Math what surgeons wish patients knew about their circulation

ROSEMONT, Illinois, April 22, 2019 – Many patients meet a vascular surgeon for the first time when they need to have surgery. There’s no time for an anatomy lesson; it’s time to make a medical decision.

But quite a few of those patients might never have needed that surgery if they had known more about how the body’s amazing system of veins and arteries works and how to keep it healthy.

Here are a few basics that vascular specialists wish patients knew:

- **Anatomy 101.** Your circulatory system is huge. Laid end to end, all your veins and arteries together would stretch for 100,000 miles. The circulatory system includes two structures: a vast network of arteries that deliver oxygen all over the body, and a hardworking system of veins that push depleted blood back up to the heart for more oxygen. In diagrams, arteries are often depicted as red and the veins show up as blue.

Some patients don’t know the difference between an artery and a vein. Both kinds of blood vessels move blood through the body, but they are as different as an on ramp and an off ramp of an expressway.

- **This old body.** The circulatory system ages along with the rest of the body. When we are older, arteries tend to become thicker and less flexible, which is where the term, “hardening of the arteries” comes from. Often, they start accumulating plaque, just as old water pipes may become encrusted with lime. When the arteries get too clogged, the blood can’t flow well and problems may become serious.

- **Vascular diseases are connected.** There are numerous kinds of vascular diseases, but most of them start with the same problem, declining blood vessel health.

- **Hardening of the arteries** can occur anywhere in the body, but causes the most trouble for the heart, the legs and the carotid artery in the neck, which can lead to stroke. In the legs, the disease is called peripheral artery disease, which can lead to leg pain and amputation if it is left untreated.
“If you have appendicitis, it’s only in the appendix,” notes Flint, Mich., vascular surgeon Dr. Carlo Dall’Olmo. “But hardening of the arteries can involve many arteries, and it may silent, with no symptoms until disease is advanced.”

- **Weakening of the arteries** can cause them to stretch out like old elastic. In the body's biggest blood vessel, the aorta, that can lead to an abdominal aortic aneurysm, when part of the aorta bulges out. If the bulge bursts, the patient has just minutes to live. Aneurysms occur in other parts of the body as well.

- **Veins have their own problems.** Their job is to push blood back up to the heart, but sometimes the valves aren't efficient. That can lead to swollen legs. Leg veins can also develop blood clots, a condition called deep vein thrombosis.

- **Staying healthy.** While part of vascular disease is the result of aging or disease, everyone's vascular health benefits from maintaining good habits.

Eating healthfully, exercising, shedding excess weight and not smoking are essential for vascular patients, who should also be careful to keep every doctor's appointment. Those who have had a vascular procedure should not assume they are healed forever. They must be conscientious about following the doctor's advice for the rest of their lives.

People with diabetes are at extra risk for vascular disease. Managing blood sugar levels is a vital part of keeping the blood vessels healthy.

- **Endovascular surgery has made it easier to be a vascular patient.** Vascular surgery changed dramatically since the 1980s with the development of endovascular surgery, which is minimally invasive and often requires just a small incision. Since then, advances in devices, medications and techniques have made procedures easier on patients and more successful.

Vascular surgeons spend five to seven years in surgical training, learning to perform both open surgery and endovascular techniques, whichever is best for the patient. Not all vascular conditions require surgery, however, and many patients only need physical therapy or medication.

For more information about vascular health and treatments, visit https://vascular.org/patient-resources.