Ask an expert: Is this kidney pain?

Q. I have been feeling pain on both sides of my spine in the flank area, especially when I lay down at night and in the morning before I get up. Could this be a problem with my kidneys?

A. First, please be aware that most types of kidney disease (such as those caused by diabetes and high blood pressure) do not cause pain. Kidneys rarely hurt, except in the cases of kidney stones and kidney infection.

Pain caused by the kidneys is typically felt in the flank area, which is in the back, just at the lower edge of the ribs on either side of the spine. Kidney pain usually is sharp, severe, and occurs in waves.

What isn't kidney pain

It is rare for the kidneys to cause dull, aching pain. People sometimes equate back pain with kidney pain, but dull aching pain in the back — especially the lower back or the middle of the back — is usually due to muscles, ligaments, or even vertebrae and disks in the spinal column. Musculoskeletal pain typically gets worse with movement, and is relieved by heat or massage.

Common causes of kidney pain

1. Kidney stones: The pain caused by kidney stones occurs when a stone becomes lodged in the ureter, the slender tube that connects the kidney with the bladder. Urine flow is then blocked, which causes urine to back up into the kidney. As a result, the kidney swells and enlarges, stretching the pain-sensitive capsule, or thin covering around it.

The pain caused by kidney stones is referred to as "colic," meaning that it comes in waves as opposed to being a steady continuous pain. Pain from kidney stones is described as being almost as severe as that of childbirth. Patients with renal colic usually find it very difficult to hold still, and are in constant motion, pacing and writhing. Often the pain is so severe that it causes nausea and vomiting.

Although the pain starts in the right or left flank area, it may move as the stone travels down the ureter. The pain may move around the side of the trunk to the lower part of the abdomen in the front and even travel down to the groin.

2. Kidney infection (also known as "pyelonephritis"): Pain caused by kidney infection (pyelonephritis) is related to infection and inflammation within the kidney tissue. Infection causes the kidney to swell and stretches the pain-sensitive capsule surrounding the kidney, leading to exquisite tenderness over the kidney.

Patients with kidney infection are very sensitive to even the lightest touch in the flank area. They are usually quite ill with the infection, and generally have high fever, nausea, and vomiting as well. Infection of the kidney is far more serious than the much more common condition of bladder infection. Pyelonephritis needs to be treated promptly with intravenous antibiotics in order to prevent spread of infection to the bloodstream.

3. Kidney cancer: Rarely a kidney tumor, or cancer, can grow and stretch the kidney capsule slowly, or involve nerves in the kidney area, causing pain.
4. Blocked urine flow: There are some conditions that may cause a gradual blockage to urine flow (not a sudden blockage like that of a kidney stone); in these cases the kidney may be stretched and cause a dull aching pain.

5. Polycystic kidney disease: A hereditary disease called polycystic kidney disease can lead to massive enlargement of the kidneys over a period of years and can sometimes cause a dull aching pain, which is usually felt in the front of the abdomen rather than in the back.

6. Other less common causes of kidney pain: Uncommon causes of kidney pain are bruising or bleeding within the kidney (for instance, due to injury), or "infarction" of the kidney, where the blood supply is suddenly cut off because the artery supplying blood to the kidney becomes blocked.

Remember, it is uncommon for the kidneys to be a cause of a dull aching pain. In fact, it is extremely unusual for a slowly-occurring blockage from the conditions listed (even cancer) to cause any pain at all.