



Understanding our: Lymphatic system



Name:



Name: _____

Lymphatic system terms:

immune system- how our bodies to fight off sickness and disease, caused by bacteria, germs and other unbalanced materials that we encounter in our daily lives

lymphatic system - a system of delicate tubes found all over our body that drain fluid called lymph into glands called lymph nodes

lymph - the fluid that flows throughout your lymphatic system which collects waste products, bacteria and damaged cells from inside the body's tissues so that they can be removed from the body or destroyed

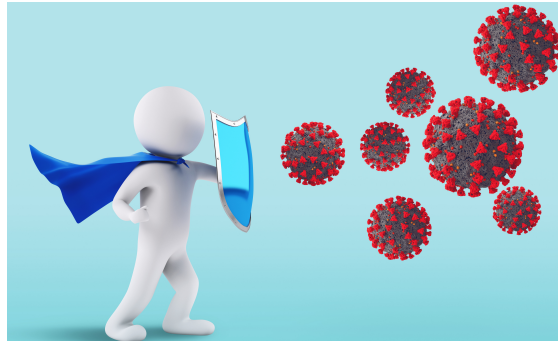
lymph nodes - small bean shaped, soft nodules of tissue that are concentrated around your neck, armpits, chest and hips

Antibodies are proteins that recognize, mark, and eliminate foreign invaders such as bacteria and viruses, either alone or with other immune cells





Name: _____



Today we will discuss an important part of our immune system.

God created our bodies with a special miracle called our immune system whose job is to fight off sickness and disease.

Sickness entered the world when sin entered the world like the Bible tells us in Genesis. It is a part of our lives, but God promises us that in Heaven we will have perfect bodies, free from sin and sickness. Until then, we must fight off sickness and disease with our immune systems and healthy choices.

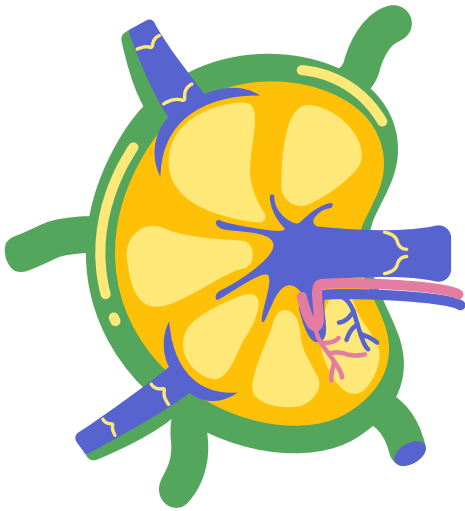
Bacteria, germs and other unbalanced materials that we encounter in our daily lives can make us sick. These harmful particles are not just found on things we touch or eat, but they are also in the air we breathe.

Germs and bacteria are absolutely unavoidable and we must be aware of how our bodies work so that we can “overcome evil with good” like the Bible commands us. (**Romans 12:21**)

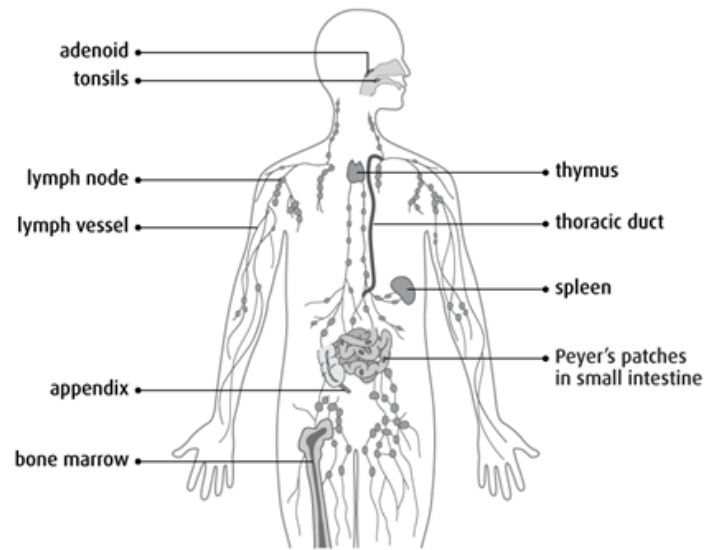
The more we know the more we learn to not fear like God commands in the Bible as well. (**Isaiah 41:10**)



Name: _____



Lymph node



Where lymph nodes are found in the body

The lymphatic system is a special part of the body's immune system.

It is a system of delicate tubes found all over our body that drain fluid called lymph into glands called lymph nodes. They are small bean shaped, soft nodules of tissue that are concentrated around your neck, armpits, chest and hips.

Lymph is the fluid that flows throughout your lymphatic system. It contains *white blood cells* called lymphocytes, fluid from the intestines called chyle (kai·uhl) and some red blood cells. Lymph goes back into circulation through your veins.

Lymph collects waste products, bacteria and damaged cells from inside the body's tissues so that they can be removed from the body or destroyed. Lymph drains into lymph vessels that carry it to lymph nodes.

Lymph nodes clean the lymph and add more lymphocytes to it.



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Lymphocytes fight disease and micro-organisms that cause infections, like bacteria, viruses, fungi and parasites. They are important cells in the body's immune system.

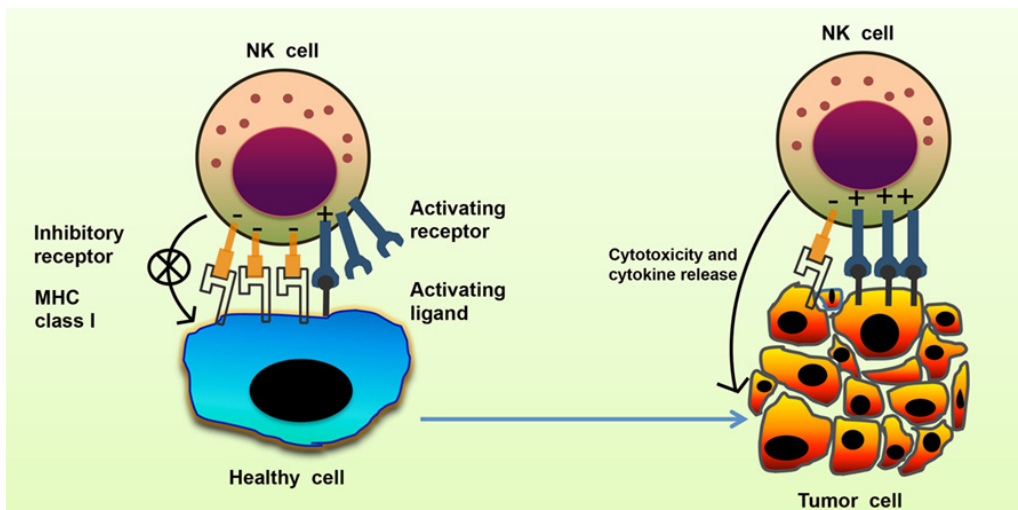
There are 3 types of lymphocytes:

- B cells (B lymphocytes) make antibodies to fight an infection.
- T cells (T lymphocytes) defend the body against disease and infection and control the immune response.
- Natural killer cells attack cells infected with a virus and abnormal cells, like cancer cells.

Lymph nodes are small clusters of cells surrounded by capsule ducts that go in and out of them. **Look at the picture below and point to the ducts that would allow lymph to flow in and out of the lymph node.**

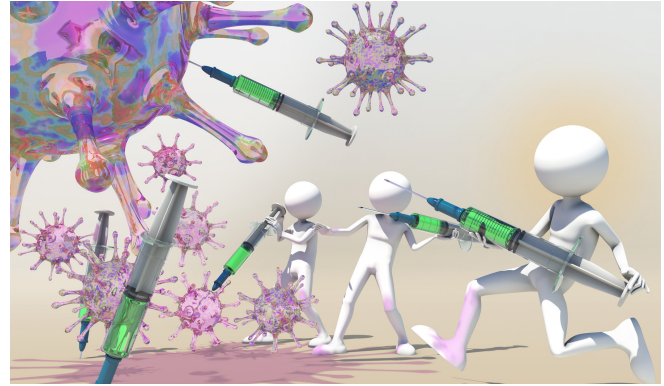
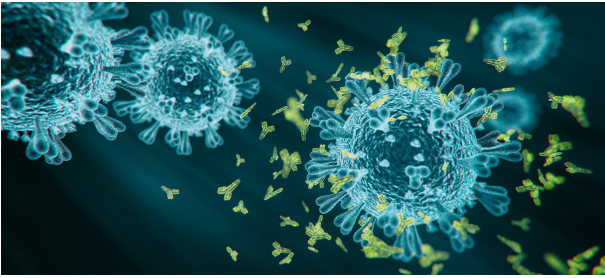
Lymph nodes are small, bean-shaped masses of lymphatic tissue along lymph vessels. They store lymphocytes and filter waste, bacteria and damaged cells (including cancer cells) from lymph.

The lymphocytes inside the lymph nodes also attack bacteria and viruses that they find in the lymph. This is why lymph nodes often get swollen when we are sick or fighting off an illness like a cold or the flu.





Name: _____



We just discussed how the cells in lymph nodes are called lymphocytes which produce antibodies.

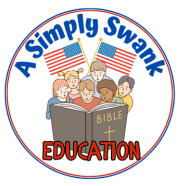
An antibody is a protein that your immune system uses to read what is good and what is bad - and they stay in your body forever. Proteins are created in your DNA with mRNA. Antibodies never go away.

Antibodies combine chemically with substances which the body recognizes as alien, such as bacteria, viruses, and foreign substances in the blood.

They recognize, mark, and eliminate foreign invaders such as bacteria and viruses, either alone or with other immune cells. The presence of antibodies in the blood indicates a recent or past infection.

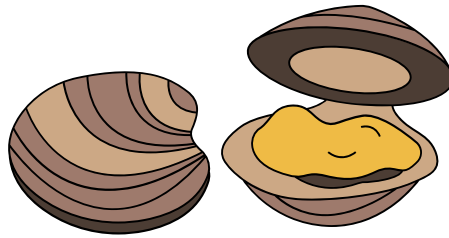
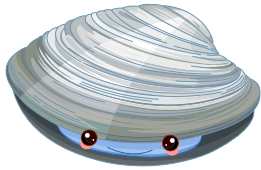
Antibodies are the superheroes of our immune system. They see the bad guys and defeat them.

Antibody levels can be tested and also indicate the strength of the immune response to an infection or autoimmune disease.



Name: _____

Let's better understand how the lymphatic system works by using an example from nature.



Do you know that clams, muscles and oysters are the Lymphatic System of the Ocean?

This is a great picture or example of how our lymphatic system works in our bodies. Clams filter in the water of the ocean, clean it by ingesting all the poisons and filter out clean and beautiful ocean water.

Thank you so much clams! It is because of you and many other filter feeders that we have clean water to swim and surf in!

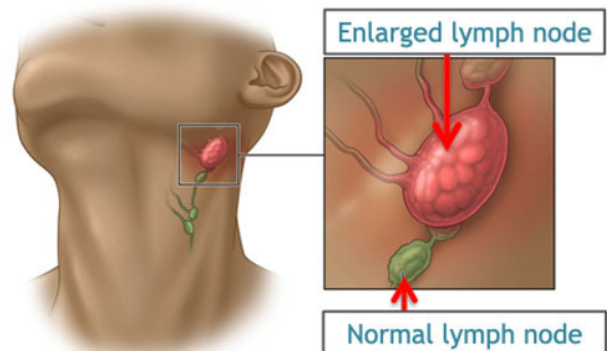
Yay, Jesus, thank you for your wisdom, power and kindness for giving us amazing clams!

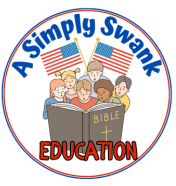


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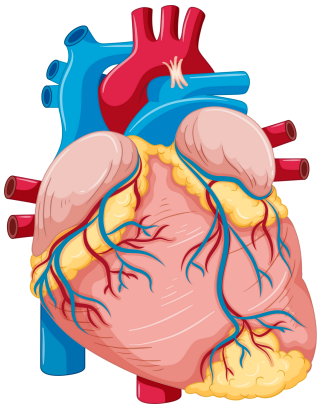


CERVICAL LYMPH NODE





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We all know that our heart pumps oxygenated blood through our bodies. Our heart works by God's grace all the time without us having to think about it. Thank you Jesus!

Our lymphatic system does not work that way.

Why doesn't our lymphatic system
have a pump?
What do we do?!



Don't worry, God is good and He gave us a solution to this problem.

Can you guess what it is? You're right!
Exercise!!

We must move in order to get our lymphatic system to work. Every time you move your arms up and down, move your feet up and down you succeed in making your lymph pump through your body.

This amazing act allows our lymphatic system to manually pump out the bad and sends out the good! Praise God!





Name: _____

In conclusion, The lymphatic system is a **major site** where foreign substances and infectious agents interact with the immune system and are destroyed.

Knowing more about your special, God-designed immune system gives you the knowledge on how to properly care for it and help it work effectively.

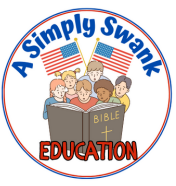


Why do you think it's important to care for and protect your body and immune system?

What do you mean?

Is there something I can do to help?





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Yes, absolutely! Here is one specific example you can use:

As we get older we will start to notice that our armpits get really stinky.

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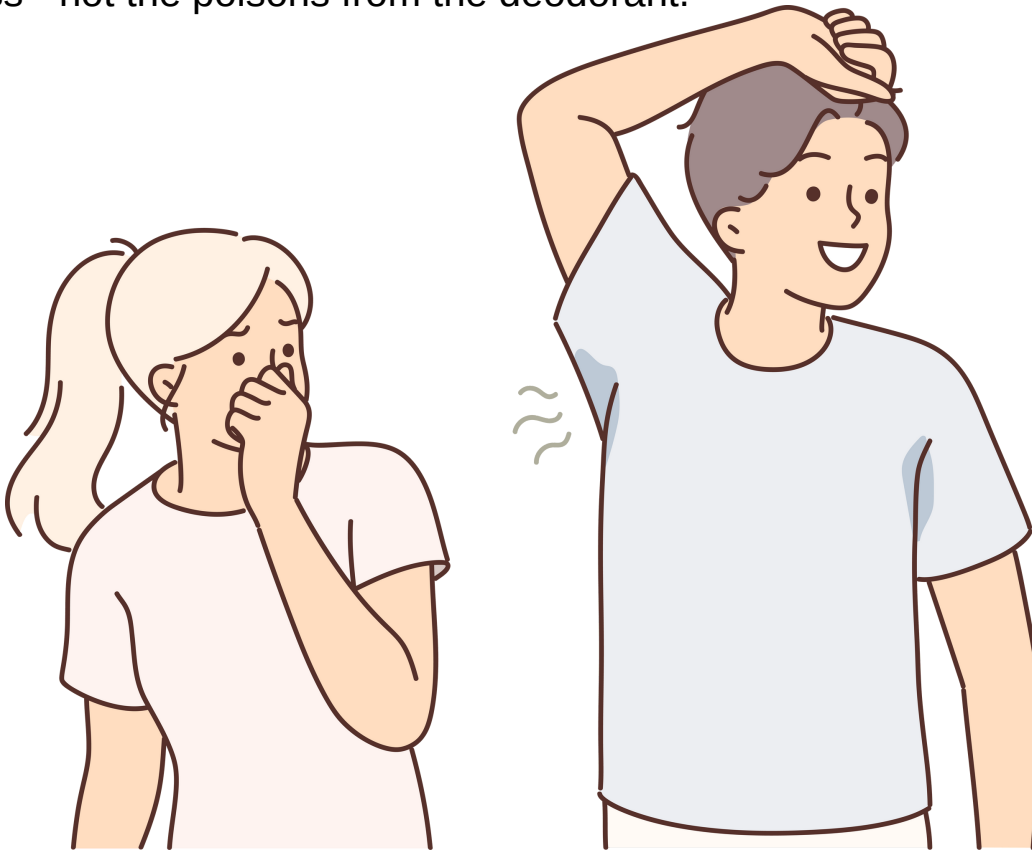
Do you remember where the lymph nodes are concentrated?

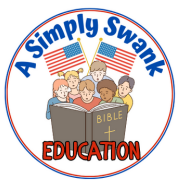
Right! Your neck, armpits, chest and hips.

Some of the stink on your skin is caused by the lymph doing their job properly. The bad smell is the cause and effect of all the sick and foreign things being filtered out of your body. It's happy that our immune system works, but stinky on the outside of our skin, right?

That sounds like a problem we need to fix.

One of the most troubling things we can do to solve the problem of stinky skin is to put nasty chemical-filled deodorant and antiperspirant into our armpits. These terrible products clog up our lymph nodes with poison that can cause disease and sickness. We must only put natural products in our armpits so that our bodies can fight off other germs, bacteria and sickness - not the poisons from the deodorant.





Name: _____

*certified pure therapeutic grade

HARVESTED
ALOE, ORGANIC
ALMOND SEED
OIL, ORGANIC
CUCUMBER SEED
OIL, HONEY,
*LIME,
LAVENDER,
CHAMOMILE &
PEPPERMINT
ESSENTIAL OIL,

oceanside, california



simplyswankwellness@gmail.com

SHAKE WELL

BEST APPLIED
AFTER SHOWER
WHEN SKIN
IS STILL DAMP

There are natural products that are so healthy and fresh that you can actually eat them. You can put these products in your armpits that make them smell fresh and clean all day. Smelling nice helps us have a happy life that doesn't offend people when we are close to them. Personal hygiene is very important and we must care for our bodies everyday.

Eating healthy food, exercising, reading your Bible, prayer, good personal hygiene and healthy play are all things we can do to make sure our immune systems are working the way God designed them to work.

God has big missions for all of you tiny Christian soldiers. He wants you to care for your bodies and He wants you to know how they work. He wants you to not fear, and to share solutions to problems when you find them. He wants Christians to care for one another and help one another do life better.