

MULTI AWARD-WINNING KIDS COACH

FOODS BIG

ADVENTURE!

A LONG, TWISTING JOURNEY THROUGH

THE BODY: FOLLOW YOUR FOODS

INCREDIBLE ADVENTURE!

JO JOSEPH

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ISBN:

the DIGESTIVE SYSTEM

1 MOUTH

When you eat, your teeth break the food into smaller pieces. Your saliva starts breaking down the food and makes it easier to swallow.

2 ESOPHAGUS

After you chew and swallow, the food travels down a tube called the esophagus. The esophagus uses wave-like movements to push the food into your stomach.

3 STOMACH

Your stomach mixes the food with stomach juices to break it down into a mushy mixture called chyme. The stomach's acid and enzymes help break down proteins in the food.

4 SMALL INTESTINE

The food moves into the small intestine, where it gets broken down even more by enzymes. Tiny finger-like structures called villi absorb the nutrients from the food into your bloodstream.

5 LARGE INTESTINE

The large intestine absorbs water from the leftover waste. Friendly bacteria in the large intestine help break down any remaining food particles and make some vitamins.

6 RECTUM AND ANUS

The leftover waste is stored in the rectum until it leaves your body through the anus when you go to the bathroom.

Have you ever wondered what happens to your food after you eat it? Let's take a fun journey through your body and follow a piece of food from your mouth all the way through your digestive system!

Mmm, this apple tastes sweet!

When you take a bite of food, your teeth chew it into smaller pieces. This makes it easier to swallow.

CHOMP!

CHOMP!

TONGUE

GOING DOWN!

After you chew your food, you swallow it, and it goes down a long tube called the esophagus.


DID YOU KNOW?

It takes about 10 seconds for food to travel from your mouth to your stomach?



the MOUTH

It all starts with your mouth. When you take a bite of food, your teeth chew it into smaller pieces. Chewing makes it easier for your body to digest the food.



Your mouth produces saliva, a special liquid that helps break down the food even more.



DID YOU KNOW?

Saliva contains enzymes that start breaking down carbohydrates right in your mouth?

Saliva also makes the food slippery so you can swallow it easily.

the ESOPHAGUS

FOOD'S SLIDE



Peristalsis is like a wave that moves the food along the esophagus.

After chewing, you swallow the food. It travels down a long, muscular tube called the esophagus, which connects your mouth to your stomach.

The esophagus uses a process called peristalsis to push the food down.

the STOMACH

Let's take a look inside!!

Inside this stretchy bag, food is mashed into a messy soup.



THE MIXING BOWL



the STOMACH

Once the food reaches your stomach, it gets mixed with stomach acids and digestive juices.

The stomach muscles churn the food, turning it into a thick liquid called chyme.

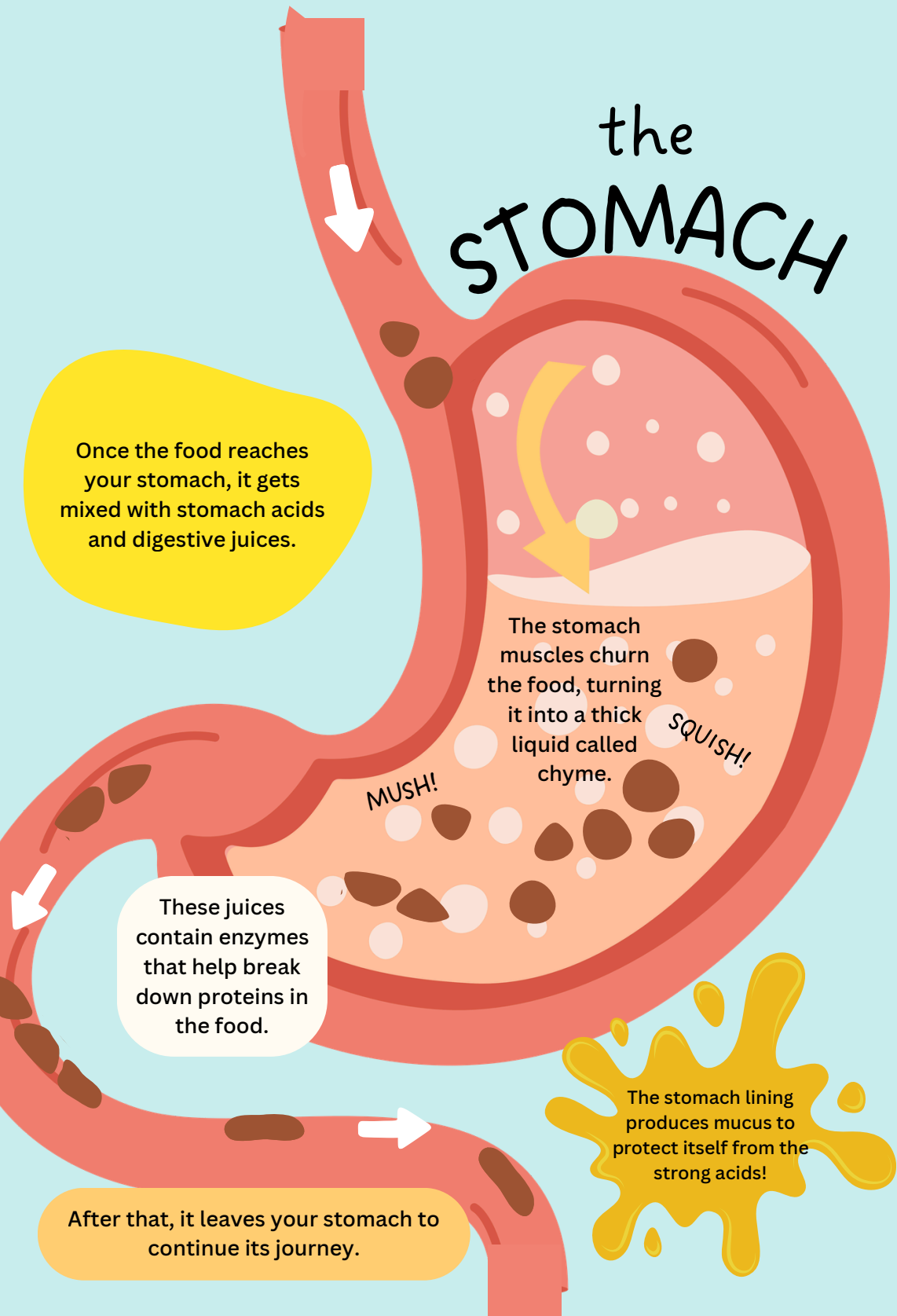
SQUISH!

MUSH!

These juices contain enzymes that help break down proteins in the food.

The stomach lining produces mucus to protect itself from the strong acids!

After that, it leaves your stomach to continue its journey.

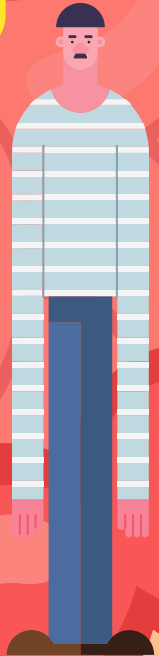



the SMALL INTESTINE

From the stomach, the mushy food moves into the small intestine. This is where most of the magic happens!

Your small intestine breaks down the food even more so your body can absorb the nutrients.

Your small intestine is about 20 feet long!



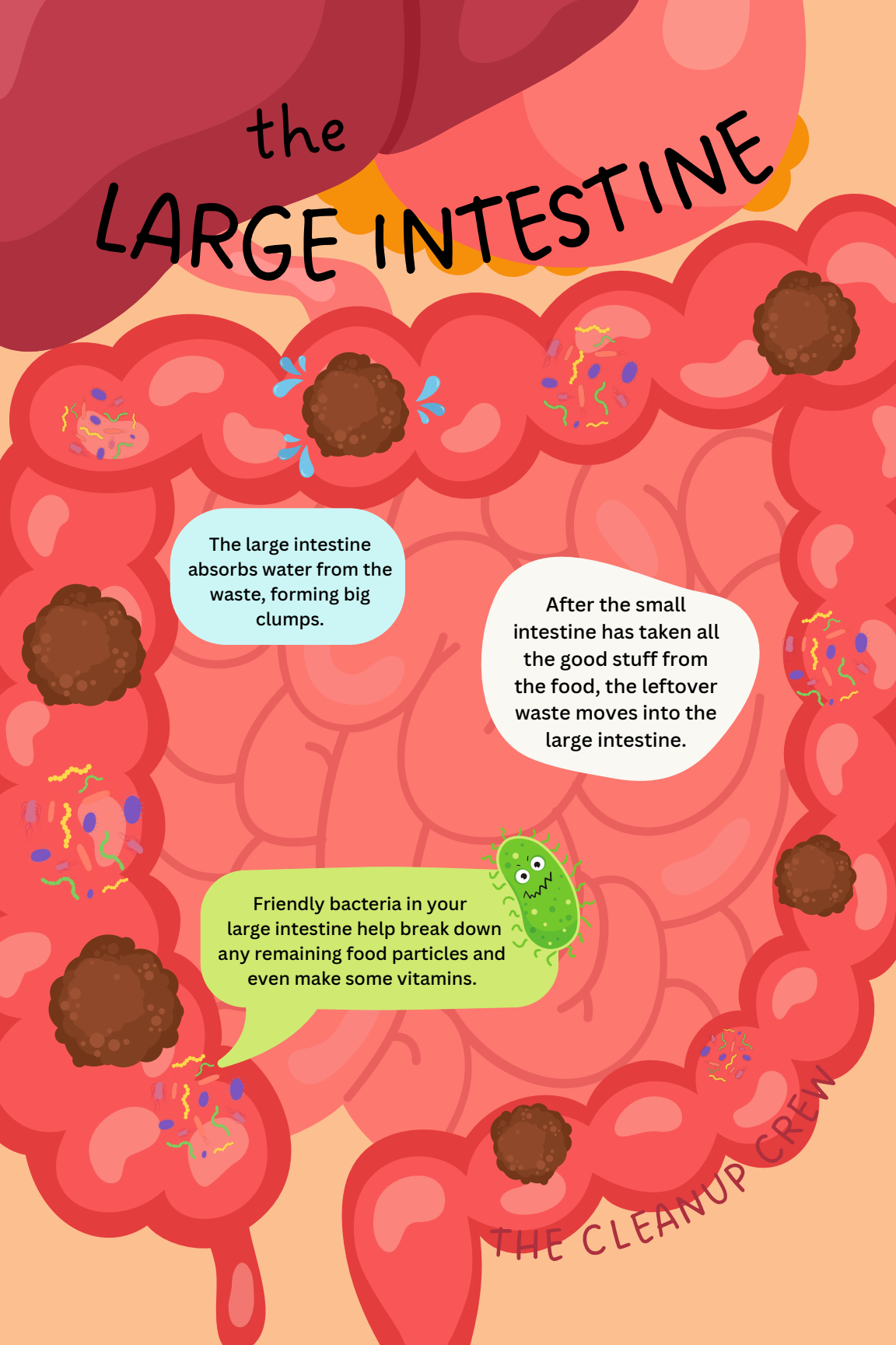
An anatomical illustration of the small intestine, shown in a cross-section. The intestine is a long, pinkish-red tube with several loops. The inner wall is covered with small, finger-like projections called villi. A magnifying glass with a black handle and a light blue frame is positioned over one section of the intestine. The lens of the magnifying glass shows a close-up of the villi, which are pinkish-red and have a brush border on their surface. Below the villi, a horizontal line represents the basement membrane, and below that, a layer of capillaries is shown. White arrows point from the villi down to the capillaries, indicating the absorption of nutrients. The word "VILLI" is written in black capital letters above the magnified area, and "BLOOD VESSEL" is written in black capital letters below it. A white speech bubble is located in the upper right quadrant of the image, containing text.

Tiny finger-like structures called villi line the walls of the small intestine and soak up the nutrients, which then go into your blood.

VILLI

BLOOD VESSEL

the LARGE INTESTINE



The large intestine absorbs water from the waste, forming big clumps.

After the small intestine has taken all the good stuff from the food, the leftover waste moves into the large intestine.

Friendly bacteria in your large intestine help break down any remaining food particles and even make some vitamins.

THE CLEANUP CREW

LIVER

The liver produces a strong greenish-yellow liquid called bile, which helps to break down food.

STOMACH

THE LARGE INTESTINE

THE SMALL INTESTINE

the
RECTUM & ANUS

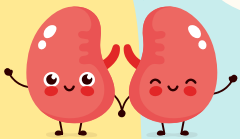
Finally, the waste, now called stool or poop, is stored in the rectum until it leaves your body through the anus when you go to the bathroom.

WHAT HAPPENS TO THE WATER YOU DRINK?

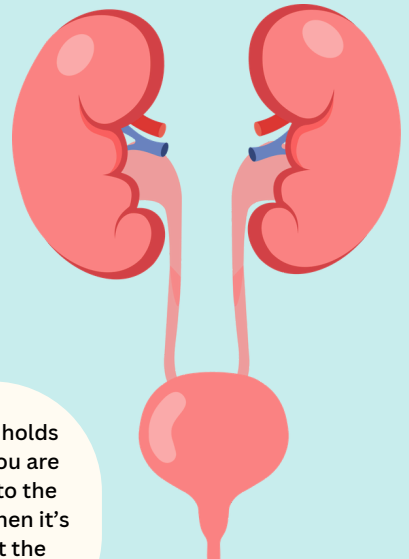
Water is essential for your body to function properly. It travels from your mouth, down the esophagus, into your stomach, and is absorbed by the small intestine into your bloodstream. It helps transport nutrients, remove waste, and keep your cells hydrated. Drinking enough water every day is super important for staying healthy and feeling great!



Once the water is absorbed into your bloodstream, it travels all over your body.



Your kidneys are like your body's natural filters. They clean the water and remove any waste, turning it into urine.



The bladder holds urine until you are ready to go to the bathroom. When it's full, you get the signal that it's time to pee!



WHAT HAPPENS WHEN YOU EAT SUGAR?



Eating sugar gives your body a quick burst of energy. It helps you run, play, and even think!

WHERE WE GET SUGAR FROM?

Sugar is naturally found in many foods, especially fruits, vegetables and milk.

In addition to natural sources, sugar is also added to many foods and drinks.

Fruits like apples, bananas, grapes, and strawberries have natural sugar's called fructose.

Fruits and fruit juices



Sugary drinks



Milk and dairy products like yogurt contain a natural sugar called lactose.

Glass of milk



Adults should eat no more than 7 teaspoons (28 grams) of added sugar per day. Children should have fewer.

Cookie



These have over 10 teaspoons of added sugar!

Sweet potato



Chocolate & candies

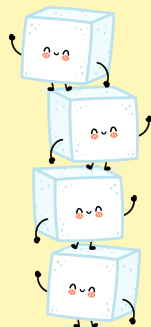


Sugar is added to foods like sweets, cookies, cakes, and sodas to make them taste sweet.

DID YOU KNOW?

Most of the sugar we use comes from sugar cane and sugar beets.

Some vegetables, such as carrots, beetroot and sweet potatoes also contain natural sugars.



WHAT HAPPENS IF YOU EAT TOO MUCH SUGAR?

By enjoying sugar in moderation, choosing healthy snacks, brushing your teeth, and staying active, you can keep your body healthy and strong. Remember, it's okay to have a treat now and then, but always balance it with healthy habits!

1

Eating too many sugary foods can lead to gaining extra weight. Extra weight can make it harder to stay healthy and active.



2

Too much sugar can lead to problems with your heart. It can raise your risk of developing heart disease when you're older.



3

Sugar can stick to your teeth and, if not brushed away, can cause cavities. Cavities are little holes in your teeth that can hurt and need to be fixed by a dentist.



A sugary coating may stick to your teeth, which can lead to cavities.



4

Eating a lot of sugar can contribute to developing Type 2 diabetes. This happens because your body can't use insulin properly when you gain extra weight from sugary foods.



WHAT ABOUT FAT?



Fat is a nutrient that gives your body energy. Even more energy than sugar.

It also helps you absorb vitamins and keep your body warm.

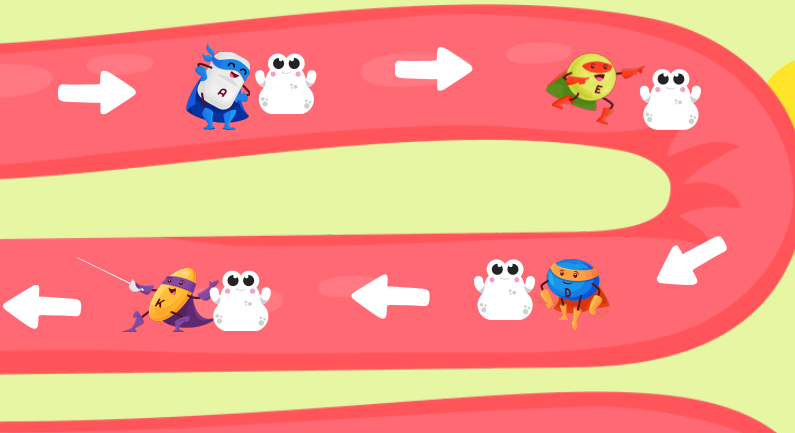
Hi! My name is Fat! I can be found in oil, nuts, seeds, avocados, and fish.

Did you know that your brain is made mostly of fat? It's true! About 60% of your brain is fat, which is essential for brain health.

Fats are important for building and repairing cells in your body.

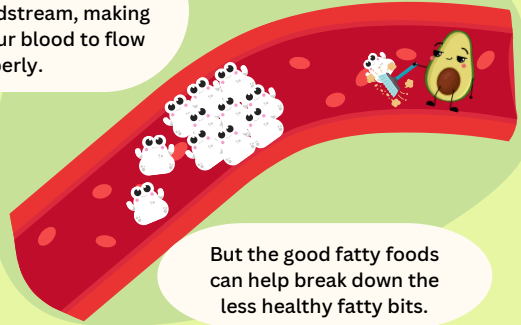
Without fat, your body wouldn't be able to absorb important nutrients from food. Fats help vitamins move from your small intestine into your bloodstream.

Fats help your body absorb important vitamins like A, D, E, and K.



Eating too many less healthy fatty foods can cause fats to enter your bloodstream, making it harder for your blood to flow properly.

Are some types of fatty foods better to eat than others?



But the good fatty foods can help break down the less healthy fatty bits.



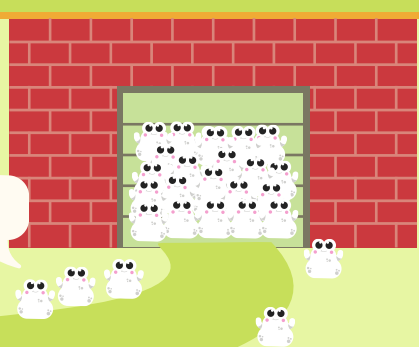
STORAGE

WHAT HAPPENS IF YOU EAT TOO MUCH FAT?

Your body stores extra fat as energy for later, but too much stored fat can lead to problems.

Eating too much fat, especially unhealthy fat, can lead to weight gain, heart problems, and high cholesterol.

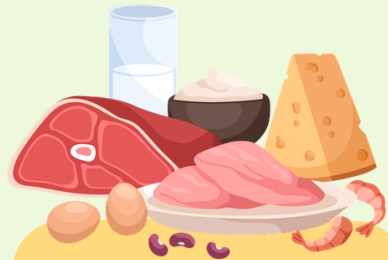
We are too many!



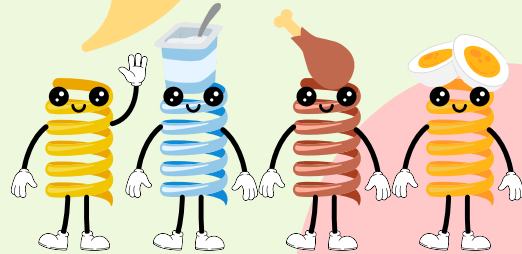
PROTEIN

Protein is a nutrient that helps build, repair, and maintain your body's tissues. It's like the building blocks your body uses to grow and stay strong.

Protein helps you grow from a tiny baby to a big grown-up.



Hi, We are Proteins! You can find us in many foods, and your body needs us every day.



Your skin and hair are made of very, very thin layers of proteins.



Meat and fish

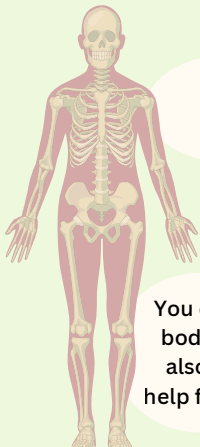


Eggs



Beans and lentils

Bones have protein in them as well, and so do muscles.



You can move every part of your body because of muscles. They also make your heart beat and help food pass through your body.



Yogurt, cheese and milk



Tofu



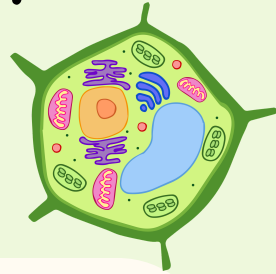
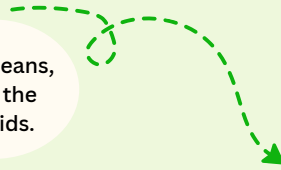
Nuts and seeds

Protein helps you heal by making new skin, bones, and muscle.

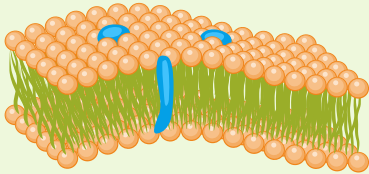


HOW DOES PROTEIN GO WHERE IT'S NEEDED IN THE BODY?

When you eat protein-rich foods like meat, beans, or cheese, your body starts breaking down the protein into smaller pieces called amino acids.



Once the protein is broken down into amino acids, they get absorbed into your bloodstream through the walls of your small intestine. The blood then carries these amino acids all over your body.



BLOODSTREAM

The amino acids travel through your blood to different parts of your body.

CELLS

Your cells take in the amino acids they need to build and repair tissues.

MUSCLES, SKIN AND BONES

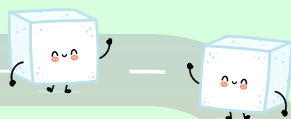
Amino acids help build muscles, make new skin cells, and strengthen bones. They also help your body heal cuts and scrapes.



CARBOHYDRATES

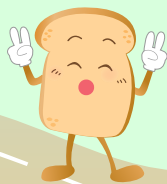
Carbohydrates are essential nutrients that provide your body with the energy it needs for everything: to breathe, move, play, learn, and grow.

ENERGY RACE

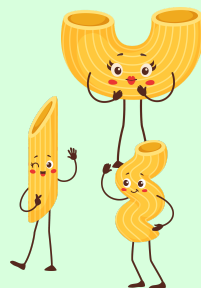
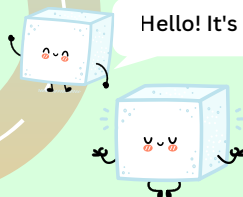


Sugar is a type of carbohydrate!

Starch is another type of carbohydrate!



Hello! It's me again!



Even if we are a little different we are also carbohydrates!



Fat gives you energy too!



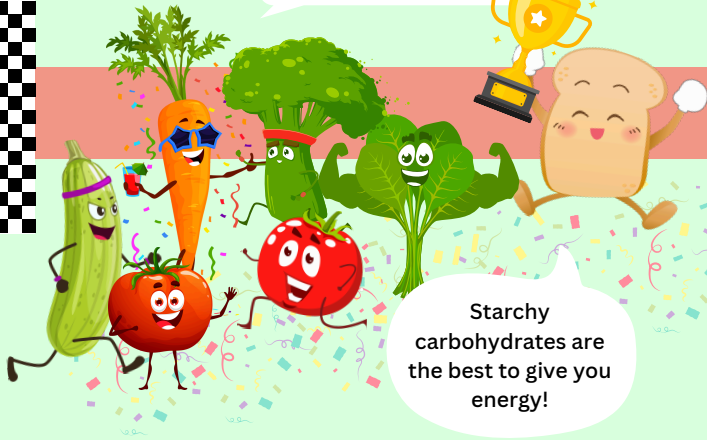
FINISH



FINISH



Fat gives you energy but your body doesn't find this energy easy to use!



Starchy carbohydrates are the best to give you energy!



Bread



Noodles



Rice



Porridge and breakfast cereals



Potatoes



Pasta

Starchy carbohydrates are an important part of our diet.

They should make up about one-third of the food we eat.

Starchy carbohydrates get in your blood more slowly than sugar. Also the energy lasts longer.

STARCHY CARBOHYDRATES

SUGAR



We are fast!



There is a special type of carbohydrate found in the skins of potatoes and other foods.



Wholewheat pasta



Nuts



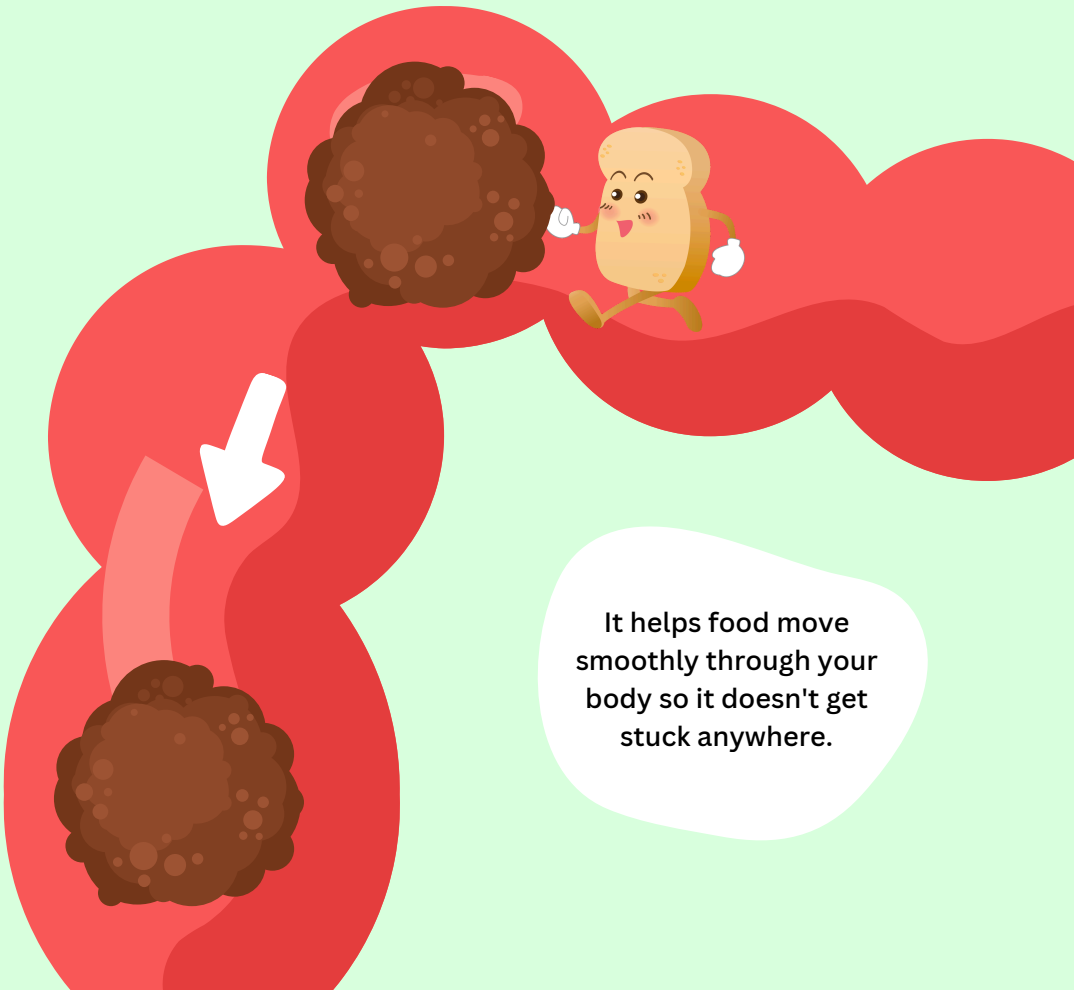
Beans



Fruit and vegetables

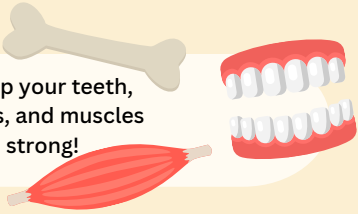


Brown bread and rice




VITAMINS & MINERALS


Did you know that vitamins and minerals are like tiny superheroes that help keep your body healthy and strong? Let's meet some of these amazing vitamins and learn about their superpowers!



I keep your teeth, bones, and muscles strong!



Hi there! I'm Vitamin D. I come from foods like fish, eggs, and mushrooms. I'm also added to cereals and spreads.




Your skin can use sunlight to help make me!

Oily fish


Eggs

Meat

Milk



Hello, I'm Vitamin A! You can find me in foods like carrots, sweet potatoes, cheese and spinach.



I keep your eyes healthy and help you see better in dim light.

Your body can also turn some vegetables and fruits into Vitamin A.

Cheese

Carrots

Mango

Spinach

Broccoli

Liver

Red Pepper

A

I'm Vitamin E. You can find me in nuts, seeds, and vegetable oils.

I help your body fight off germs and keep your skin healthy.



Cereals



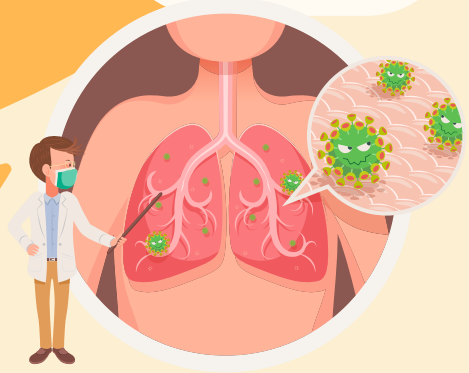
Along with Vitamin A, I help your body stay strong against infections.



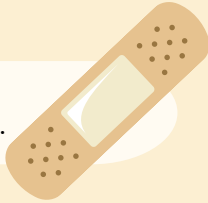
Nuts and Seeds



Olive Oil



I help cuts and wounds to heal.



Vitamin K here. You can find me in leafy green vegetables like kale and spinach.

If you get a cut, I help it stop bleeding and form a scab



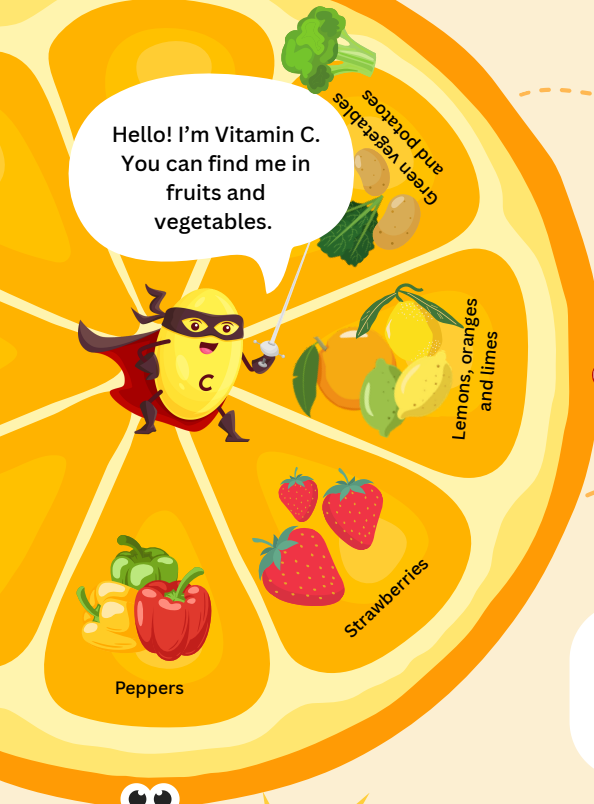
Cereals and bread



Sunflower, soya and rapeseed oil



Green, leafy vegetables



Hello! I'm Vitamin C. You can find me in fruits and vegetables.

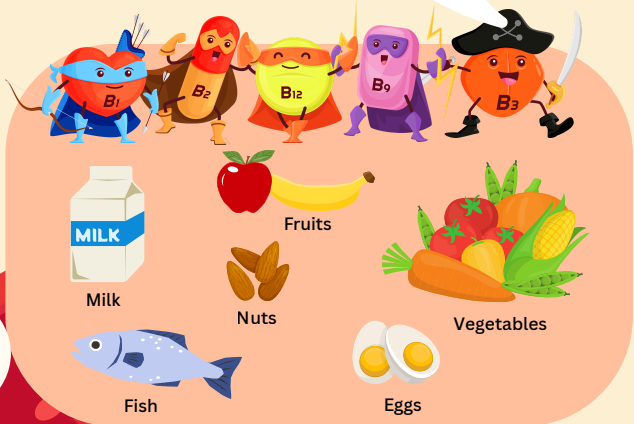


I help your body fight off colds and infections, keeping you healthy.



Eating foods rich in Vitamin C can help your body heal faster when you get a cut or bruise!

We are the B Vitamins. Our main job is to help your body absorb energy from the foods you eat.



We assist in breaking down this energy into tiny bits that can travel through your blood to where they are needed most.



Make sure to eat foods rich in B Vitamins every day to keep your energy levels up and your body functioning well!!

We are minerals! We do a lot of good things for your body too.

Hello! I'm Salt.



Avocado



Fish and shellfish



Banana

Potassium helps keep your muscles and nerves functioning properly.

Salt helps with this too.



Salted snacks



Bacon and ham



Salt is added to many foods, but too much salt can be harmful to your heart.



Spinach



Red meat



Beans



Nuts

Iron is a crucial component of your blood.

Without enough iron, you can feel tired and become very ill.

I help your blood carry oxygen to all parts of your body.



Cheese, yogurt and milk



Calcium is essential for the growth of your teeth and bones.



Green vegetables



BACTERIA

Bacteria are tiny living things that are all around us and inside us. They're so small you need a microscope to see them! Inside your large intestine, there are millions of good bacteria.

Sometimes your stomach and small intestine can't break down all the food completely. This means some useful stuff, like certain carbohydrates, are still left in the food.

We are bacteria!



By the time food reaches your large intestine, it's in mushy clumps, like this.

START HERE

The bacteria get to work on this leftover food.

Some bacteria can even turn leftover food into vitamins that your body needs.



LARGE INTESTINE

SMALL INTESTINE

These vitamins then get absorbed into your blood, so your body can use them to stay healthy.

Finally, waste exits your body through your bottom, but most of the helpful bacteria remain inside.



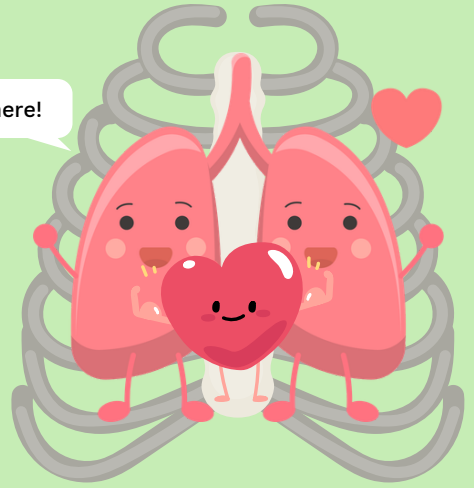


We are vitamins!

Some bacteria can even turn leftover food into vitamins that your body needs.

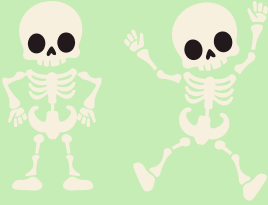
the SKELETON

We are safe in here!



WHAT IS THE SKELETON?

The skeleton is a framework of bones that supports and protects your body. It gives your body its shape, helps you move, and protects important organs like your heart and brain.

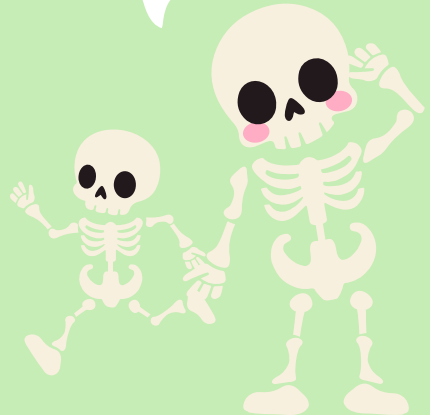


By the time you become an adult, you will have 206 bones.

When you are born, you have around 300 bones. Some of these bones fuse together as you grow.



How many bones do we have?



MAJOR BONES AND THEIR FUNCTIONS

SKULL: The skull protects your brain and forms the shape of your face.

SPINE: Your spine is made up of small bones called vertebrae. It supports your body and protects your spinal cord.

RIB CAGE: The ribs protect your heart, lungs, and other organs in your chest.

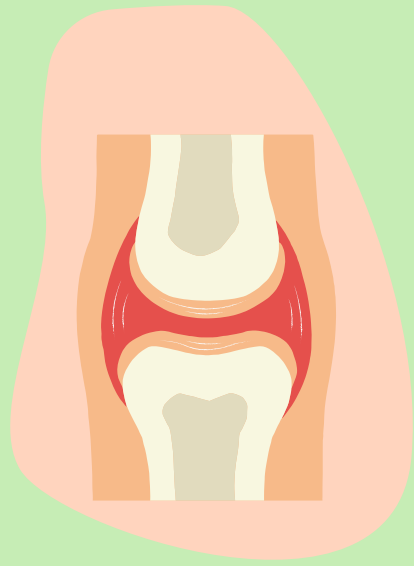
PELVIS: The pelvis supports your lower body and protects organs in your lower abdomen.

ARMS & LEGS: Bones like the humerus in your upper arm, the femur in your thigh (the longest bone in your body), and the tibia and fibula in your lower leg help you move.

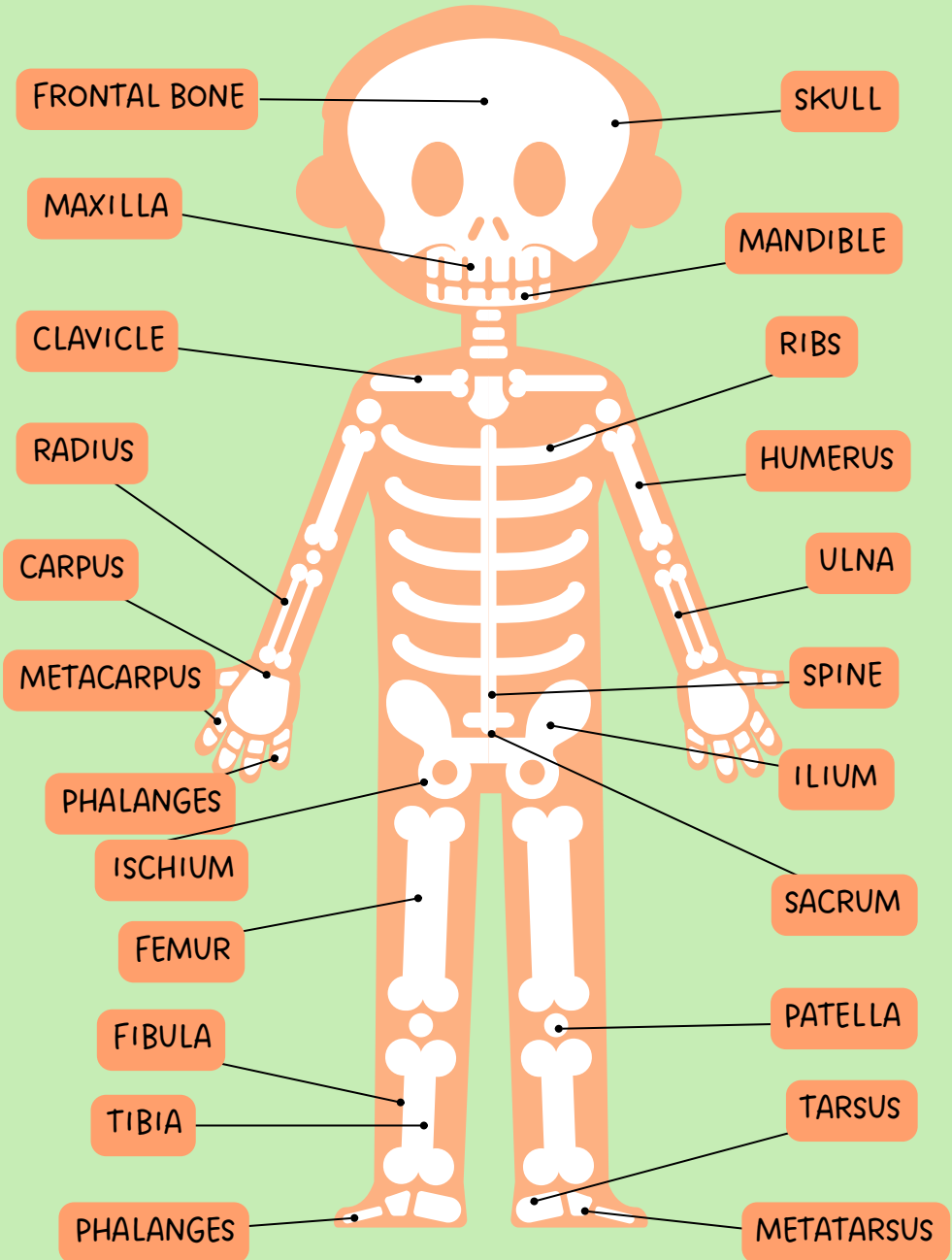
JOINTS: WHERE BONES MEET

Joints are places where two or more bones meet. They allow your body to move in different ways.

This is a joint!



BONES

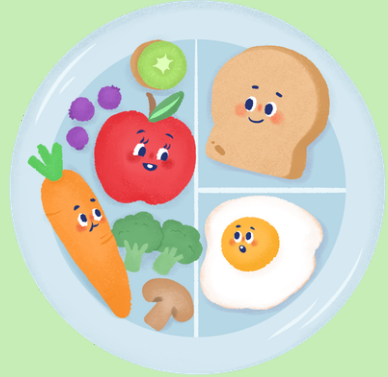


TAKING CARE OF YOUR BONES

1

EAT HEALTHY

Foods rich in calcium (like milk, cheese, and yogurt) and vitamin D (like fish and eggs) help your bones grow strong.



2

EXERCISE

Activities like running, jumping, and playing sports help build and maintain bone strength.



3

WEAR PROTECTIVE GEAR

Helmets, knee pads, and elbow pads can help protect your bones when you're playing sports or riding a bike.



UNDERSTANDING YOUR BODY MUSCLES

WHAT ARE MUSCLES?

Muscles are soft tissues that make your body move. They are attached to your bones and work in pairs to help you move in different directions. When muscles contract (shorten) and relax (lengthen), they pull on your bones to create movement.



OUTSIDE



INSIDE



MUSCLE

Muscles work in pairs to create movement. When one muscle contracts, the opposite muscle relaxes. For example, when you bend your arm, your biceps contract, and your triceps relax.

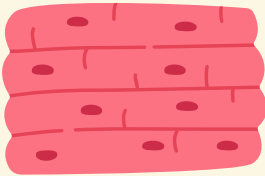
How muscles work?



TYPES OF MUSCLES CELLS

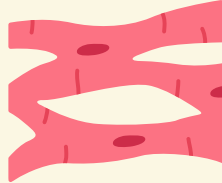
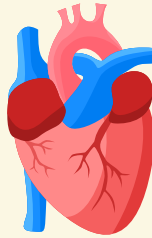
There are three main types of muscles in your body:

SKELETAL



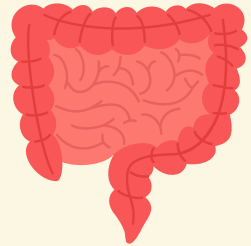
These muscles are attached to your bones and help you move. They are the muscles you can control, like when you wave or kick a ball.

CARDIAC



This muscle is found only in your heart. It pumps blood throughout your body and works automatically without you having to think about it.

SMOOTH



These muscles are found inside your organs, like your stomach and intestines. You can't control them; they work automatically to help with digestion and other body functions.

MAJOR MUSCLE GROUPS

Let's take a look at some of the major muscle groups in your body:

ARM:

Your biceps and triceps are in your upper arms. Biceps help you bend your elbow, while triceps help you straighten it.

LEG

Your quadriceps (quads) are in the front of your thighs, and your hamstrings are in the back. Quads help you straighten your knee, and hamstrings help you bend it.

CORE:

These muscles are in your stomach and back. They help you stay upright, bend, and twist.

BACK

Your back muscles, like the latissimus dorsi (lats) and trapezius (traps), help you move your shoulders and arms.

TAKING CARE OF YOUR MUSCLES



EXERCISE

Activities like running, jumping, and playing sports help build and strengthen your muscles.



EAT HEALTHY

Eating foods rich in protein, like meat, beans, and nuts, helps your muscles grow and repair.



STAY HYDRATED

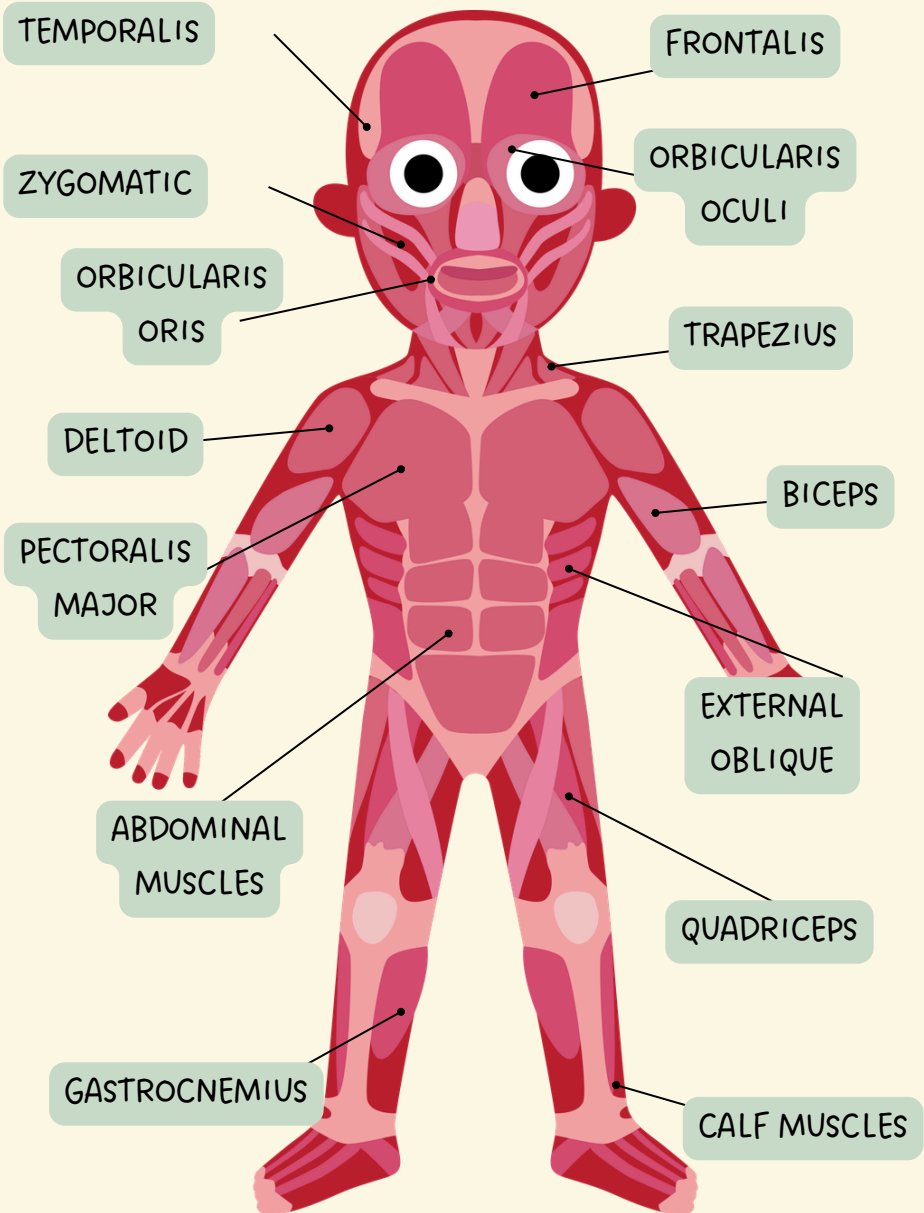
Drinking plenty of water helps your muscles work properly.



REST


Getting enough sleep gives your muscles time to recover and grow.

MUSCLES







Thank You




Thank you for joining us on this amazing journey through your digestive system and learning about the importance of nutrition! We hope you had fun exploring how your body works and discovering new ways to stay healthy.



Remember, eating a variety of nutritious foods helps keep your body strong and full of energy.



Stay curious, stay healthy, and keep having fun!



Love & Laughter, Jo
(Multi award-winning child nutrition coach)

