



Text on figure:

The vaccine boosts the immune system's division of work

Prior to the vaccination, the body has only a few cells capable of recognising the HIV virus.

Top tier: Virus attack without vaccine. When the HIV virus infects the unvaccinated host, the immune system is mainly presented with the strong antigens. The immune cells consequently divide, so that a predominant number of cells can recognise the strong immunostimulatory genes (shown in green). However, the HIV virus division takes place so quickly, that the immune cells cannot keep up in the long run. The weak immunostimulatory genes (shown in pink) only activate the immune system to a mild extent.

Middle tier: Virus attack with traditional vaccine: A vaccination with strong immunostimulatory cells primes the immune system, but the HIV virus will still be able to wear out the immune cells or avoid them through mutation.

Bottom tier: Virus attack with new vaccine strategy: A vaccination with weak immunostimulatory cells boosts the immune system against these genes and also allows an immune system against strong immunostimulatory genes. The result is that the immune system recognises all parts of the virus and divide the work between the strong and weak immunostimulatory genes. The vaccine thus creates a division of work ensuring that the immune system can keep up and combat the virus or in some cases eradicate the infection.