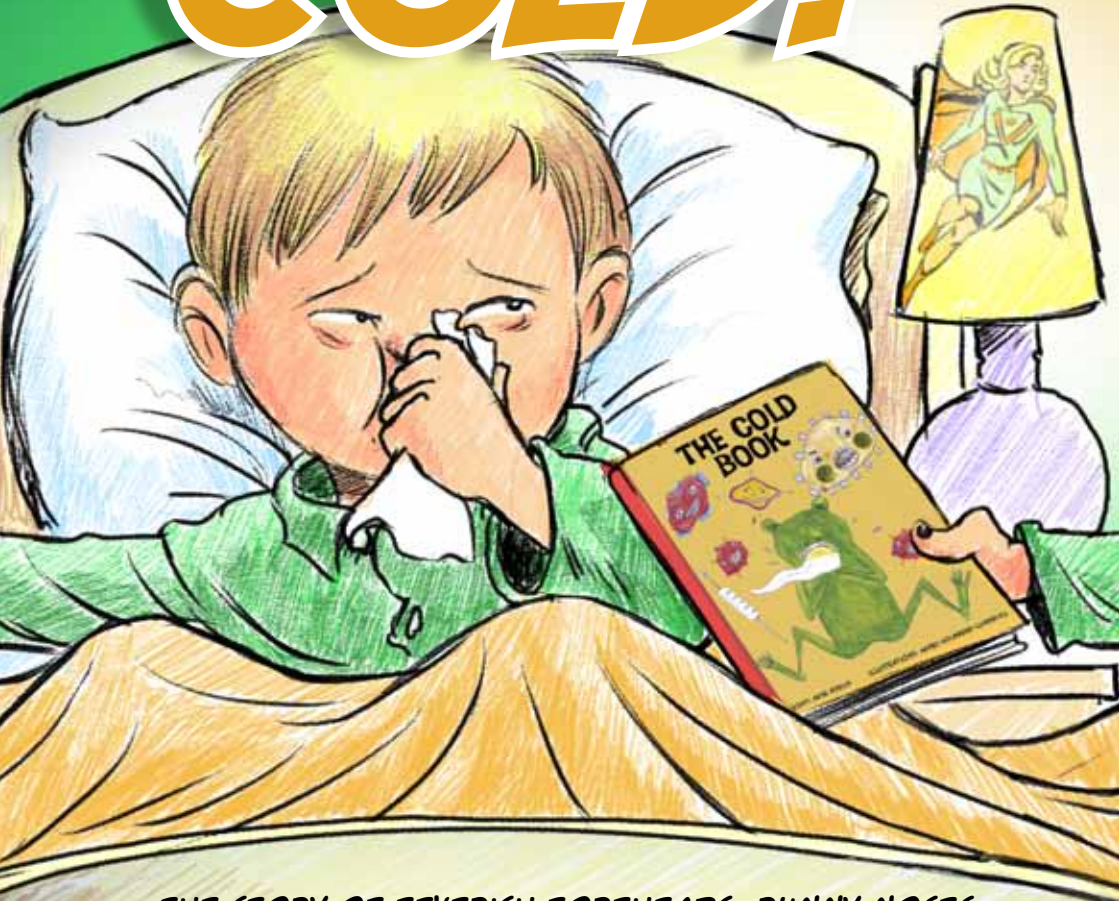


# COLD!



THE STORY OF FEVERISH FOREHEADS, RUNNY NOSES,  
AND HOW LITTLE HEROES DEFEAT NASTY VIRUSES AND EVIL BACTERIA  
TEXT: ARNE NORLIN ILLUSTRATION: PER DEMERVALL

# THINGS THAT ARE GOOD TO KNOW

MOST AIRWAY INFECTIONS – SUCH AS COMMON COLDS AND COUGH – ARE TAKEN CARE OF BY OUR BODIES AND HEAL WITHOUT ANTIBIOTICS.

THE INTRODUCTION OF ANTIBIOTICS IN THE 1940S WAS A MEDICAL REVOLUTION, MANY MORE SURVIVED SEVERE INFECTIONS. ANTIBIOTICS CAN STILL SAVE LIVES IN CASES OF SEVERE BACTERIAL INFECTIONS, SUCH AS MENINGITIS, SEPSIS AND PNEUMONIA.

UNFORTUNATELY, ANTIBIOTICS ARE OVER-USED, ROUTINELY, OR "JUST TO BE SURE". THERE ARE SEVERAL RISKS ASSOCIATED WITH THIS.

IT SPEEDS UP THE DEVELOPMENT OF BACTERIA'S RESISTANCE. TREATMENT ALSO DISTURBS THE BODY'S NATURAL BALANCE OF USEFUL INTESTINAL BACTERIA, AND CAN GIVE SIDE EFFECTS LIKE DIARRHOEA, RASHES, AND FUNGAL INFECTIONS.

WE MUST PROTECT OUR ANTIBIOTICS.

LUKAS,  
DO YOU REMEMBER  
WHEN YOU HAD  
A COLD?

YES.  
IT WASN'T  
FUN...



# WHEN LUKAS HAD A COLD



LUKAS DIDN'T FEEL WELL WHEN HE WOKE UP ON WEDNESDAY MORNING.

HE HAD A SORE THROAT, AND HIS HEAD FELT HEAVY.

EVEN THOUGH HE'D SLEPT ALL NIGHT HE WAS STILL SO TIRED THAT HE COULD HAVE FALLEN ASLEEP AGAIN RIGHT AWAY.

DAD CAME TO FEEL HIS FOREHEAD, "I'LL GET THE THERMOMETER!" HE SAID IT SHOWED 38°.



"YOU'LL HAVE TO STAY HOME FROM SCHOOL FOR A FEW DAYS", SAID DAD. HE PUT A GLASS OF WATER ON THE TABLE NEXT TO THE BED LUKAS DRANK ALMOST ALL OF IT.

"WHAT ABOUT THE GAME ON SATURDAY? I HAVE TO BE THERE!"





DAD SHOOK HIS HEAD.

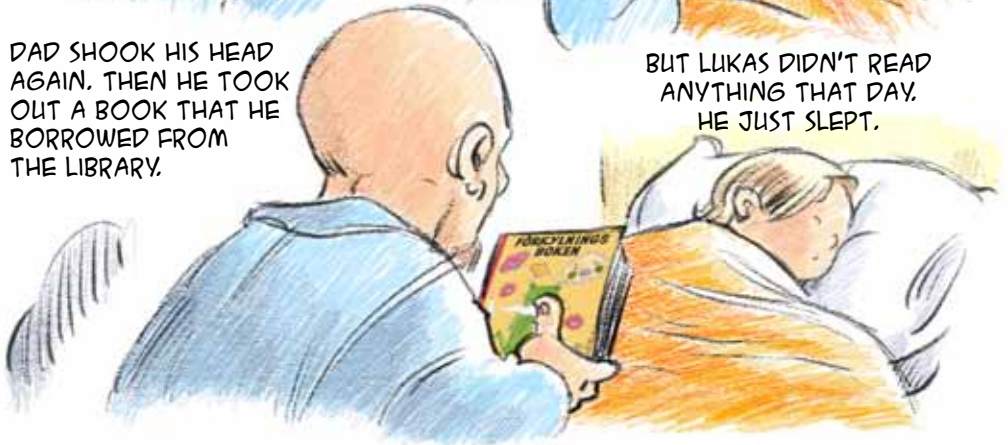
"I DON'T THINK THERE'LL  
BE A SOCCER GAME  
FOR YOU ON  
SATURDAY!"

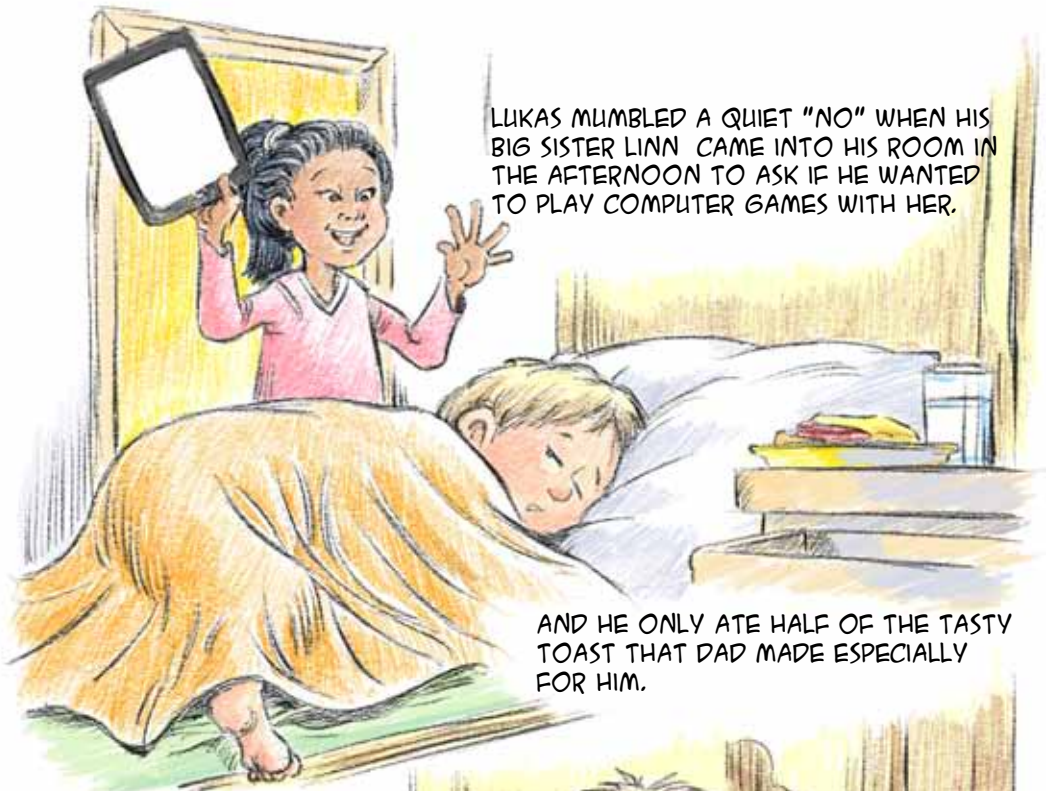
"IS THERE NO MEDICINE?  
TO MAKE ME WELL  
STRAIGHT AWAY?"



DAD SHOOK HIS HEAD  
AGAIN. THEN HE TOOK  
OUT A BOOK THAT HE  
BORROWED FROM  
THE LIBRARY.

BUT LUKAS DIDN'T READ  
ANYTHING THAT DAY.  
HE JUST SLEPT.





LUKAS MUMBLED A QUIET "NO" WHEN HIS BIG SISTER LINN CAME INTO HIS ROOM IN THE AFTERNOON TO ASK IF HE WANTED TO PLAY COMPUTER GAMES WITH HER.

AND HE ONLY ATE HALF OF THE TASTY TOAST THAT DAD MADE ESPECIALLY FOR HIM.

WHEN LUKAS WOKE UP ON THURSDAY MORNING HE WORKED OUT IN HIS HEAD THAT HE HAD SLEPT ON AND OFF FOR 17 HOURS STRAIGHT.



HE WASN'T AS HOT ANYMORE. INSTEAD, SNOT WAS RUNNING FROM BOTH HIS NOSTRILS. AFTER A WHILE, THERE WAS A BIG PILE OF USED TISSUES IN THE BIN BY THE BED.

HE STILL DIDN'T HAVE THE ENERGY TO READ, WATCH TV, OR PLAY ON THE COMPUTER. BUT HE LISTENED TO SOME MUSIC ON HIS MOBILE PHONE - AND STUMBLED TO THE KITCHEN TO HAVE SOME DINNER WITH DAD AND LINN.



ON FRIDAY MORNING, LUKAS FELT MUCH BETTER. HE GOT UP, MADE HOT CHOCOLATE AND A SANDWICH.



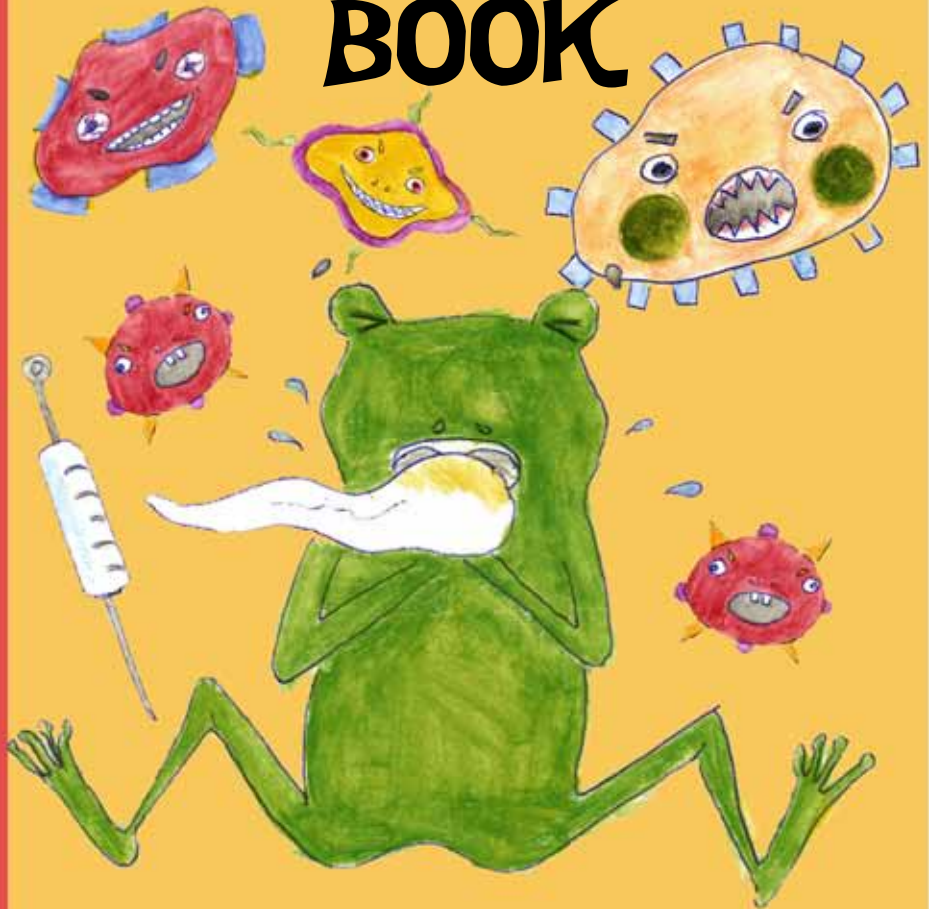
HE BROUGHT THE CUP AND THE BOOK THAT DAD HAD GIVEN HIM, AND THE DUVET FROM THE BED TO GET COSY ON THE LIVING ROOM SOFA.



THEN, HE STARTED TO READ THE COLD BOOK.



# THE COLD BOOK



TEXT: ARNE NORLIN

ILLUSTRATIONS: AGNES HOLMBERG LUNDEVALL

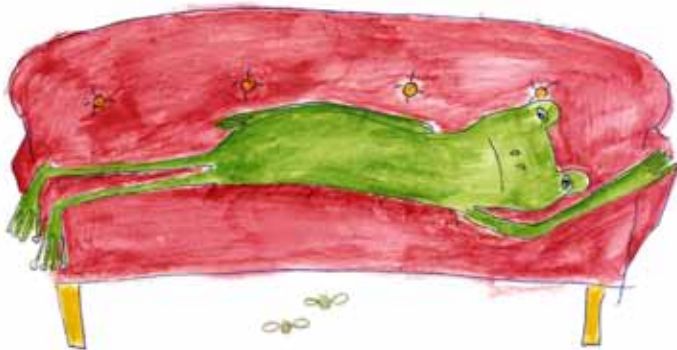
# Bacteria

**Bacteria are tiny.  
So tiny we can't see them with  
the naked eye.  
They're actually everywhere  
- in the sea, the forest, animals  
and inside our bodies.  
We have the largest number  
of bacteria in our tummies and  
bowels.**

**Most bacteria are good, and help  
to keep us well.  
They protect us from other bacteria  
that can make us unwell.**



Here are my  
good bacteria that I call  
my internal pharmacy.

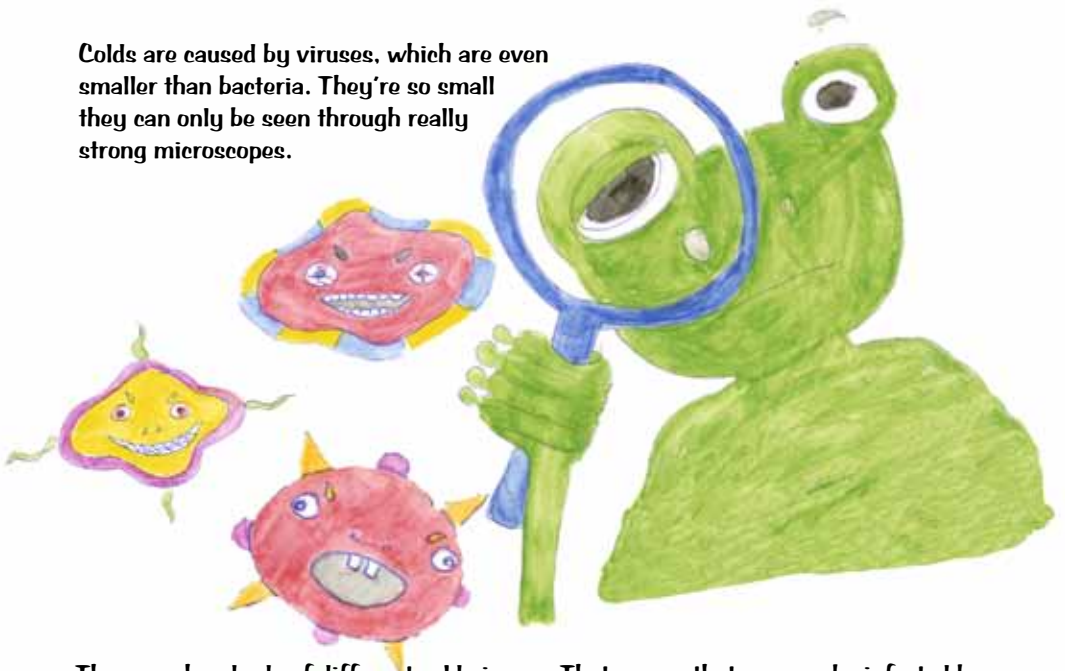


**Tonsillitis, pneumonia and  
ear inflammation are some  
illnesses that are caused by  
bacteria.**



# Viruses

Colds are caused by viruses, which are even smaller than bacteria. They're so small they can only be seen through really strong microscopes.



There are hundreds of different cold viruses. That means that you can be infected by one virus one week, and another one a few weeks later.

Colds are more common in the winter. Stomach illnesses, and children's diseases, such as chicken pox and measles, are also caused by viruses.

**All diseases caused by bacteria and viruses are called infections.**



# Who Gets Colds, and Why?

Viruses are transferred from one person to another, through the air, or when we touch each other. For viruses to make us ill, they also need to get inside us, through the nose or mouth for instance. When we have a cold and pick our nose we get virus on our hands. When we are in places with a lot of people we can both infect others and get infected. Therefore it's important to wash your hands!

It's a good habit to wash our hands when we've been to the toilet and before we eat.



## Other things to remember

Use your own towel.

Don't pick your nose.

Sneeze into the bend of your arm, not into your hand.

Use paper tissues that you can throw away afterwards.

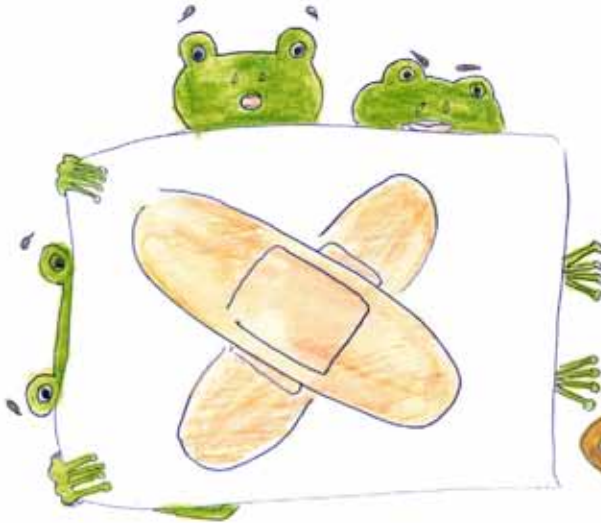
A person with a cold is more likely to infect others just when he or she is starting to become ill.

Therefore, you should stay home when you begin to feel unwell.

# Are colds dangerous?

No!

Small children who haven't get built up their immune defence, can get several colds per month. Then, when we are older, we don't get colds as often.



A normal cold lasts for about a week. Sometimes, you keep coughing for a few more weeks, but that kind of cough is not dangerous or infectious.

## Colds and Medicine

Common colds end of their own accord, and there is no medication to treat them. The body deals with the infection by itself.

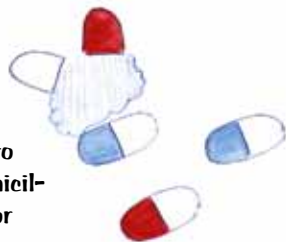
We know that viruses and bacteria struggle to survive when the body temperature is high. Fever is a way for the body to defend itself.





You can take medicine to reduce the fever if you feel so unwell that you can't drink or eat.

But there are bacteria that can make people very sick. Then you need to take a special medicine, called antibiotics. A common kind is called penicillin. Antibiotics help the body to fight bacteria by weakening, injuring or killing them.



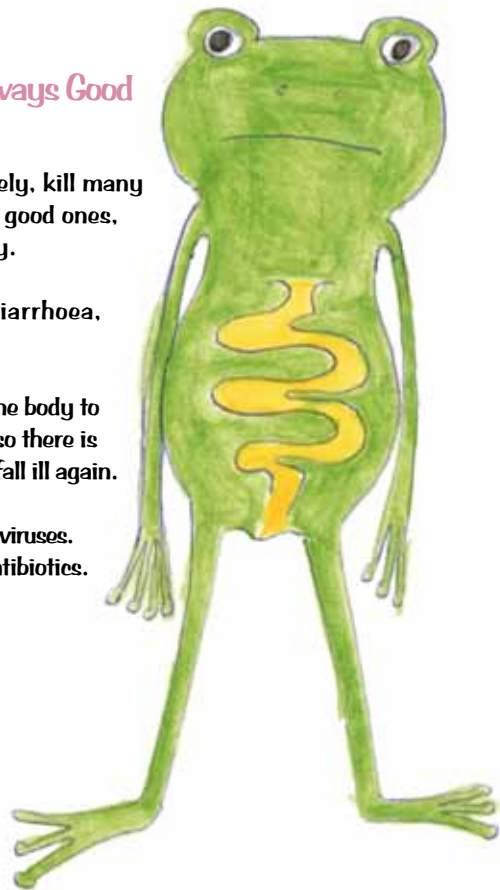
## Antibiotics Aren't Always Good

Antibiotics do, unfortunately, kill many bacteria in the body, even good ones, like the ones in the tummy.

Therefore, you can get diarrhoea, after taking antibiotics.

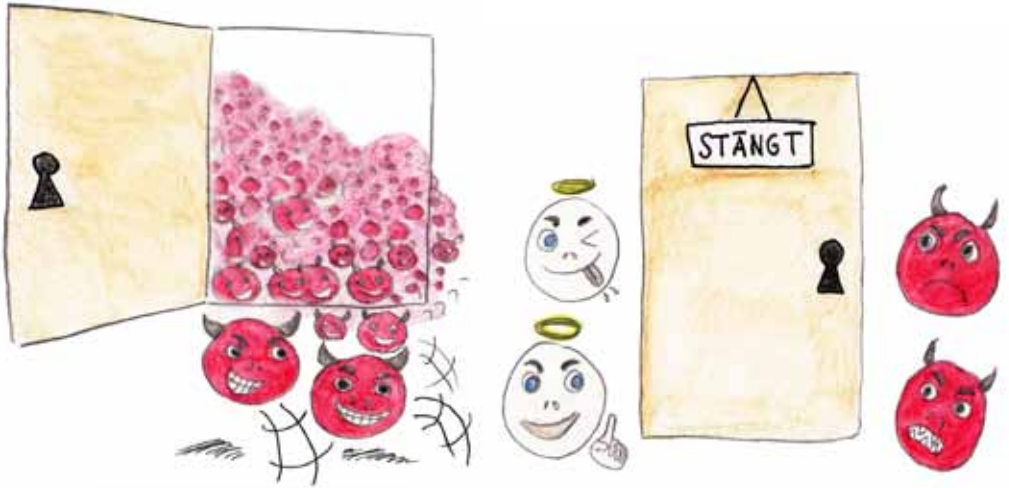
It can take a long time for the body to recreate the good bacteria, so there is always a risk that you will fall ill again.

Antibiotics don't help against viruses. You can't cure colds with antibiotics.



# The Immune System

The white blood cells are the body's soldiers. When they meet viruses or bacteria that the body doesn't recognise, they try to fight them. Often, they find and kill the dangerous intruders.



White blood cells can learn to recognise the intruders, and stop similar viruses and bacteria the next time, to make sure the body doesn't get ill.

That's why we can't get chicken-pox more than once.

# Vaccination

You can get vaccinated against certain viruses and bacteria. You get an injection with a tiny, friendly dose of it.

It means that the body learns to recognise the infection. Thus, you become immune, and won't be infected and fall ill.

When you were little, you were vaccinated against a lot of diseases at the child welfare centre, including measles, mumps and German measles.

Influenza is a tough winter disease. When it's on its way, people who risk getting severely ill are usually vaccinated.

There is no vaccine against common cold. The body deals with the infection by itself.





# Resistance

There were bacteria on earth long before there were people and animals. Over time, they have become good at surviving in all sorts of situations. When we take antibiotics to cure an infection, the bacteria do their best to survive. They can develop resistance against the antibiotics. When the bacteria have become resistant, antibiotics are no longer effective.

If we use a lot of antibiotics, we'll get more and more resistant bacteria. So we shouldn't use antibiotics unnecessarily.

## Have fun!

The body's immune system becomes stronger when we feel well. So it's important to sleep a lot and to eat good and healthy food.

Playing - and laughing - are also good. And being outdoors a lot.

Remember that the next time you do something fun with a friend: it's not just fun - it gives you a better immune defence as well!!!

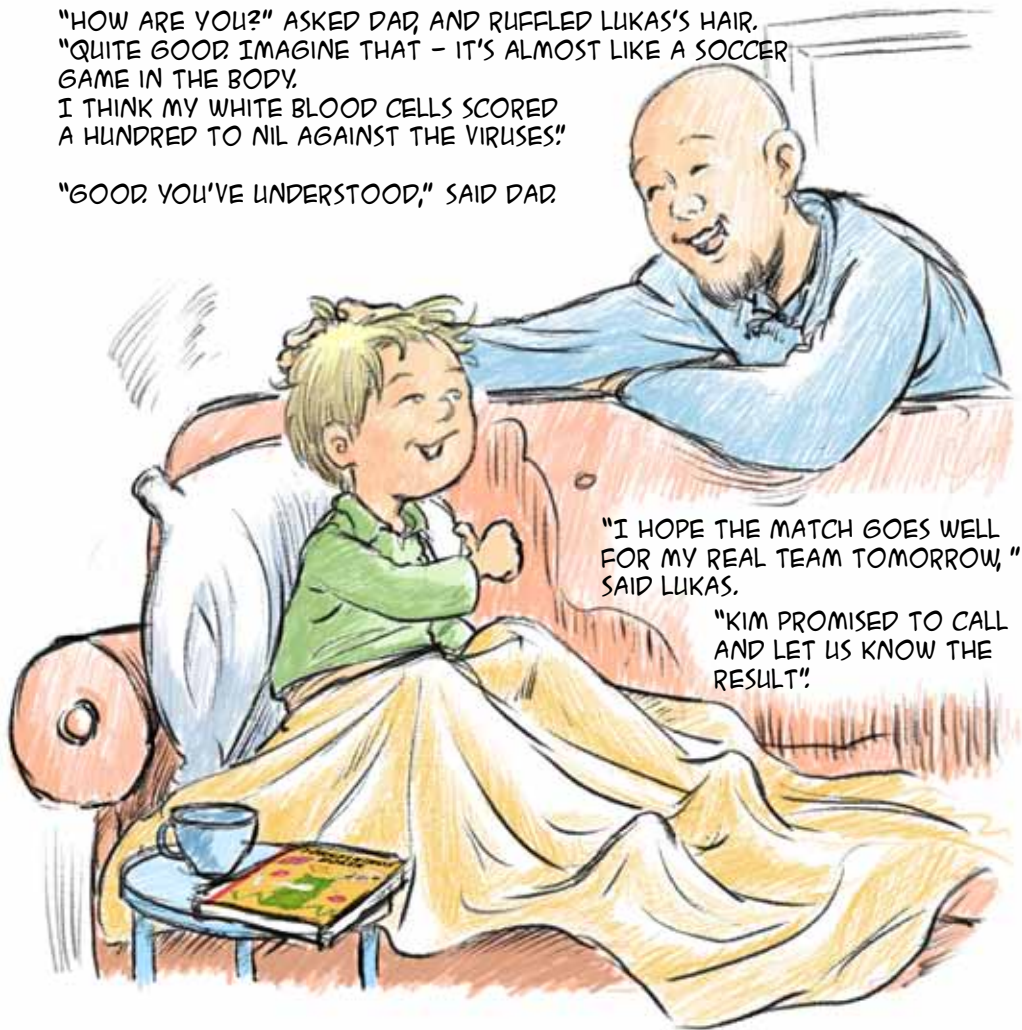




JUST AS LUKAS CLOSED THE BOOK, DAD CAME HOME TO MAKE LUNCH FOR THE TWO OF THEM.

"HOW ARE YOU?" ASKED DAD, AND RUFFLED LUKAS'S HAIR.  
"QUITE GOOD IMAGINE THAT - IT'S ALMOST LIKE A SOCCER GAME IN THE BODY.  
I THINK MY WHITE BLOOD CELLS SCORED A HUNDRED TO NIL AGAINST THE VIRUSES!"

"GOOD. YOU'VE UNDERSTOOD," SAID DAD.



"I HOPE THE MATCH GOES WELL FOR MY REAL TEAM TOMORROW," SAID LUKAS.

"KIM PROMISED TO CALL AND LET US KNOW THE RESULT!"



"THERE'S BOLOGNESE LEFT FROM YESTERDAY."  
SAID DAD.

FOR THE FIRST TIME IN THREE DAYS, LUKAS  
FELT A BIT HUNGRY.

DAD MOVED TOWARDS THE KITCHEN.  
"YOU HAVE TO WASH YOUR HANDS!"  
CALLED LUKAS. DAD STOPPED AT THE DOOR.

"YOU PROBABLY BROUGHT A LOAD OF  
VIRUSES FROM WORK," SAID LUKAS.



"I DON'T WANT TO GET SICK AGAIN  
AND MISS THE GAME NEXT WEEK TOO!"

DAD SMILED AND WENT TO THE BATH-  
ROOM TO WASH HIS HANDS.



LUKAS LOOKED AT THE COLD BOOK AGAIN.  
HE WAS GOING TO BRING IT TO SCHOOL AND SHOW IT  
TO HIS TEACHER.

HIS CLASSMATES ALSO NEED TO KNOW THAT THERE IS  
NO MEDICINE FOR COLDS.



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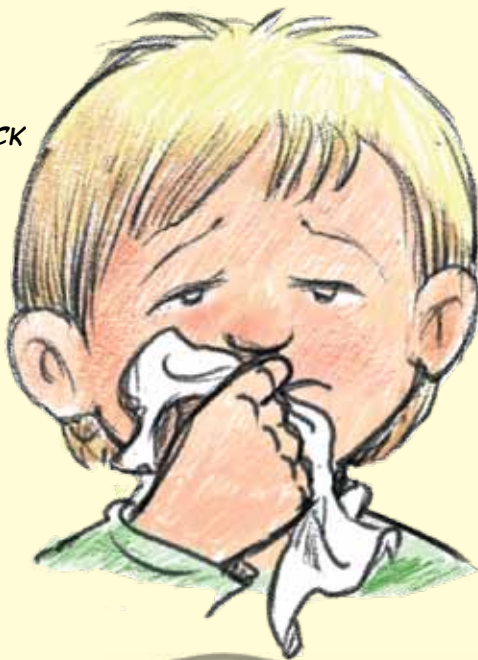
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HI!

THIS BOOK WAS DEVELOPED BY STRAMA STOCKHOLM. WE WORK AGAINST UNNECESSARY USE OF ANTIBIOTICS IN STOCKHOLM COUNTY. WE WANT TO EDUCATE CHILDREN ABOUT COLDS, BACTERIA, VIRUSES, THE BODY'S IMMUNE SYSTEM AND VACCINATIONS.

HOPE YOU LIKE THE BOOK!

PST! TELL YOUR PARENTS TO CHECK OUT ANTIBIOTIKAELLERINTE.SE TO LEARN MORE ABOUT ANTIBIOTICS.



  
Stockholms läns  
landsting

  
Strama Stockholm  
Samverkan mot antibiotikaresistens

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