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Medical Encyclopedia: Myoglobin - serum

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Alternative names

Serum myoglobin

Definition

This is a test that measures the amount of myoglobin in the blood.

Myoglobin is a protein in heart and skeletal muscles. When a muscle is exercised, it uses up available oxygen. Myoglobin has oxygen bound to it, thus providing an extra reserve of oxygen so that the muscle can maintain a high level of activity for a longer period of time.

When muscle is damaged, myoglobin is released into the bloodstream. Ultimately, it is excreted in the urine (see Urine myoglobin).

How the test is performed

Blood is drawn from a vein, usually from the inside of the elbow or the back of the hand. The puncture site is cleaned with antiseptic, and an elastic band or blood pressure cuff is placed around the upper arm to cause veins to distend (fill with blood).

A needle is inserted into the vein, and the blood is collected in an air-tight vial or a syringe. During the procedure, the band is removed to restore circulation. Once the blood has been collected, the needle is removed, and the puncture site is covered to stop any bleeding.

For infants or young children:

The area is cleansed with antiseptic and punctured with a sharp needle or a lancet. The blood may be collected in a pipette (small glass tube), on a slide, onto a test strip, or into a small container. Cotton or a bandage may be applied to the puncture site if there is any continued bleeding.

How to prepare for the test

There is no special preparation.

For infants or young children:

The preparation a parent can provide for this or any test or procedure depends on the child's age, interests, previous experiences, and level of trust. For specific information regarding how you can prepare your child, see the following topics as they correspond to your child's age:

- infant test or procedure preparation (birth to 1 year)
- toddler test or procedure preparation (1 to 3 years)
- preschooler test or procedure preparation (3 to 6 years)