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Want to win a cool YES Mag t-shirt? All you have to do is answer one or all of our Brain Bumpers. Everyone with a correct answer gets their name in the draw! Feel free to look up the answer or ask a parent, teacher, or friend.

Send your answers to: YES Mag 3968 Long Gun Pl Victoria, BC V8N 3A9 or email: contests@yesmag.ca

Don't forget to include your name, age, address, & t-shirt size (S, M, L, or XL).

Entries must be received by: August 5, 2003.

This month's winners:

Jordin Magnussen (Saskatoon, SK, age 13);

Marie Ottenbrite (Stittsville, ON, age 8);

Oliver Brooks (Victoria, BC, age 11);

Matthew Tingley (Ottawa, ON, age 8).

Congratulations! The t-shirts are in the mail.

Photos.com

Brain Bumpers

Answers to last issue's questions...

Why do humans and other animals need to stretch?

"Everyone, including your dog or cat, stretches, but we know little about why we do it," explains neuroscientist Dr. Robert Provine. (Dr. Provine likes to investigate difficult to explain behaviour, he's author of *Laughter: A Scientific Investigation*). Okay, so what does stretching do?

Dr. Provine says stretching prepares us for action. Stretching affects an animal's physiology—pulse rate increases, as does blood pressure, and blood flow to the muscles and other body parts. Stretching also increases flexibility of muscles and joints.

Yawning is a stretch too, but involves only the upper body and face. "Upon waking in the morning, you probably yawn and stretch, while at night, before bedtime, you only yawn," Dr. Provine explains. "Yawning but not stretching is contagious. You can yawn without stretching, but you usually yawn when you stretch."

Why is bird poop white?

Okay, this one should throw everyone, bird "poop" isn't white. The urine is white. So yes, when you're walking along, minding your own business, sometimes a bird pees on you. Mind you, it's also pooping.

You see, some of a bird's waste (nitrogenous waste that comes from proteins) breaks down into uric acid. (Mammals break their nitrogenous waste down into urea, a liquid.) Uric acid does not really dissolve well in water, and it's excreted as crystals—it looks like a semi-solid white paste.

In mammals, the bladder stores the liquid waste. Most birds lack a bladder. No bladder means less weight (good for flying). Bird urine passes from the ureters into the cloaca, which holds all sorts of digestive wastes. So, bird droppings



Ostriches are the only birds with a bladder.

contain white uric acid crystals and "poop". The poop depends on what they eat, insect parts, seeds, or whatever it is that strikes their fancy.

Why are tennis balls "canned" before you buy them?

Thwip. What's that? The sound of the lid being peeled off a "can" of tennis balls. (Okay, the can is usually a plastic cylinder with a metal lid.) But tennis balls aren't really "canned". Canned goods lack air—they're vacuum packed. Tennis balls are packed under pressure—air pressure. So the sound after the "thwip" is air escaping from the canister.

Just like basketballs and soccer balls, tennis balls are inflated. But, you can't re-inflate them, there's no hole. To keep the tennis balls inflated to the right specifications, they're packed under pressure. Once you unleash the balls, they'll last a mere three to five weeks. After that, the balls become heavier, which aggravates problems such as tennis elbow.

During the last Wimbledon, 48,000 tennis balls were used by the 560 players in the tournament.



Next Issue's Questions:

What is a sun dog?

What is bulletproof glass made from?

Can animals cry?