



Toxic Shock Syndrome

What is toxic shock syndrome?

Toxic shock syndrome (TSS) is a rare, often life-threatening illness that develops suddenly after an infection. TSS can quickly affect several different organ systems including the liver, lungs and kidneys. Since TSS advances quickly, medical help is needed as soon as possible.

What causes TSS?

TSS is caused by an infection from bacteria. There are two bacteria that produce toxins that can cause TSS – one is staphylococcus aureus (SA), and the other is group A streptococcus. Group A streptococcal bacteria is linked with necrotizing fasciitis or flesh-eating disease. For more information, see HealthLink BC File [#60 Necrotizing Fasciitis](#).

This BC HealthFile describes TSS as it relates to infection with staphylococcus aureus (SA) bacteria.

What is staphylococcus aureus?

SA bacteria are found in the nose and/or on the skin of up to 30 per cent of healthy people. Fortunately these bacteria are usually not harmful and only cause mild throat or skin infections.

SA bacteria produce toxins that do not affect most people. In rare cases, people who have not developed immunity to these toxins can have a severe reaction to them when the toxins get into the bloodstream. This results in toxic shock syndrome.

What are the symptoms of TSS?

Symptoms of TSS include flu-like symptoms, which develop quickly and are severe. Symptoms may include: pain at the site of infection, vomiting and diarrhea, signs of shock including low blood pressure and light-headedness, headache, shortness of breath and sunburn-like rash.

Symptoms usually develop in 3 to 5 days in women who are menstruating and using tampons. In general, TSS symptoms can develop as soon as 12 hours after a surgical procedure.

Who is at risk of TSS?

TSS from SA bacterial infection can affect anyone. However, the majority of affected people are younger women and men, 20 to 40 years of age who have not developed the specific antibodies.

Although menstruating women using tampons are at higher risk of TSS, tampons do not cause TSS.

Risk factors for TSS include:

- Past history of SA toxic shock syndrome.
- Prolonged use of a tampon, especially the super absorbent type.
- Use of contraceptive sponges, diaphragms or intrauterine devices.
- Irritation and inflammation of the vagina (vaginitis).

- A skin injury, including a wound from surgery, such as nasal surgery. Those who develop an SA wound infection after surgery may be at greater risk of TSS.
- Recent respiratory infections, such as sinusitis, sore throat (pharyngitis), laryngitis, tonsillitis or pneumonia.

What should I do if I may have TSS?

If you think you have TSS you should see a doctor **right away**. If you cannot see a doctor right away, go to the nearest Emergency Care facility. If you experience any of the symptoms of TSS while using a tampon, remove the tampon and see a doctor **right away**. Inform the health professional that you were using a tampon when the symptoms started.

What is the treatment for TSS?

TSS from SA bacterial infection is serious. However, when it is identified and treated correctly, it is fatal in only 3 to 6 per cent of cases.

TSS cannot be treated at home. Hospital care is required for treating TSS infection and related complications caused by TSS, such as shock. Antibiotic drugs are given to kill the bacteria. If the source of infection involves a tampon, diaphragm or contraceptive sponge, it should be removed as soon as possible.

Can TSS be prevented?

TSS caused by infection not related to tampon use can be prevented by keeping all wounds clean, including wounds from surgery, cuts, scrapes, burns, sores and animal or insect bites.

TSS related to use of tampons, diaphragms, or contraceptive sponges can be prevented:

- Follow the directions on package inserts when using tampons, diaphragms or contraceptive sponges.
- Wash your hands with soap before inserting or removing a tampon, diaphragm or contraceptive sponge.
- Change your tampon at least every 8 hours, or use tampons for only part of the day.
- Do not leave your diaphragm or contraceptive sponge in for more than 12 to 18 hours.
- Wear tampons and sanitary pads at alternate times. For example, use pads at night and tampons during the day.
- Use tampons with the lowest absorbency that you need. The risk of TSS is higher with super absorbent tampons.

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