

جامعة الانبار
كلية العلوم التطبيقية – هيت
قسم الفيزياء الحياتية

الاجهزة الطبية

Blood Gas Test

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Arterial Blood Gas

Definition

- Blood gases test is a measurement of how much oxygen (O₂) and carbon dioxide (CO₂) is in the blood.
 - It also determines the acidity (pH) of the blood.
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Why the Test is Performed ?

1. To evaluate respiratory diseases and conditions that affect the lungs.
2. It helps determine the effectiveness of oxygen therapy.

How the Test is Performed?

1. Usually, blood is taken from an artery.
2. The blood may be collected from the radial artery in the wrist, the femoral artery in the groin, or the brachial artery in the arm.
3. Sometimes, test circulation to the hand before taking a sample of blood from the wrist area.
4. Insert a small needle through the skin into the artery (*You can use (anesthesia) applied to the site before the test begins*).

How the Test is Performed?

5. *In rare cases, blood from a vein may be used.*
6. *After the blood is taken, pressure is applied to the site for a few minutes to stop the bleeding.*
7. Watch the site for signs of bleeding or circulation problems.
8. The sample must be quickly sent to a laboratory for analysis to ensure accurate results.

Arterial Blood Gas

How to Prepare for the Test

- There is no special preparation.
 - If you are on oxygen therapy, the oxygen concentration must remain constant for 20 minutes before the test.
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How the Test Will Feel

- You may feel brief cramping or throbbing at the puncture site

Test Risks

- There is very little risk when the procedure is done correctly.
 - Veins and arteries vary in size from one patient to another and from one side of the body to the other.
 - Taking blood from some people may be more difficult than from others.
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Risks associated with this test include:

1. Bleeding at the puncture site
2. Blood flow problems at puncture site (rare)
3. Bruising at the puncture site
4. Delayed bleeding at the puncture site
5. Fainting or feeling light-headed (dizzy)
6. Hematoma (blood accumulating under the skin)
7. Infection (a slight risk any time the skin is broken)