

Serum Sickness-Like Reaction (SSLR)



Serum sickness-like reaction (SSLR) is an immune hypersensitivity reaction. It's linked to certain medicines used to treat an infection, and to other health conditions. It often occurs within 10 days after exposure. People with SSLR often have an itchy rash, fever, and joint pain. SSLR occurs in both children and adults. It's seen more often in children.

A different but related condition to SSLR is called serum sickness. Like SSLR, serum sickness is also an immune system reaction. But it occurs more in adults. Both conditions have similar symptoms. But serum sickness symptoms may be more severe.

What causes SSLR?

It's not known exactly how SSLR occurs. But medical experts believe it's caused by an immune system reaction triggered by certain medicines.

SSLR has been commonly linked to these medicines:

- Cefaclor (most common antibiotic)
- Other cephalosporins (antibiotics)
- Penicillins, such as amoxicillin (antibiotics)
- Sulfonamides (antibiotics)

Other less common medicine causes of SSLR include:

- Streptokinase (dissolves blood clots)
- Propanolol (heart medicine)
- Minocycline (antibiotic)

SSLR has also been linked to:

- Bacterial infections, such as strep throat, caused by the streptococcus bacteria
- Viral infections, such as hepatitis B
- Some vaccines, such as rabies. **Note:** In rare cases, SSLR has been linked to flu, tetanus, and pneumococcal vaccines. If you have any questions or concerns, talk with your healthcare provider.

Symptoms of SSLR

SSLR symptoms can appear within 10 days after being exposed to the medicine or infection. Symptoms include:

- Skin rash that is often itchy, or may be purple or blue in color, like a bruise. The rash is often seen on the lower legs or the stomach.
- Hives
- Fever
- Joint pain (often seen in children)

- Limping or trouble walking due to severe pain (often seen in children)
- Enlarged or swollen lymph nodes
- Red or swollen hands or feet
- Feeling tired or ill

Diagnosing SSLR

To diagnose SSLR, your healthcare provider will:

- Do a physical exam
- Take your health history
- Ask about symptoms
- Ask about events or illness that may have occurred 2 weeks before symptoms started, such as:
 - Any illness or feeling sick
 - Using antibiotics or any other medicines
 - Recent vaccines, especially for snakebites, rabies, flu, tetanus, or pneumonia

It can be hard to find the cause of SSLR if you are taking several medicines or if you have recently been ill.

You may need lab tests, such as:

- Blood tests. These are done to look for a hidden (underlying) illness or condition.
- Urine test. This is done to look for an underlying condition.
- Skin biopsy (rare). A small tissue sample of the rash may be taken and tested.

You may need more testing to rule out other conditions that may cause symptoms similar to SSLR. These conditions include:

- Lyme disease
- Bacterial and viral infections
- Scarlet fever, acute rheumatic fever
- Arthritis (systemic juvenile idiopathic arthritis, reactive arthritis, acute rheumatic fever)
- Conditions with sores or rashes (Kawasaki disease, Sweet syndrome, Stevens-Johnson syndrome)
- Other medicine reactions

Treatment for SSLR

For most mild to moderate cases of SSLR, the main treatment is simply to stop taking the medicine that likely caused the immune reaction. Symptoms will generally go away on their own in about 2 weeks. Often the rash won't leave any scarring.

Your healthcare provider will advise you not to take this medicine (either generic or brand name) again in the future. Symptoms can be more severe, and appear sooner, the next time. It's important to share this information with all of your or your child's healthcare providers. Be sure it's also added to all medical records or charts.

Your healthcare provider may advise other treatment to help with symptoms. These include:

- Corticosteroids. Medicines that reduce inflammation taken by mouth or applied as a cream, as prescribed.
- Nonsteroidal anti-inflammatory drugs. These may be prescribed to help ease joint pain.
- Antihistamines. These may be prescribed to help ease the rash and itching.
- Cold packs. These can help ease itching.

When to call your healthcare provider

Call your healthcare provider if any of the following occur:

- Rash or joint pain doesn't go away in 2 weeks
- Symptoms get worse
- New symptoms appear
- Fever of 100.4°F (38°C) or higher, or as advised by your provider

Call 911

Call 911 if any of the following occur:

- Feeling of doom
- Trouble breathing or shortness of breath
- Other symptoms as advised by your healthcare provider

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