A Patient's Guide to the SensiLase® PAD-IQ™ *Studycast* System:

Three Simple Tests to Measure Blood Flow and Circulatory Health / Peripheral Arterial Disease

What is P.A.D.?

It stands for Peripheral Arterial Disease. People develop P.A.D. when the arteries in their legs become narrowed or clogged with fatty deposits, or plaque. Enough plaque causes the arteries to harden and narrow – doctors call this "atherosclerosis". This situation causes blood flow to the legs and feet to slow down. P.A.D. occurs most often in the arteries in the legs, but it can affect other arteries that carry blood outside the heart. This includes arteries that go to the heart, arms, brain, kidneys and stomach. All of these are serious -- but P.A.D. can be very well managed by making lifestyle changes (exercise and diet), taking medicines, and/or having surgery.

Testing for P.A.D with the SensiLase PAD-IQ *Studycast* System

If P.A.D. is left undiagnosed and untreated, it can lead to loss of sensation in the feet, open sores from lack of blood flow, and leg amputations. People with P.A.D. also have a much higher risk for a heart attack or stroke. Men are at higher risk for erectile dysfunction. Increasingly, people with Diabetes are finding that they also have P.A.D. When these two diseases are combined, P.A.D. can be more difficult to diagnose.

The PAD-IQ System is designed specifically to assess blood flow in the legs and feet for patients with P.A.D. and Diabetes. The PAD-IQ System supports three separate tests that are highly effective in determining if a person has P.A.D. and if so, its severity. Once a patient is diagnosed with P.A.D., a physician can then develop the optimal treatment plan. All the tests are typically painless and can be performed in a doctor's office while the patient rests quietly on their back.

Testing with the SensiLase PAD-IQ Studycast System

SensiLase PAD-IQ Tests: All of these tests use simple pressure cuffs and special sensors that send light or sound through the skin and into capillaries and arteries.

1. The Skin Perfusion Pressure (SPP) Test

The SPP test measures blood flow to the tiny vessels in the feet. When P.A.D. is present, it can diminish blood flow to the feet. This test may also be called a "measurement of reactive hyperemia" by your physician since a pressure cuff is used to briefly stop blood flow in these small vessels. When the pressure is released, a small sensor under the cuff determines when the blood is flowing again in these tiny vessels.

When a patient with diabetes has P.A.D., special care must be taken. Diabetes causes deterioration of tiny capillary vessels and arteries become hardened in a different way. This condition makes other tests that only assess larger vessels much less reliable in diagnosing P.A.D.

2. The Pulse Volume Recording (PVR) Test

The PVR test uses the same pressure cuff as the SPP test. With the PVR test, the cuff is inflated to a lower pressure than with SPP. Each pulse produces small changes in the circumference of the leg under the cuff. These changes are measured and produce a print out tracing. A physician can view this tracing and determine if flow is normal or diminished. The PVR test can also be used to pinpoint where P.A.D. is located in your leg or foot.

3. Ankle Brachial Index (ABI) Calculation

Using the same cuffs and a Doppler sensor, the ABI test measures and compares pressures in arteries in both feet and arms. The ratios of these pressure measurements provide valuable information about arterial health.

SensiLase PAD-IQ *Studycast*

After the completion of the test, a doctor can touch a button and all test results are automatically sent to a specialist physician to read and interpret. Results are routed back to your doctor for review. SensiLase PAD-IQ *Studycast* is an efficient way to get a patient on the road to recovery from P.A.D. as soon as possible.

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