Our bodies don't just make gall and kidney stones—from saliva to tonsils, these are other ones to look out for

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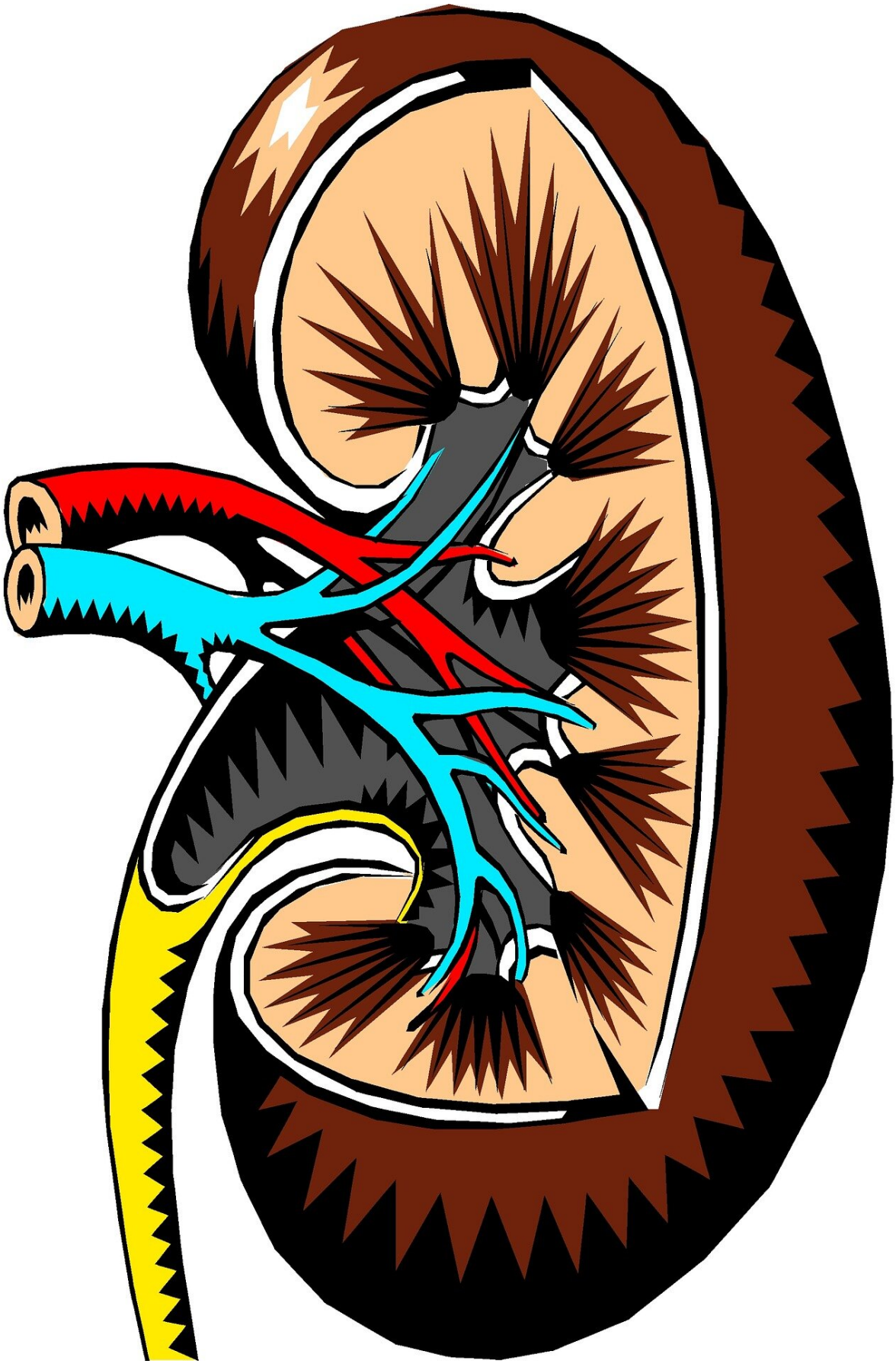

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Of all the body's amazing abilities, perhaps one of the strangest is its capacity to make stones.

Many will have heard of kidney or gallstones, and be aware of the problems they can cause. But there are other, rarer types of stone in the body that can be found in the most unlikely places.

What are these body stones are made of? And what can we do to prevent them?

Kidney stones affect around 1 in 10 people. They develop from mostly calcium and oxalate that is filtered from blood into our urine. (Oxalates are naturally occurring compounds found in both plants and humans.) In larger amounts, the oxalate and calcium can crystallize and collect together to form a stone.

Kidney stones can vary considerably in size—from less than a millimeter across to centimeters or more. They can also form unusual shapes—if the stone builds up within the branching channels (calyces) of the kidney, it can take on the form of a deer's antler. This is called a staghorn calculus.

These stones cause issues when they obstruct the ureters—the two tubes that transport urine from the kidneys to the bladder. If this happens, it can cause severe pain in the loins, as well as preventing normal urinary flow. This in turn can cause an infection, or urine accumulating in and around the kidney.

Another common condition is gallstones. These form inside either the gallbladder, or the biliary tree—the duct system that delivers bile to the gut to help break down fats. Gallstones form from either cholesterol or bile pigments, and can be singular or multiple.

But, like kidney stones, if gallstones work their way into a narrower space (like the common bile duct), they too can cause problems such as abdominal pain, infections and jaundice.

Rarer stone disorders

Stones, then, can develop from different bodily fluids. Take salivary stones, for instance.

Saliva is produced by glands that sit next to the ear and underneath the jaw and tongue. Once secreted into the mouth, it helps moisten food so it can be swallowed, as well as kicking off the digestion process. Salivary stones are made from many different elements, including calcium, magnesium and phosphate.

If salivary stones become stuck in the ducts, this can prevent the secretion of saliva into the mouth, causing pain and swelling. Stagnation of saliva might lead to bad breath, or a horrid taste in the mouth, especially if it triggers an infection of the salivary gland.

Stones can also be found in the tonsils. Located at the back of the mouth at the top of the throat, tonsils are masses of lymphoid tissue that are part of the body's immune system. It's ironic, then, that they so often get inflamed and infected.

The tonsils have cavities called crypts, in which morsels of food and saliva can lodge. The result is a tonsil stone, or tonsillolith.

These are often softer and less stony, but may harden with time and also come with their fair share of problems—mainly bad breath or recurrent infections.

Other body materials have the capacity to harden too, turning themselves into stone. Feces, for instance, can become so hardened that it forms a stony mass called a faecolith.

And the debris, including sloughed skin, found in your belly button can also form a stone known as an omphalolith.

What can we do about stones?

Happily, there are some simple measures that might prevent these pesky stones forming, or help to get rid of them.

The most important is proper hydration. Drinking the correct amount of water dilutes urine, prevents constipation, and also reduces bacterial build up in the mouth, so can help avert many of these different stone types. In the case of tonsil stones, good oral hygiene including regular tooth brushing can help reduce the risk too.

Diet is also important, particularly for gallstones, which can be triggered by a high-fat diet and obesity. There are some risk factors that you can't alter—such as being female or over 40, which raises the likelihood of gallstones forming. Avoiding calcium and oxalate-rich foods like dairy, spinach and rhubarb may help prevent kidney stones.

But what if you've already got a stone? If it's made you poorly, removal by surgery or endoscopy may be necessary.

In the case of kidney stones, you can wait for the stones to pass through your system, down the ureter into the bladder and out—sometimes with

an audible ping into the loo. A doctor may even ask you to sieve your urine using a tea strainer to try and catch the stone on its exit.

Salivary stones can sometimes be helped along by sucking on a lemon, which acts as a powerful stimulant for salivation—creating a jet to clear the duct. Salivary and tonsil stones can also be gently prodded out using a blunt instrument.

In short, there are many different treatments available for the different types of body stone—and simple everyday measures that can help reduce the risk of them developing.

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