

can 1 Eat TH15?



A children's book about peanut allergy Br-LiU iGEM





Authors and illustrators: Emma Ingeström, Johannes Solomonsson, Elina Janson and Agnes Ekberger. Publicated: 2015-09-18 by LiU iGEM

can leat THIS?



A children's book about peanut allergy.





It's a lovely and sunny summer day. And what better than a picnic with tasty foods and dear friends out in the green green grass. Right? Anyhow, that's the thoughts of little Tiny. If it were not for Ivan. Ivan brought a lot of broccoli. Lots and lots of broccoli.



"Uah, I hate broccoli." Tiny cries out.

"Don't be silly, eat your food, otherwise you get no dessert." old Tuskarsen brawls.

"But, it's so disgusting!" Tiny whines.

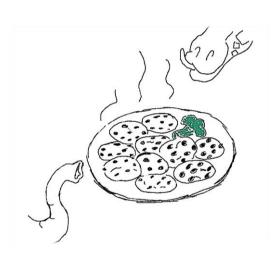
"Well then Tiny, you do know that broccoli is healthy and contains lot of beneficial substances." Feathers persuades.



"Oh, I'm so full." Tuskarsen complains and burps loudly. "Now it's time for dessert!" Ivan announces.

"Oh, what is that?" Tiny wonders and licks around her mouth. Ivan brings out the biggest cake dish Tiny ever has seen. It really makes one's mouth water.

"Cookies, and it's my very own recipe that everyone can eat!" Ivan says proudly.

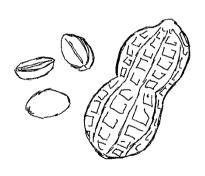


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"They look delicious." the others assent.

"Do they contain peanuts?" Alice asks.

"Yes, why do you ask?" Ivan responds."



"I'm allergic to peanuts, I can't eat peanuts" Alice replies downhearted.

"Don't be silly, you only state so because you don't favor the taste of it. But, that means more left for us!" old Tuskarsen chuckles and scoffs the largest cookie. "Then, I'm allergic to broccoli!" little Tiny exclaims.



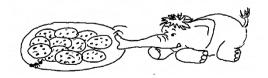
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	DID YOU KNOW
,	THAT THE PEANUT, DESPITE
	ITS NAME ISN'T A NUT AT ALL?
, –	NOT LIKE WALNUTS OR
	HAZELNUTS AT LEAST, WHICH
) _	GROW ON TREES AND BUSHES.
	THE PEANUT IS THE SEED TO A
) ; — 1	SMALL LEGUME PLANT, A PEA,
, –	WHICH GROWS DOWN IN THE
)	EARTH.
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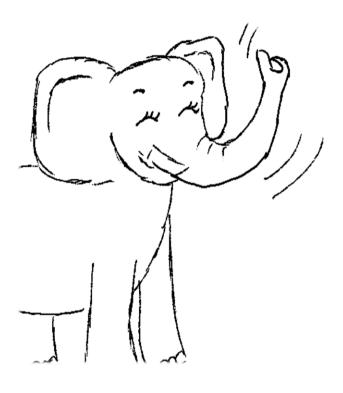
"No Tuskarsen, you are wrong about this. There are actually people who can't eat certain foods, like peanuts, shellfish or milk because they have a food allergy." Feathers points out.

"So you say, Feathers."
Turskarsen grunts. "Allergies are just an illness people make up, they become ill because they believe that they don't tolerate it."



"And no, Tiny, you are not allergic just because you don't like something or do not want it in your food. Food allergy is a disease. You can become very ill if you eat something you are allergic to" Fearthers explains. "How will I explain this further?"
"I can explain it!" Jenna burst out.





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"If you become ill every time you eat a certain food, you have a food allergy." Jenna explains.



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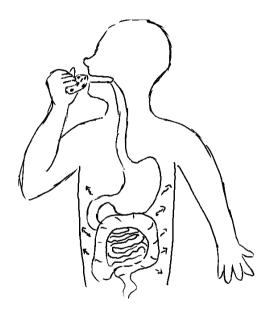
DID YOU KNOW...

...THAT THE MOST COMMON
FOOD ALLERGIES ARE CAUSED
BY NUTS, PEANUTS, MILK,
EGGS, FISH, SHELLFISH, WHEAT
AND SOY?

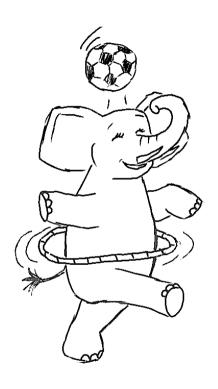
Cross allergies: Sometimes you can get an allergic reaction to substances you aren't allergic to. This is because the proteins of various animals and plants are similar. For example, if you are allergic to peanuts you can react allergic to grass pollen, apples and nuts.

"When you who are not allergic eats peanuts, it works like any other food. The food travels through the throat, down to the stomach and into the intestines.

"From there the body takes up the food and makes it into energy. Our body needs energy to function, so we can be able to jump around, play and learn in school."



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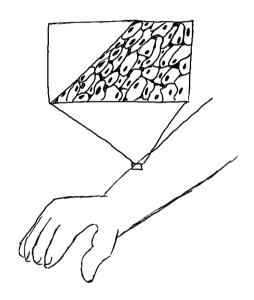


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"To make you understand this I will explain how our body is built.

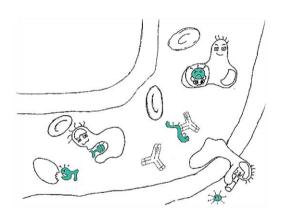
Our body is constructed by a lot of tiny building blocks, called cells, so tiny you can't see them.

There are a lot of different types of cells in our body with different functions. In our brain, there is brain cells and on our skin there is skin cells"



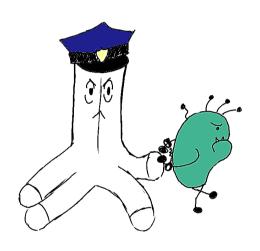
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"The body also have immune cells, which builds up the body's defense. They guard and protect our body from intruding substances, such as bacteria, viruses and parasites. The immune cells can be found in many places in the body. In the mouth, throat, stomach and in the blood."

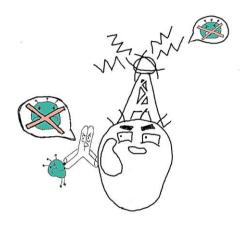


"Bacteria, viruses and parasites can harm the body and make you sick. The immune cells can find these bandits with the help by the body's own police, the antibodies.

The antibodies have one task, and that is to find a certain kind of bacteria, one type of virus or the most unreliable parasite."

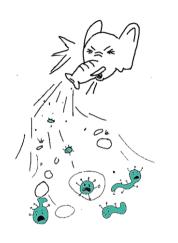


"The antibody finds and captures the tricky parasite. Then the antibody sends a report to the headquarters, the mast cell, which in turn sends out the defense patrol to protect the body."



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"When you get sick you get a cough, a runny nose and fever. It is the body's way of protecting itself against those meanies. When you catch a cold, the body wants to wash out the meanies in the nose and clean it. Bacteria and other bad stuff flow out with the snot. More slime makes you sneeze. When you sneeze, the bacteria and the slime flies out at high speed. "



"Cough is when you have something irritating your throat, like slime and bacteria."

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"Within the allergic person," the antibodies have gotten the idea that harmless substances have some mischief going on. The antibodies mistake the harmless substances for bad ones and trigger the whole defense mechanism. This is called an allergic reaction. An allergic reaction resembles of a cold with cough and runny nose and everything that goes with it "



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 DID YOU NOW
 THAT SUBSTANCES THAT
 CAUSE AN ALLERGIC REACTION
 ARE CALLED ALLERGENS?
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"I remember the first time I tasted peanuts. It tasted so good, salty and yummy. But then, suddenly, I became very ill."

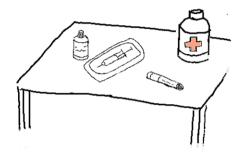


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"My eyes became red and started streaming, my throat hurt, I sneezed and started to snot a lot. My skin became all warm red and itchy and my nose got all swollen up and I got really hard to breath. I was send to the doctor right away. There I got an injection, and now I have one of my own that I carry with me in my backpack."



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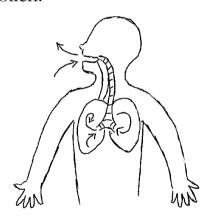
Everybody who's allergic doesn't react the same. Two people can react differently to the same food. For one person it can be very dangerous while for the other it will just be a little bit uncomfortable.

20	
000	DID YOU KNOW
5 _	SYMPTOMS IS A WORD USED
6 -	BY DOCTORS TO DESCRIBE
10	WHAT A DISEASE LOOKS LIKE.
0	SYMPTOMS FOR ALLERGIES ARE:
000000000000000000000000000000000000000	- SNEEZING, NASAL CONGESTION
o =	AND A RUNNY NOSE
[2] -	- RED, ITCHING AND BURNING
5	EYES
55540	- HIVES AND ECZEMA
5	- BREATHING DIFFICULTIES AND
0 -	COUGHING
22	- :
0 =	- VOMITING, DIARRHEA AND
F -	STOMACH PAINS
0.535	- ANAPHYLAXIS
2:	Aut

Allergies can be very uncomfortable, especially since you are unable to control the body's response. Anyone having an allergy should never be blamed for it. Stress and fear can even worsen an allergic reaction.

Hard to breathe

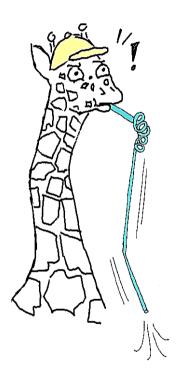
During an allergic reaction it can become very hard to breathe. Due to the airways becomming irritated and swollen.



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DID Y	OU NOW	
	AT THE NASAL CAVITY,	
-	PHARYNX, TRACHEA AND LUNG	
	ECTIVELY ARE CALLED THE	
_	IAYS?	
which diffic whee chest, cough	ma is a chronic lung disease in leads to breathing ulties, a characteristic zing and whining in the shortness of breath and thing. It is common that tren with allergies also top asthma.	

Some people who have allergies also have asthma, where the airways contracts and becomes even tighter. Tight airways makes it difficult to breathe. Try to breathe through a straw, it is pretty tough!



Swelling

When a lot of immune cells are gathered in the same place, it becomes crowded and warm, making the inflamed area swell and become red.



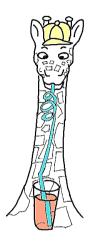
Hives

Hives can easily be recognized as lightly red bumps on the skin. They can be a few or many, and they come in different shapes and sizes.



Beware if the tongue and lips start to go numb or the face gets red - it may indicate that the beginning of an allergic shock.

Anaphylaxis, an allergic shock, means that the blood vessels expand and blood pressure drops. Symptoms of anaphylaxis, in addition to a drop in blood pressure, include; itching, hives, swelling of the lips, eyes and throat, dizziness, nausea, vomiting, breathing difficulties, and unconsciousness. The symptoms can quickly become acute and will require immediate care!



"It's the same thing for me. I have celiac disease and can't eat bread, pasta or pizza" Ivan says.

"No, that's not the case. The symptoms for food allergy and food intolerance resembles each other, but ..."

Feathers' explanation is on the next page.



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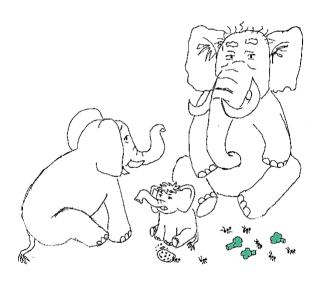
WHAT'S THE DIFFERENCE BETWEEN FOOD INTOLERANCE AND FOOD

ALLERGY?

SOME OF THE SYMPTOMS ARE ALIKE FOR FOOD INTOLERANCE AND FOOD ALLERGY. WHEN THE BODY CAN'T DIGEST THE FOOD OR THE STOMACH BECOMES IRRITATED. IT IS A FOOD INTOLERANCE. FOOD INTOLERANCE DOESN'T SHOW ITSELF DIRECTLY LIKE FOOD ALLERGY DOES. WHEN IT COMES TO ALLERGIES. A VERY SMALL AMOUNT OF FOOD CAN CAUSE SERIOUS REACTIONS WHILE FOOD INTOLERANCE REQUIRES A LOT MORE FOOD DURING À LONGER PERIOD OF TIME FOR THE INDIVIDUAL TO BECOME ILL.

"Now, do you understand why I can't eat peanuts?" Jenna wonders.

"Oh yes, one has gotten a lot to think about." Tuskarsen replies.



"My mother is a vegigerian, is the allergic or intolerant to meat?" Tiny asks.

"You probably mean vegetarian, Tiny. Vegetarians are not allergic to meat, but they choose for one reason or another to not eat meat" Feathers explains.

"Oh, then I understand" Tiny says.

"I have some mints with me, do you want those instead?" Tuskarsen asks Alice.

"Oh, yes please!" Alice replies happily.



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Tiny wonders what she can do to help her other friends that also have food allergies.

What can I do? - To prevent dangers such like an allergic reaction.

- Ask your friends if they have any allergies. Do your best to remember it, but hopefully there is an adult nearby who also is well informed about the situation, for example your teacher.
- Don't bring any food to school that you know someone is allergic to. You can read what the food

contains on the package, or you can ask your parents.

- Don't share your food with your classmates nor friends, especially if someone or some of them have allergies.
- Wash your hand upon eating as well as before, that way you prevent allergens from your food ending up at someone who have allergies.

- Get an adults attention if someone becomes unwell or feels weird upon eating.





