

At-Home Anemia Test (60 seconds)

Anemia is usually defined as a decrease in the total amount of red blood cells (RBCs) or hemoglobin in the blood.

It can also be defined as a lowered ability of the blood to carry oxygen. **Iron-deficiency anemia**, also spelled **iron-deficiency anaemia**, is anemia caused by a lack of iron.

Accurate Diagnosis Within 60 Seconds, At Low Cost

When anemia comes on slowly, the symptoms are often vague and may include feeling tired, weakness, shortness of breath or a poor ability to exercise. Anemia that comes on quickly often has greater symptoms, which may include confusion, feeling like one is going to pass out, loss of consciousness, or increased thirst. Anemia must be significant before a person becomes noticeably pale. Additional symptoms may occur depending on the underlying cause.

At-Home Anemia Test Produces Accurate Diagnosis Within 60 Seconds, At Low Cost.

A device that uses a single drop of blood can quickly diagnose anemia and allow inexpensive at-home monitoring.

“Our goal is to get this device into patients’ hands so they can diagnose and monitor anemia themselves,” said Dr. Wilbur Lam, a physician and professor in the department of pediatrics at Emory University School of Medicine, in a statement.



The basic test produces results in about 60 seconds and requires no electrical power. Because of its simplicity and ability to deliver results without electricity, the device could also be used in resource-poor nations. A companion smartphone application can automatically correlate the visual results to specific blood hemoglobin levels.

The disposable self-testing device uses a chemical reagent that produces visible color changes corresponding to different levels of anemia.

As for the new diagnostic device, researchers concede they still need to earn FDA approval before the product can reach consumers. Lam and several of his colleagues have teamed up to launch a startup, called Sanguina, to commercialize the test under the brand name AnemoCheck. They anticipate the product reaching shelves by 2016.

Source: Tyburski E, Gillespie S, Stoy W, et al. Disposable platform provides visual and color-based point-of-care anemia self-testing. *The Journal of Clinical Investigation*. 2014.