

# Elite controllers have a stronger innate immune system

Newsletter June 2023



A small proportion of people with HIV have very low blood virus levels without HIV medication. They are called elite controllers. Elite controllers are rare, less than 1 in 100 people living with HIV. We have examined the immune system of elite controllers to gain a better understanding in the underlying mechanisms, which may bring us new ideas for HIV cure.

The human immune system has two parts: the innate part and the acquired part. The innate part of the immune system reacts first and only later the acquired part comes into action. CD4 cells are part of the acquired part of the immune system. HIV infects CD4 cells and therefore this component has been extensively studied so far. The innate part got less attention. However, during the first contact of the body with the HIV virus, the innate part is the first to act.

To investigate the innate immune system, we not only examined elite controllers, but also the close relatives of people with HIV. These family members do not have HIV.

## What we found:

- Elite controllers and their relatives have a stronger innate defense system
- This probably helps suppress the virus
- The innate immune system can be important for research towards curing HIV

## What we are still investigating:

- Is there a certain gene or number of genes that provide a stronger innate immune response?
- Does a stronger innate immune system also lead to a stronger acquired immune system?

Do you have any questions about the study?  
Reach out to us via the contact form on our  
website [www.2000hiv.com](http://www.2000hiv.com)