

# Salicylate (Blood)



## Does this test have other names?

Salicylate serum test, serum salicylate level test, serum salicylate concentration test

## What is this test?

This is a blood test to check for salicylate intoxication, which is usually caused by an overdose of aspirin. This test is also used to check for the correct aspirin dose in people who are given high doses of aspirin to treat inflammation from arthritis.

Aspirin contains acetylsalicylic acid (ASA). Other salicylates are found in some wart removers, medicines for diarrhea, medicines for bloating, and some Chinese herbal medicines. Methyl salicylate, for example, is found in a Chinese medicine called oil of wintergreen, gaultheria oil, sweet birch oil, betula oil, and teaberry oil.

Aspirin poisoning can happen in children, but it's less common now because the medicine is packaged in child-resistant containers. Aspirin can cause Reye syndrome in children and teens. This can happen if they take aspirin when they have the flu or chickenpox. Reye syndrome is a potentially life-threatening condition, so aspirin should never be given to children or teens.

Aspirin poisoning is still a concern because some teens and adults take too much aspirin on purpose.

Severe salicylate intoxication can be fatal. For example, taking too much aspirin overwhelms your body's usual means of protection against poisoning. Your system may start shutting down. You may go into a coma.

## Why do I need this test?

You may need this test if it's possible you have overdosed on aspirin or other products containing salicylates. Signs of an overdose include:

- Abnormally deep or rapid breathing
- Fever
- Increased heart rate
- Ringing in the ears (tinnitus)
- Vertigo or dizziness
- Diarrhea
- Vomiting
- Nausea
- Too much acid in your bodily fluids

Severe aspirin toxicity can also change how your brain functions and how you think. Symptoms include:

- Confusion
- Agitation, hyperactivity
- Seizures
- Restlessness

- Coma

This test is needed to confirm a diagnosis of aspirin intoxication. You may have this test every 2 hours to watch your blood levels. It's likely you will have this test until 2 tests in a row show that the concentration of aspirin in your blood is lower than the peak measurement.

This test is also used to see how well treatment of the intoxication is working and to find out whether more treatment measures are needed. For example, results of this test can tell whether you need hemodialysis. This is a procedure that uses a machine to clear your blood of toxins.

## What other tests might I have along with this test?

You may have other tests to look at your salicylate toxicity level. These include:

- Arterial blood gas, to look for acid-base balance
- Electrolytes and glucose tests
- Urinalysis, to watch the progress of the poisoning
- Plasma creatinine, to find out how your kidneys are working
- Electrocardiogram
- Toxicology screen
- Coagulation tests
- Acetaminophen level because some products contain both salicylate and acetaminophen
- Pregnancy test
- Imaging studies

Your healthcare provider may also give you a physical exam and take your health and psychiatric history.

## What do my test results mean?

Test results may vary depending on your age, gender, health history, and other things. Your test results may be different depending on the lab used. They may not mean you have a problem. Ask your healthcare provider what your test results mean for you.

If your healthcare provider prescribed aspirin for inflammation or arthritis, the typical level of aspirin is between 10 to 30 milligrams per deciliter (mg/dL) of blood. Any concentration above 40 mg/dL can be toxic.

In adults, taking 10 to 30 grams of aspirin can be fatal. Children may be fatally poisoned by as little as 3 grams of aspirin.

## How is this test done?

The test is done with a blood sample. A needle is used to draw blood from a vein in your arm or hand.

## Does this test pose any risks?

Having a blood test with a needle carries some risks. These include bleeding, infection, bruising, and feeling lightheaded. When the needle pricks your arm or hand, you may feel a slight sting or pain. Afterward, the site may be sore.

## What might affect my test results?

Too many blood fats (lipids) can interfere with test results. But there are ways that lab workers can remove any extra lipids from your sample.

## **How do I get ready for this test?**

You don't need to prepare for this test. Be sure your healthcare provider knows about all medicines, herbs, vitamins, and supplements you are taking. This includes medicines that don't need a prescription and any illegal drugs you may use.

© 2000-2027 The StayWell Company, LLC. All rights reserved. This information is not intended as a substitute for professional medical care. Always follow your healthcare professional's instructions  
This information is not intended as a substitute for professional medical care. Always follow your Healthcare professional's instructions. Copyright Krames LLC.