Dear Future Health Scientists,

The time has come! You need to vote for the future name of our newsletter!

HERE’S WHAT YOU NEED TO DO:

1) Choose only one name.
2) Submit your choice by calling 405.271.2390 (you may leave a message) or email ann-wittmann@ouhsc.edu.

You do not need to leave your name!

Newsletter Name Choices
1) The Brain Blast
2) The Monthly Method
3) The Science Spot

Inside this issue:
- Vote for Newsletter Name!
- What’s a Booger?
- Cell Phones & DNA
- Health Career Spotlight
- Mad Scientist
- Cartoon of the Day
- Quick Facts & Word Search

Only the nose knows!!

Hey...get your finger outta there!! Instead of picking them out, let’s learn about those little blobs. Yeah, we’re talking about boogers!

To understand what boogers are, you need to know about mucus (say: myoo-kus). Mucus is the sticky, slimy stuff that’s made inside your nose. If you’re like a lot of kids, you have another name for nose mucus: snot. Your nose and sinuses make about a quart (about 1 liter) of snot every day!

Mucus has a pretty important job — it protects the lungs. When you breathe in air through your nose, it contains lots of tiny things, like dust, dirt, germs, and pollen. If these made it all the way to the lungs, the lungs could get irritated or infected, making it tough to breathe. Luckily, snot helps trap this stuff, keeping it in the nose and out of the lungs.

After this stuff gets stuck inside the nose, the mucus surrounds it and some of the tiny hairs inside the nose called cilia (say: sih-lee-uh). These hairs help move the mucus and the trapped stuff toward the front of the nose or the back of the throat. When the mucus, dirt and other debris dry and clump together, you’re left with a booger. Boogers can be squishy and slimy or tough and crumbly. Yuk!!! Everybody gets them, so they’re not a big deal. In fact, boogers are a sign that your nose is working the way it should!

If you have to get rid of boogers, your best bet is to blow’em out of your nose and into a tissue (don’t wipe’em on the furniture or your clothes!). Picking your nose isn’t a great idea because boogers contain lots of germs and because poking around in your nose can make it bleed.

So, keep your nose clean!!
Your cell phone holds secrets about you. Besides the names and numbers that you’ve pro-
grammed into it, traces of your DNA linger on the device, according to a new study.

DNA is genetic material that appears in every cell. Like your fingerprint, your DNA is unique to
you—unless you have an identical twin. Scientists today routinely analyze DNA in blood, saliva, or
hair left behind at the scene of a crime. The results often help detectives identify criminals and
their victims.

Meghan J. McFadden, a molecular biologist at McMaster University in Hamilton, Ontario, heard
about a crime in which the suspect bled onto a cell phone and later dropped the device. This
made her wonder whether traces of DNA lingered on cell phones—even when no blood was in-
volved.

To find out, she and a colleague collected flip-style phones from 10 volunteers. They used swabs
to collect invisible traces of the users from two parts of the phone: the outside, where the user
holds it, and the speaker, which is placed at the user's ear.

The scientists scrubbed the phones using a solution made mostly of alcohol. The aim of washing
was to remove all detectable traces of DNA. The owners got their phones back for another week.
Then the researchers collected the phones and repeated the swabbing of each phone once more.

The scientists discovered DNA that belonged to the phone's owner on each of the phones. Better
samples were collected from the outside of each phone, but those swabs also picked up DNA that
belonged to other people who had apparently also handled the phone.

Surprisingly, DNA showed up even in swabs that were taken immediately after the phones were
scrubbed. That suggests that washing won't remove all traces of evidence from a criminal's de-
vice. So cell phones can now be added to the list of clues that can clinch a crime-scene investiga-
tion.

—Emily Sohn
http://www.sciencenewsforkids.org/articles/20080312/Note3.asp
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Cardiologists are medical doctors that specialize in treating cardiovascular disease. The cardiovascular system includes the heart and blood vessels (veins and arteries). Cardiologists have extensive training in diagnosis and treatment of heart conditions. Cardiology is classified as an internal medicine subspecialty and requires special certification. Knowledge of internal medicine and other specialties is required to obtain the required certification. A cardiologist must be acquainted not only with anatomy and physiology, but also with modern computerized diagnostic equipment. Cardiology and cardiovascular surgery complement each other. For example, the cardiologist may determine that a child has been born with a hole between the chambers of the heart; the cardiovascular surgeon is the one who will repair this hole through open heart surgery. Amazing!

MAD SCIENTIST CORNER!

Isotropy/Thixotropy

You Will Need:

- Cornstarch (or corn flour)
- Water
- Large bowl (one that can hold a few cups of water and still be able to reach your hands inside)

What To Do:

1. Place about a cup of cornstarch in a large bowl.
2. Add about a 1/4 cup of water to the cornstarch.
3. Keep adding water until the mixture appears somewhat thicker than pancake batter.
4. With your hands, take a handful and knead the mixture, like you would bread dough.

As the mixture is agitated or squeezed, it will become firm as long as continuous kneading or pressure is exerted. As soon as the pressure stops, the “batter” will revert to its original form and ‘pour’ through your fingers. Even though the cornstarch and water is a liquid, you can form the stuff into a ball if you squeeze and knead it quickly enough. The sensation of this ‘glop’ in your hands is weird and must be experienced to be believed. It feels great!!

What’s going on?

This experiment demonstrates isotropy and thixotropy properties of certain emulsions (fluid mixtures).

Isotropy is the property of a fluid to become firm when agitated. This is what you are experiencing with the cornstarch and water. It’s kind of like when you walk on wet sand at the beach. The sand firms up below your feet as you first touch the sand and then becomes fluid, as your feet sink into the sand just a moment later. If you run over the sand, the sand will feel very firm. If you walk slowly, your feet will sink below the surface with every step!

Thixotropy is the opposite of isotropy in that the fluid mixture becomes more fluid (less firm) as it is agitated. An example of this is where you strike the end of a ketchup bottle to get ketchup to come out of the bottle. The striking force temporarily causes the ketchup to become ‘runny’ and it flows more easily from the bottle (and on to your new clothes...white ones!). Another example is the infamous “quicksand”. If you thrash around in the quicksand, you will sink quicker because all that wiggling causes the sand to liquefy!
All about a Cardiologist

Quick Facts!

Between 4 and 7 liters (1 and 2 gallons) of blood are pumped through your heart every minute?

Your heart will beat more than 2.5 billion times in your life?

Your heart weighs about 280 grams (10 ounces)?

A sneeze travels at over 100 miles per hour? Gesundheit!

Your brain is 80% water?

Fly eyes are made of hundreds of separate little side-by-side lenses?

Some clams have a row of simple eyes around their shells?

Trivia from:
(www.billnye.com and www.funology.com)