaccine concept is not suggested to be directed against Covid-19, but instead an immune preventive measure against the severe inflammatory symptoms of Covid-19.
- The use of childhood live attenuated vaccines such as MMR given to adults to induce bystander cells that can dampen or reduce severe complications associated with Covid-19 infection is a low risk – high reward preventive measure during a critical period of the pandemic.
- These bystander cells are long-lived but not life-long.
- Anyone who had an MMR vaccination as a child, while likely to still have immune antibodies directed against measles, mumps, or rubella, will not likely still have the immune cells directed against sepsis.
- So, it could be important to get the MMR vaccination as an adult to protect better against Covid-related sepsis.