

We are recruiting participants aged 14-29 years old for a study of postural vasovagal syncope (VVS, postural faint) and neuropathic postural tachycardia syndrome (POTS). Exact mechanisms of illness have remained elusive although our past work shows that with upright posture blood is excessively relocated from the central pool to the splanchnic vasculature in both VVS and neuropathic POTS. This occurs because blood vessel contraction (vasoconstriction) is impaired when upright. We hypothesize that impairment occurs because of excessive production of nitric oxide (NO) which reduces the ability of the nerves to produce vasoconstriction.

If you choose to participate, we will perform a type of testing called lower body negative pressure (LBNP) during which we use a vacuum to redistribute blood to your legs while you remain supine. This simulates many findings of upright postural stress. We will perform simple noninvasive tests. On other days we will also use a technique called intradermal microdialysis in which several tiny tubes are placed in the uppermost layer of the skin, while we simultaneously measure blood flow. Two 3mm biopsy samples will be obtained from the skin of your calf. In addition, we will be administering several drugs - L-NMMA, Phenylephrine, and Sodium Nitroprusside through an IV placed in your arm and combine this with LBNP, along with microneurography that measures Muscle Sympathetic Nerve Activity (MSNA) using an acupuncture-like needle placed in a nerve behind your knee. Testing will take place over 5 days and you will be reimbursed \$150 per day.

Further details of the research and representative consent forms can be found on our web-site, [syncope.org](http://syncope.org)

Or at our listing on [Clinicaltrials.gov](http://Clinicaltrials.gov) - the direct link is

<http://clinicaltrials.gov/ct2/show/NCT01791816?term=julian+m.+stewart&rank=1>

If interested, please reply to:

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