

Vascular testing is usually done using expensive equipment, require parts that can only be used one time, and/or need specialized personnel to conduct the tests. One example of this equipment is the EndoPAT device which can diagnose microvascular dysfunction. In the current study, we are comparing the results from the EndoPAT to a unique method being developed in our lab. While completing a standard EndoPAT test which uses one-time use finger probes to measure volume changes in the index fingers during periods of baseline, reduced blood flow to the forearm, and the recovery period, we also placed pressor sensors on the middle fingers of the hands. In 25 people of varying ages and health status, we had them rest in a seated position for 5 minutes, inflated a blood pressure cuff around their forearm for 5 minutes, and then let them recover for another 5 minutes while measuring changes in blood pressure. By measuring the area under the curve of the blood pressure signal and comparing the arm which experienced the occlusion to the arm which didn't, we could determine the microvascular function index (MFI). We then compared our MFI to the results of the EndoPAT. We found that the two results were highly related to one another. We concluded that our MFI technique can be used to assess microvascular function and potentially be used for vascular health screening in locations that are remote or underfunded.