



This text is taken from *Why is Snot Green? And Other Extremely Important Questions (and Answers) from the Science Museum* by Glenn Murphy.

Being Human

Ahh – the human body. Forged over millions of years into a finely tuned machine. Incredibly complex and perfectly adapted to its environment, it has allowed us to become the most powerful and intelligent creatures on the planet.

But if you think about it, being human can be pretty gross at times. For all that we've achieved, we still sneeze, burp, fart and poo our way through life. Like huge meaty balloons filled to bursting with snot, gas and worse.

And if our bodies are so clever and complex, how come our eyes go blurry underwater? And how come a blob of ice cream – eaten too quickly – can bring us to our knees?

Here we find out what it *really* means to be human.

Why is snot green?

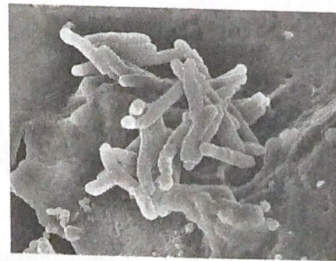
Basically, because it's the result of a fight between nasty bugs and body cells that make a green-coloured goo.

What?!

Seriously. Snot is made of a sticky substance produced inside the nose that traps and flushes out harmful bacteria. These nasty bugs try to get up your nose when you breathe them in. The sticky stuff stops them getting down your throat and into your lungs, and it also contains cells that your body produces to fight and kill the bugs. It's these that make the green goo. Sneezing and blowing your nose help to clear it all out.

Ugh. Fine. But what do they make the green goo for?

The body cells form part of the incredibly clever and complex defence system in your body. They make special proteins called lysozymes, which help them bust open, eat and digest the bacteria – a bit like the acid in your stomach. For this reason, we call the cells phagocytes, which is Latin for 'eaty-cells' (which you may prefer, but biologists use 'phagocytes' because it sounds more important and clever). It's one of these bacteria-busting proteins that has the green colour.



*Under the microscope:
a phagocyte attacks bacteria*

But why green, and not blue or purple?

This is purely because the protein contains a form of iron that reflects green light and absorbs all the other colours. Incidentally, you find a similar protein in wasabi, the type of horseradish you eat with Japanese sushi, which is why that's green too. Think about that next time you eat horseradish. Or a bogey.



I don't eat bogeys. I don't even pick my nose.

Of course you don't. No one does. No one rolls them up and flicks them, or sticks them under the desk either.

That's right. But if someone did... why would the bogey change colour to dark green, brown or black?

That's because once it's out of its warm, moist home in your nose, the snot begins to dry up as water from it evaporates into the air. When this happens, the phagocytes die and the greenish proteins within them break up – removing the green colour from the bogey.

After this, bacteria in the air settle onto the bogey and start to eat it (waste not, want not, as my mum always says). They chew up all the bits of phagocyte, dead bacteria and skin cells found in the snot, until all that's left is a dried-up mass of brownish-black protein leftovers. And even that gets eaten eventually.

Hang on a minute – how did you know bogeys change colour if you never pick your nose?

Oops.