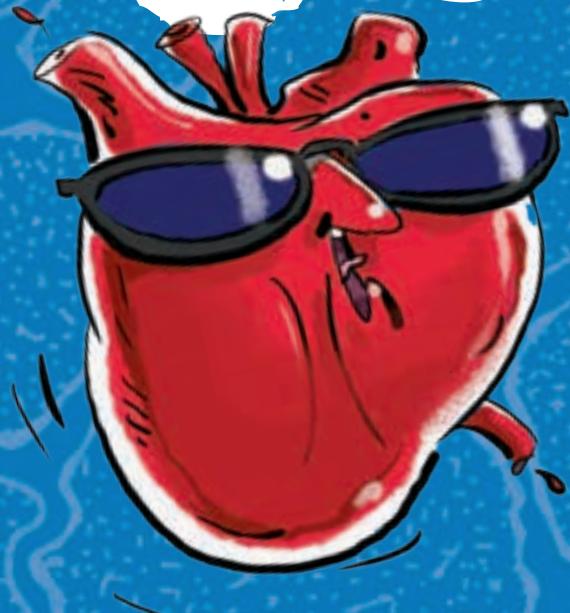


# 50 BODY QUESTIONS



A BOOK  
THAT  
SPILLS  
ITS GUTS

Tanya Lloyd Kyi  
*illustrated by Ross Kinnaird*



annick press  
toronto + new york + vancouver

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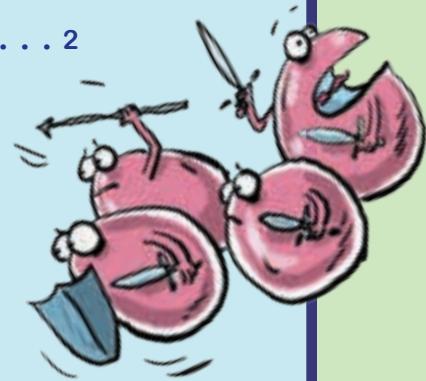
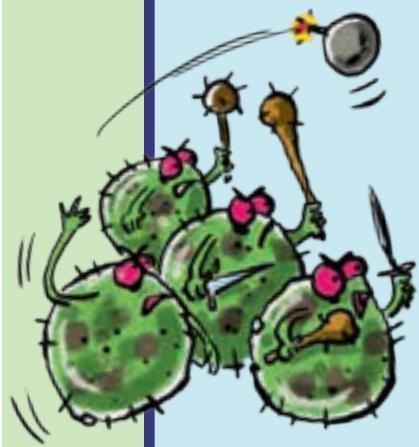
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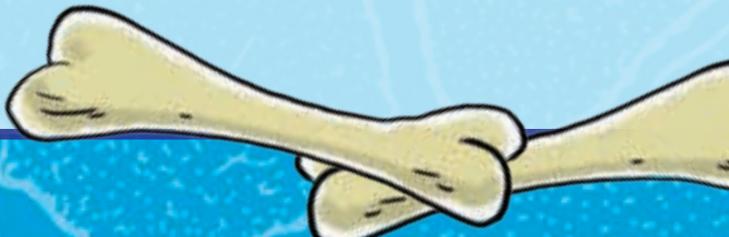
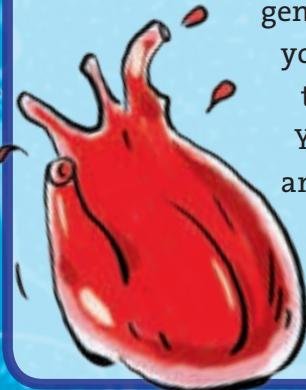
# Welcome to the Body Shop

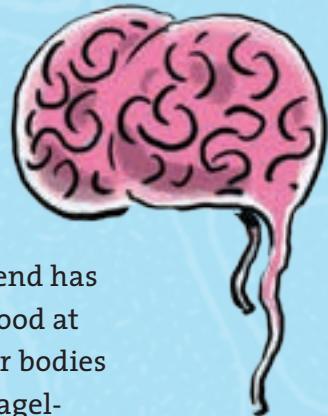
## Introduction

**BLINK.** Your body just created thousands of cells. *Snap.* Thousands more!

Every single day, you make billions of new cells and get rid of just as many old ones. You couldn't possibly flutter your eyelashes or snap your fingers as fast as those cells are produced.

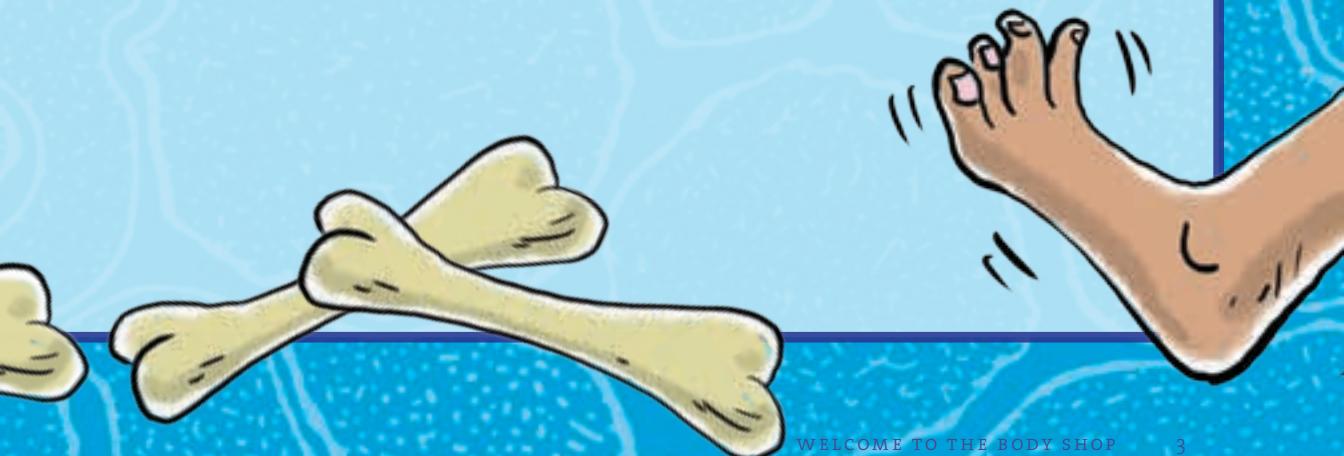
Inside each microscopic building block is the exact same genetic information—a specific code that makes you unique. There are seven billion people in the world, but no one else has your code. Your cells create a body that's different from any other. Different . . . and yet similar.





Even if you have brown eyes and your friend has blue, even if you're good at science and he's good at drama, there are still many things about your bodies that work in the same ways. You both have bagel-shaped cells to carry oxygen around your bloodstreams. You both have cells shaped like sea monsters to combat disease. You both have lung and heart and muscle and bone bits that work together in incredibly intricate ways to keep you walking, talking, and learning.

Want to know more? If you crave all the bloody details, if you want to get to the guts of these ideas, if you want to follow the trail of entrails, the 50 questions and answers that follow are for you!



# That Takes Guts

**WHEN WE THINK ABOUT DIGESTION,**

we imagine a series of tubes and organs leading from our mouths to our bottoms.

Those tubes, with their twists and turns, are definitely a big part of the process.

But our innards are also much more complicated. Turning food into usable nutrients takes muscle power, nerve input, and blood flow. It even takes bugs!

There are microscopic creatures in your guts right now, working to feed themselves and you.



*Great, and it's  
my day off.*



*More food  
coming!*

# Question 1

## Can you turn pepperoni into poo?

**TURNING NOSH INTO NUTRIENT—**  
that's the main job of the digestive system.

When you scarf a piece of pepperoni pizza, it's softened and chunked by your tongue, your teeth, and a good supply of saliva. Then it's pushed and squeezed downward by the muscles surrounding your esophagus, the tube that links your mouth to your stomach.

In your stretchy stomach, food gets churned and chunked some more. A few things get fully digested here: salt and water travel directly from your stomach into your blood. For the rest of that pizza, it's on to the small intestine . . .

If you took your small intestine and stretched it straight up from the ground, it would be the height of a two-story building. It's only called "small" because of its width—about the diameter of a gumball. Resting in coils beneath your ribcage, it sucks the nutrients from your food and sends them to your bloodstream.

The unwanted material gets sent to the large intestine. Food that couldn't be digested, bits of fat, cells that died in the digestive tract during the trip, and bugs and bacteria all end up at your rectum. Somewhere between 10 hours and a couple of days after the pizza delivery guy rang your doorbell, your pepperoni is officially poo.

*I don't want  
to know!*



# Workers and Slackers

Some organs in your digestive system act as support workers, with their own specialized tasks. The busiest of all is the liver, which has about two hundred different jobs. Its most important task is producing a liquid called **bile**, which helps break down fat. It also cleans chemicals such as food preservatives from your blood.

Meanwhile, the pancreas makes digestive juices to help the small intestine, and the gall bladder stores extra bile until your intestines need it.

And the appendix? Well, it just sits there. Scientists think it used to help out, back when early humans were chewing on sticks. Now, it's taking an extended vacation, lazing around like a guy under a beach umbrella.



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