

News & Comments

Changing the Site of the Covid-19 Vaccine Shot can Reduce Side Effects

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There may be a way to reduce side effects while maintaining the effectiveness of the Corona vaccine by changing the intramuscular injection to a subcutaneous one.

COVID-19 vaccines are currently administered intramuscularly (deep in the muscles). The subcutaneous injection of m-RNA based COVID vaccine is an alternative method of injection. It uses a short needle that delivers the shot between the skin and muscle - subcutaneously. In tests performed on mice, researchers found that the mRNA vaccine administered subcutaneously was effective at reducing the adverse side effects of vaccinations, like fatigue, while maintaining their effectiveness that is providing similar immune-system responses.

The reason behind it is that muscle tissue contains huge amounts of immune cells, which are responsible for pathogen (an organism causing disease) identification, and blood vessels. These immune cells can rapidly take up, antigens from the vaccine and transport them to the nearby lymph node. While the number of both the immune cells and blood vessels is comparatively less in subcutaneous tissues, the immune cells can't up-take the antigens that quickly, also since the blood supply is less, the supply of these antigens to the lymph nodes is delayed, which means that the effects of vaccination aren't that quick and dramatic as in case of an intramuscular vaccine jab.

KEYWORDS

Vaccination, Covid-19, adverse effects, sars-cov2, health care, life science, health medicine, fatigue, PLoS

