

Is Tilt Table Testing [TTT] necessary for diagnosing POTS?

The short answer to this is no. POTS does not require a TTT for diagnosis. A simple 10-minute standing test is adequate [and in many cases preferable] to TTT.

What is it?

TTT is used to assess a person's heart rate and blood pressure response to being moved from laying to standing. It is used to evaluate symptoms like dizziness, light-headedness or fainting to see if these may be caused by changes in your heart rate or blood pressure.

How is TTT done?

There are varying protocols for TTT. However, the process is essentially the same with slightly different timeframes applied. The test may last from 10-45 minutes and is stopped if the patient feels very unwell or faints. It may be necessary to fast or stop some medicines for this test.

The patient is gently strapped to an examination table that can tilt upright. The operator of the table can then move the patient to an upright position while monitoring heart rate and blood pressure responses and symptoms. In some TTT protocols, medications may be used to 'provoke' a drop of blood pressure to see if the patient 'faints'.

Why is it done?

The TTT was developed to explore cardiac causes of 'syncope' [fainting]. Essentially the test is a way of 'passively' changing a person's posture. This means that the patient does not 'actively' move or contract any muscles during the process of being raised upright. Ordinarily, contraction, or squeezing in, of muscles when moving from lying to standing provides some 'resistance' to the pooling of blood to the lower extremities. The TTT removes this aspect of blood pressure control and allows Doctors to monitor how well the autonomic nervous system can manage blood movement in the absence of muscle contraction.

What are the problems with TTT

More recent international consensus guidelines have highlighted that a TTT is not necessary for the diagnosis of syncope or POTS. In fact, some research has highlighted concerns that the TTT may risk causing unnecessary harm to patients without the benefit of providing a clear diagnosis. Even a healthy person is at risk of fainting on a TTT and the test is known to 'overestimate' a POTS diagnosis.

Additionally, in Australia a TTT requires a cardiologist to be present during the procedure and the patient must have an intravenous line inserted into a vein. This is because the test heightens the risk of syncope which may require treatment. These requirements mean the test is time consuming, expensive for the patient and often difficult to access. There is also the added complication that not all cardiologists and technicians are familiar with the diagnostic criteria for POTS. Even when a person can access the test, the result and interpretation may not be reliable.

When is a TTT necessary

POTS is best diagnosed with the use of the patient reported questionnaires, such as the MALMO symptom survey, a thorough history and a 10-minute standing test. However, when the diagnosis is not clear, or when the patient has an unusual history of 'atypical' syncope, it may be useful for a TTT to be undertaken. When this is the case, a cardiologist familiar with POTS will be able to organise this test through a specialist centre.

