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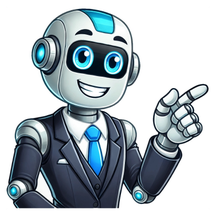

Retic count blood test

PurposePreparationProcedureRisksResults What is a reticulocyte count?Reticulocytes are immature red blood cells. A reticulocyte count is a test your doctor can use to measure the level of reticulocytes in your blood. It’s also known as a retic count, corrected reticulocyte count, or reticulocyte index.A reticulocyte count can help your doctor learn if your bone marrow is producing enough red blood cells. If your red blood cell count is too low or too high, your body will try to achieve a better balance by producing and releasing more or less reticulocytes. Your doctor can tell whether your body is creating and releasing them properly by ordering a reticulocyte count. A reticulocyte count can help your doctor make a diagnosis of a variety of conditions, such as anemia and bone marrow failure. They’ll likely order additional tests to develop their diagnosis.Your doctor may recommend a reticulocyte count if they want to learn how your bone marrow is functioning, including production of enough red blood cells. They may also order a reticulocyte count to help diagnose and distinguish between different types of anemia. To conduct a reticulocyte count, your doctor will need to collect a sample of your blood to send to a laboratory for testing. Your doctor may ask you to take certain steps to prepare for drawing your blood. For example, they may ask you to fast for a specific period of time beforehand. They may ask you to avoid eating anything, drinking anything, or both. They also may ask you to avoid taking certain medications beforehand, such as blood thinners.Ask your doctor if you should take any steps to prepare for your blood draw. Tell them if you have hemophilia, a history of fainting, or any other medical conditions beforehand. You should also tell them about any medications you’re taking, including prescription and over-the-counter drugs. Your doctor, nurse, or technician will draw a sample of your blood for testing. They’ll likely take it from a vein in your inner elbow or the back of your hand. First, they’ll sterilize the area with an antiseptic. Then, they’ll wrap a plastic band around your arm to apply pressure and help your vein swell with blood. They’ll insert a sterile needle into your vein and use it to collect a sample of your blood in an attached vial. Once they’ve collected enough blood, they’ll remove the needle and untie the plastic band from your arm. Then they’ll clean the injection site and, if necessary, bandage it. They’ll send the sample of your blood to a laboratory for testing. Your doctor will let you know when your test results are available.For infants or young children, the testing process may be different. Rather than use a needle to collect their blood, your child’s doctor may make a small cut in their skin. When the cut starts to bleed, they will use a test strip or slide to collect a small sample of your child’s blood. Then they’ll clean the area and, if necessary, bandage it.In some cases, you may not need to have your blood drawn. Instead, a simple finger prick may suffice. In this case, your doctor will prick your finger with a needle. When it starts to bleed, they’ll use a test strip or slide to collect a sample of your blood. Then they’ll clean the area and, if needed, bandage your finger. Blood draws are common procedures. They’re generally safe for most people, but they do involve some risks.You may experience mild to moderate pain from the needle prick. If your doctor, nurse, or technician has trouble collecting a blood sample, they may need to inject you with the needle several times. It’s common for the injection site to throb afterwards. Some bleeding and bruising are also common. In rare cases, you may experience other side effects, such as:fainting excessive bleeding at the puncture siteaccumulation of blood under your skin, known as a hematomadevelopment of an infection where the needle pierced your skin inflammation of your vein, known as phlebitisYour doctor can help you understand the potential benefits and risks of having your blood drawn. For most people, the potential benefits outweigh the risks.Normal levels of reticulocytes vary, due to differing laboratory procedures and levels of hemoglobin in people’s blood. Your doctor may need to order additional tests to help interpret your reticulocyte count. The results are reported as the percentage of reticulocytes divided by the total number of red blood cells times 100. The reference range, or healthy range, of the reticulocyte percentage in adults is 0.5 percent to 1.5 percent.High reticulocyte levels could be a sign of:acute bleedingchronic blood losshemolytic anemiaerythroblastosis fetalis, also called hemolytic disease in a newborn, a potentially fatal blood disorder that affects some fetuses and newborns kidney disease Low reticulocyte levels could indicate:iron deficiency anemia aplastic anemiafolic acid deficiencyvitamin B-12 deficiency bone marrow failure caused by drug toxicity, infection, or cancerkidney diseasecirrhosisside effects from radiation therapyAsk your doctor for more information about your test results. They can help you understand what your results mean. They can also recommend appropriate follow-up steps, which may include additional tests or treatments. URL of this page: A reticulocyte count (retic count) measures the number of reticulocytes in your blood. Reticulocytes are immature (still developing) red blood cells (RBCs). Your body makes reticulocytes in your bone marrow. Then it sends them into your blood, where they mature into red blood cells within one to two days. The main job of the red blood cells is to move oxygen from your lungs to every cell in your body. Your bone marrow constantly creates new red blood cells as your body needs them. A reticulocyte count checks to see if your bone marrow is making the right amount of red blood cells when old ones die off. If you have too few, your tissues may not get enough oxygen. If you have too many, you could be at risk for blood clots or other health concerns. This test can check for certain health conditions or show how well a treatment is working. If the reticulocyte count is too high or too low, it can be a sign of a serious health condition, including anemia and conditions of the bone marrow, liver, and kidneys. Other names: retic count, reticulocyte percent, reticulocyte index, corrected reticulocyte, reticulocyte production index, RPI A reticulocyte count is most often used to: Diagnose specific types of anemia (a condition in which your blood has a lower-than-normal amount of red blood cells) See if treatment for anemia is working See if bone marrow is producing the right amount of red blood cells Check bone marrow function after chemotherapy or a bone marrow transplant You may need this test if: You may also need this test if you have symptoms of anemia. They include: Sometimes newborn babies may have a reticulocyte count test to check for a blood disorder called hemolytic disease of the newborn (HDN). This condition may happen if your blood does not match the blood type of your unborn baby. This is known as Rh incompatibility. It causes your immune system to attack your baby's red blood cells. You most likely will be tested for Rh incompatibility during a routine prenatal screening. This screening helps to prevent HDN by providing early treatment. A health care professional will take a blood sample from a vein in your arm, using a small needle. After the needle is inserted, a small amount of blood will be collected into a test tube or vial. You may feel a little sting when the needle goes in or out. This usually takes less than five minutes. To test a newborn, a health care provider will clean your baby's heel with alcohol and poke the heel with a small needle. The provider will collect a few drops of blood and put a bandage on the site. You don't need any special preparations for a reticulocyte count test. There is very little risk to having a blood test. You may have slight pain or bruising at the spot where the needle was put in, but most symptoms go away quickly. There is very little risk to your baby with a needle stick test. Your baby may feel a little pinch when the heel is poked, and a small bruise may form at the site. This should go away quickly. To understand the results of a reticulocyte count test, your provider will consider your symptoms, medical history, and the results of other blood tests. If your results show a higher-than-normal reticulocyte count (reticulocytosis), it may mean: You have hemolytic anemia, a type of anemia in which red blood cells are destroyed faster than the bone marrow can replace them. You have had new or ongoing bleeding (hemorrhage), and your body is making many more red blood cells to replace what you've lost. Your baby has hemolytic disease of the newborn (HDN), a condition that limits the ability of a baby's blood to carry oxygen to organs and tissues. If your results show a lower-than-normal reticulocyte count, it may mean you have: Iron deficiency anemia, the most common type of anemia. It happens when you don't have enough iron in your body. Pernicious anemia, a type of megaloblastic anemia which can happen when your body is not getting enough of certain B vitamins (B12 and folate) in your diet or when your body can't absorb enough B vitamins. Aplastic anemia, an uncommon type of anemia, happens when the bone marrow isn't able to make enough blood cells. Bone marrow failure, which may be caused by an infection or cancer. Kidney disease. Cirrhosis, or scarring of the liver. If your reticulocyte test results were not normal, it doesn't always mean you have anemia or another health condition. For example, your reticulocyte count may not be normal because: Your reticulocyte counts may be higher during pregnancy. You may have an increase in your count for a short time if you move to a place with a high altitude. The count should return to normal once your body gets used to the lower oxygen levels that happen in higher altitudes. Some medicines may increase or decrease your reticulocyte count. If you have questions about your results or your child's results, talk to your health care provider. Learn more about laboratory tests, reference ranges, and understanding results. Learn how to cite this page A reticulocyte counts that’s higher or lower than normal may be a sign of a blood disorder. Having an unusually high or low reticulocyte count doesn’t necessarily mean you have a specific illness. It’s important to remember this is a single test used to help diagnose potential problems. Ask your doctor to explain what your test results mean. They’re your best resource for information about your specific situation.What medical conditions are associated with an abnormally low reticulocyte count?A lower than normal reticulocyte count may be a sign of several conditions, including hypoproliferative anemias. Hypoproliferative anemias happen when your bone marrow can’t make enough new red blood cells. Here are examples of hypoproliferative anemias:Chronic disease anemia:This is one of the most common types of anemia. It occurs in connection with several chronic illnesses such as diabetes, heart disease, lung disease, rheumatoid arthritis, chronic infections and cancer.Nutritional anemias:These types of anemia happen when your bone marrow can’t make the normal number of young red blood cells because you aren’t getting enough of certain elements or vitamins. Nutritional anemias include iron-deficiency anemia, pernicious anemia (vitamin B12 anemia) or folate deficiency anemia.Aplastic anemia: This is a rare blood disorder that happens when you don’t have enough stem cells in your bone marrow to create an adequate amount of blood cells.Other conditions are:Myelodysplastic syndrome: These cancers keep your stem cells from maturing into healthy red blood cells.Megaloblastic anemia: This anemia happens with certain vitamin deficiencies, such as vitamin B12 or folic acid, certain medications and bone marrow diseases. The common cause is your bone marrow can’t make normal red blood cells.What medical conditions are associated with an abnormally high reticulocyte count?A higher-than-normal reticulocyte count may be a symptom of the following conditions:Hemolytic anemia: Your bone marrow normally makes millions of blood cells per minute. Hemolytic anemia occurs when your red blood cells don’t last their normal life span (120 days). When that happens, your bone marrow makes more reticulocytes to try to make up for the loss. More reticulocytes mean an abnormally high reticulocyte count.Blood loss: If you lose a lot of blood or have chronic blood loss, your bone marrow may start making more reticulocytes. Again, more reticulocytes may boost your reticulocyte count.What questions should I ask my healthcare provider?There are several reasons why your healthcare provider may order a reticulocyte test. You may want to know more about the test and the reasons for it. Suggested questions for your healthcare provider include:Why do I need this test?When will I have my test results?Will I need additional blood tests? A reticulocyte count test measures the number of new red blood cells in your body. It’s sometimes called a reticulocyte index – or “retic count” for short. Doctors use it to help figure out whether you have certain types of illnesses that affect your blood, such as hemolytic anemia, a condition where red blood cells are destroyed faster than they can be made.Your blood includes many kinds of cells, but red blood cells are the most common. They carry oxygen from your lungs to the rest of your body. The iron-rich protein called hemoglobin that carries oxygen in the red blood cells is what makes our blood red.Because red blood cells only live about 4 months, your body constantly makes new ones, which are known as reticulocytes. They are bigger than mature red blood cells and are made by bone marrow, a spongy tissue inside many of your bones.When doctors want to know whether your bone marrow is making the right amount of red blood cells, they take a sample of blood and calculate the number of reticulocytes in it. If you’re like most people, reticulocytes make up about 0.5% to 1.5% of your red blood cells.When you get this test, a lab tech will take a sample of blood from one of your veins.In earlier years, doctors would put a drop of blood on a microscope slide and count the number of reticulocytes themselves. Today, machines calculate the results of nearly all reticulocyte count tests.A reticulocyte count test is often done when someone is believed to have an illness called anemia, which happens when your body doesn’t make enough red blood cells. That can leave you feeling weak and tired, short of breath, or having headaches and chest pain.A retic count is often a follow-up to what’s known as a complete blood count or CBC. Most of the time, the CBC is the first test doctors use to diagnose anemia.There are many different kinds of anemia. If your complete blood count suggests you have anemia, a reticulocyte count is one of several tests that can help tell your doctor which type:Aplastic anemia: Your reticulocyte count is low. That tells your doctor your bone marrow isn’t making red blood cells fast enough.Hemolytic anemia: Your reticulocyte count is high. This type of anemia destroys red blood cells before they would normally die, so your bone marrow has to work overtime to replace them.Iron deficiency anemia: A low reticulocyte count also can be a sign of this. It happens when your body doesn’t have enough iron to make red blood cells.Pernicious anemia: Your body doesn’t get enough vitamin B12, also producing a low reticulocyte count.A reticulocyte count test is also useful for people with sickle cell disease. That’s a disorder that makes your body produce red blood cells that are shaped like a crescent, or sickle, instead of being round.Sickle cells die early and can get caught in blood vessels, forming obstructions that cut off circulation to parts of the body. They can cause a form of anemia, because there aren’t enough healthy red blood cells to carry oxygen, as well as other painful or life-threatening illnesses that can put you in the hospital. A high reticulocyte count in someone with sickle cell disease suggests increased hemolysis, and points to a sickle cell crisis. Sickle cell crisis is usually painful and can be life-threatening.Doctors also use reticulocyte counts when someone has had:The tests can tell your doctor whether your bone marrow is starting to recover from the treatment.