

Fever

Mummy, I feel weird, cold, and shivery!



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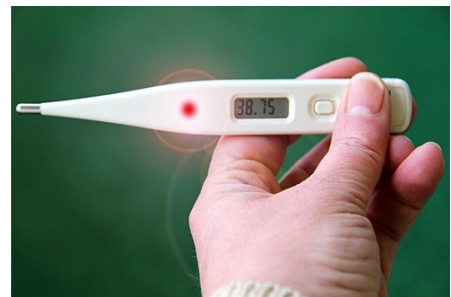
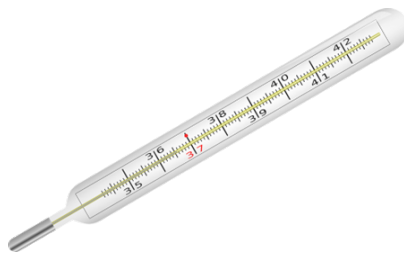
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Fever

It's Saturday afternoon. Yesterday, Sara spent the whole day playing with her friends in the park where she had a great time. But it was raining the whole time and she got soaked. And since her last meal, she feels weird: she's cold, she's shivering and she's very tired.

As she feels unwell, she tells her mother who, after putting her hand on her forehead, tells her: "you feel hot, I'm going to get the thermometer".

Sara's mom goes to the cabinet where she keeps the medicines and brings a thermometer that she puts in Sara's armpit and tells her to keep very still. After two minutes of waiting, the thermometer starts beeping and shows a temperature of 38.5°C. Sara's mother exclaims: "You have a fever!"



Three types of thermometers for measuring body temperature

But what is fever?

Fever is a rise in body temperature above normal. When we are well, our body temperature is around 36°C; if it goes up, we say we have a fever. Technically, we are considered to have a fever when this temperature rises above 38°C.

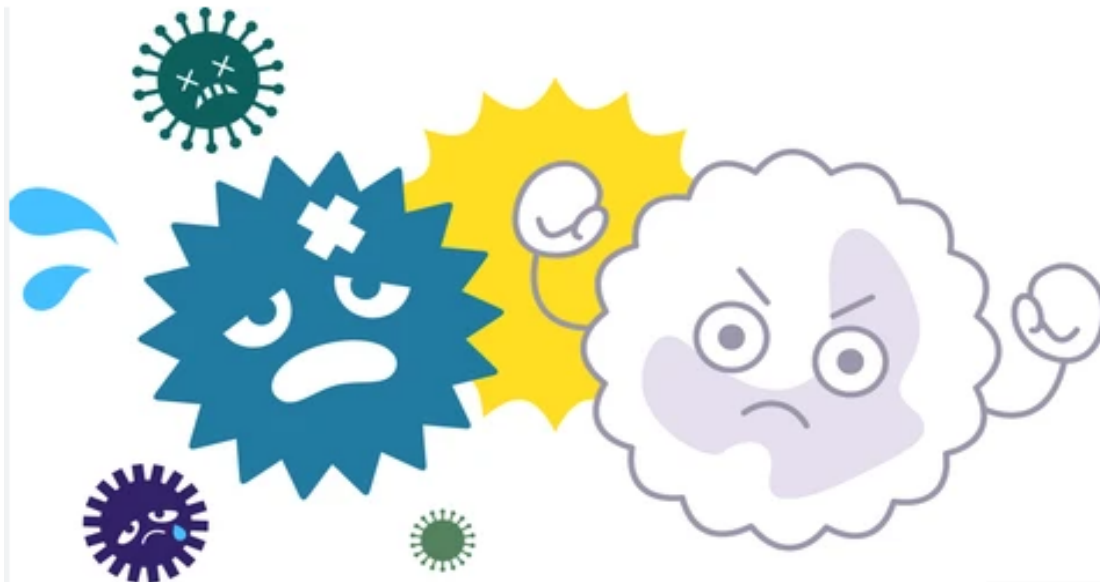
Why does our temperature rise and cause fever?

As we know, the human being, unlike some animal species such as reptiles, has a thermostat that is more or less in the center of the brain. That thermostat is in charge of maintaining our body temperature around 36°C.

If one day we are in winter with snow, our thermostat will tell our body that it has to generate more heat to maintain the temperature at 36°C. However, in the opposite situation, for example in summer while we are at the beach, our thermostat will tell our body to lower the temperature by sweating.

We could think of it as an air conditioner, which heats when the temperature is low and cools when we are hot. That is how our body is always kept at 36°C, which is the temperature at which it works best.

But when a microorganism infects us, our body detects that it is being attacked and switches up the heat: our temperature rises. This is because it is more difficult for the microorganism that infects us to reproduce at high temperatures and, in addition, our defenses act better, so fever helps fight the germ.



And what happens to us if the body temperature rises?

When our thermostat tells the body to increase the temperature, we do so by expending a great quantity of energy. That is to say, part of our energy reserves that we had saved, are dedicated to generating heat and that is why we feel very tired while we have a fever. But we need to take care to prevent the temperature from rising above 41-42°C because, at this point, some organs such as the brain can “overheat” and be damaged.

How can we prevent overheating?

When Sara's mother saw that she had a fever, she went back to the medicine cabinet, took out a red syrup and gave it to her. The syrup was paracetamol, one of the options we have, along with ibuprofen, for treating fever. This medicine is responsible, in addition to other things, for telling our brain not to raise the body temperature so much because this makes us feel bad.

The next day, Sara still had a fever, so her mother took her to the pediatrician. As soon as she arrived, he took off her shirt and listened to her chest, took her temperature, and examined her ears and throat. It seems that her throat was a little swollen and this could be the cause of the fever. As the causative microorganism is probably a virus, the pediatrician did not give her antibiotics, which only serve to fight bacteria, and told her to continue treatment with paracetamol and that he would see her again in two days. The next day, when she got up, Sara did not have a fever, so with the help of her own defenses she had managed to defeat the virus on her own.

