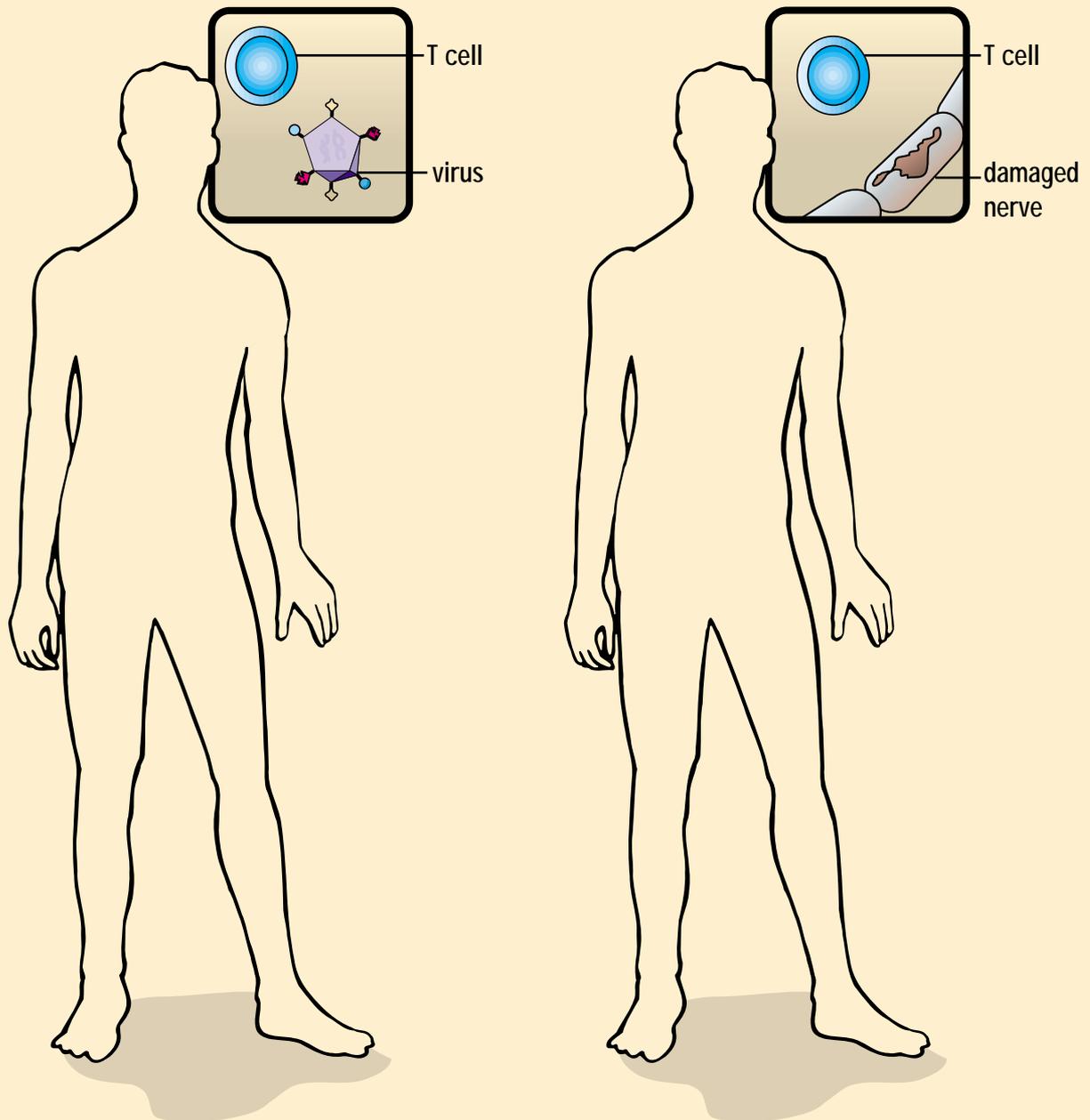


## MS inside the body



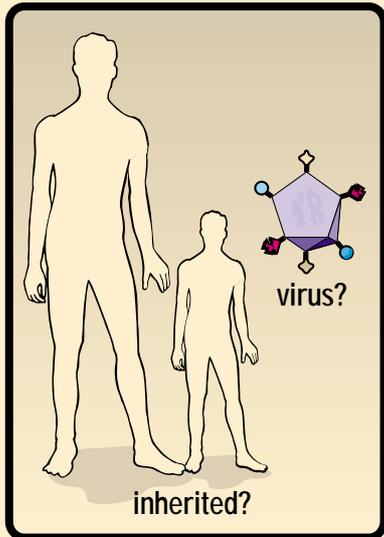
The immune system defends the body against infections like the common cold

This defence is coordinated by immune cells known as T cells

In multiple sclerosis (MS), the body attacks its own nerves

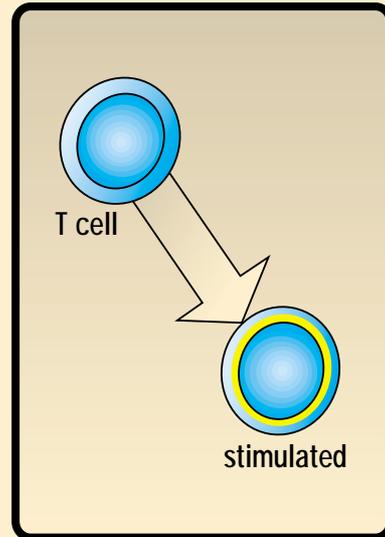
This happens because T cells become confused

Damaged nerves → symptoms of MS



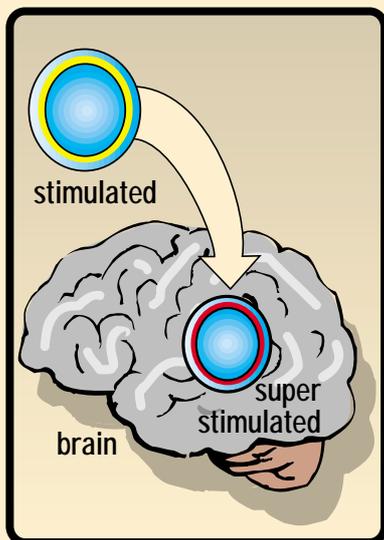
### MS inside the body I

No-one knows exactly what triggers multiple sclerosis (MS). It might be triggered by inherited factors or by chance infection, with a virus, for example. Whatever the trigger, the body is somehow confused into attacking its own nerves. The symptoms of MS result from damage to the outer coating of nerve cells.



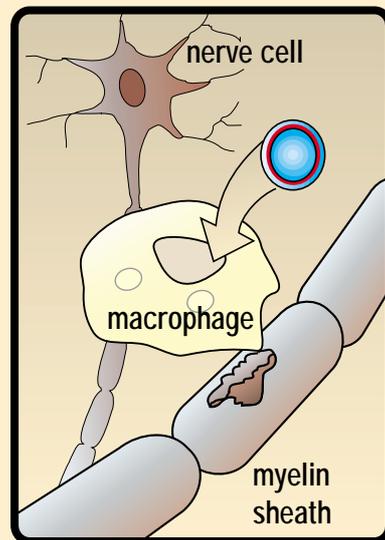
### MS inside the body II

It is the immune system that becomes confused into attacking the body's own nerves. Some of the body's immune cells, known as T cells, are stimulated to coordinate this attack. Normally, these T cells would only be involved in attacking infectious agents such as viruses and bacteria.



### MS inside the body III

Once stimulated, the T cells are able to enter the brain, which contains lots of nerve cells. Inside the brain, T cells become further stimulated — or super stimulated — to coordinate an attack on the nerve cells. The attack causes damage to the insulating outer coating of the nerve cells. This coating is called the myelin sheath.



### MS inside the body IV

Inside the brain, super stimulated T cells bring about damage to the myelin sheath by activating other immune cells called macrophages. It is the macrophages that 'eat' the myelin sheath around nerve cells. Holes develop in the myelin sheath causing messages to travel more slowly along nerves. This decrease in the speed of messages produces the symptoms of MS.