



TRANSCUTANEOUS OXYGEN MEASUREMENT (TCOM) PROCEDURE

A transcutaneous oxygen measurement (TCOM) assesses the oxygen level of tissue beneath the skin. Because oxygen is carried to the tissues by blood, TCOM is an indirect measure of blood flow. For TCOMs to be normal, the lungs must oxygenate the blood, the heart must pump the blood, and an artery must be able to carry the blood with the oxygen to the skin. Adequate blood flow is important for wounds to heal.

The TCOM procedure is painless and takes about 45 minutes depending on how many sites are measured. You will lie on a stretcher during the procedures with your legs straight.

The area to be tested is first cleaned with alcohol. If necessary, the site is also shaved. A gel that conducts electrical impulses is applied, and then adhesive sensors containing an electrode that can sense oxygen is placed on the affected limb. An electrode will be placed on a control site, usually the upper chest, and then 2 or more electrodes will be placed around the wound. You may be asked to breathe oxygen by a mask to see if that increases the oxygen levels around the wound.

Electrodes in the sensors heat the area underneath the skin to dilate (widen) the capillaries so oxygen can flow freely to the skin, providing the reading. The readings are converted to an electrical current and the signal is displayed on a monitor and recorded.

Once the test is completed, the sensors are removed, the testing sites are cleaned, and any dressings are reapplied.

Your health care provider will discuss the results of the TCOM with you.