

# Varicose Veins Patient Monitoring and Automated Treatment

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**Abstract:** *This paper presents a home based automated temporary treatment for patient healthcare to be made easier. The proposed system consists of a wearable device, detection sensors, and coin motor. Varicose veins are veins that are twisted and bulging. Varicose veins can form near the surface of the skin (superficial veins). Varicose veins most commonly affect the veins in the legs. This is because standing and walking increase the pressure in the veins of the lower body. In this project, a rehabilitation monitoring and exercise device. 5+1 thermistors are used where the former is for the lower body and the latter is for the upper body to keep track of the temperature. Comparing the temperatures of the lower body as well as the upper body and with the detection of force in the legs will activate the motor to give in the exercise to subtle pain and the block of blood in the nerves. The signal acquired from the thermistors and force motor is processed by Arduino using ZigBee for varicose pain detection. When the system was running, it was able to identify a three-degree difference in force and temperature and successfully install the coin motor. Patients will be able to receive rapid temporary therapy and will not have to hurry to hospitals if the rehabilitation system is implemented.*

**Keywords:** Varicose Veins; Automated Temporary Treatment; Arduino; ZigBee; Rehabilitation System

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