
Toxic shock syndrome (TSS)

Summary

- Toxic shock syndrome (TSS) is a rare and potentially life-threatening illness that is thought to be caused by infection with certain types of bacteria.
 - Women who have their period (are menstruating) are most at risk of getting TSS, as it is thought to be associated with tampon use.
 - Suggestions for reducing the risk of TSS include changing tampons regularly and using pads instead of tampons overnight.
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Toxic shock syndrome (TSS) is a rare and potentially life-threatening illness that is thought to be caused by infection with certain types of bacteria, including *Staphylococcus aureus* and *Streptococcus pyogenes*.

Women who have their period (are menstruating) are most likely to get TSS, as it is thought to be associated with tampon use. The underlying mechanisms are not fully understood, but one theory is that the bacteria naturally present in the vagina can over-grow in the presence of a blood-soaked tampon. However, one third of women who get TSS when they have their period are found to have no causative bacteria in their vaginas.

TSS can occasionally develop as a complication after surgery or childbirth. A few cases of the syndrome have been reported in men who were also found to have staphylococcal infections of the skin.

Symptoms of toxic shock syndrome

The symptoms of TSS include:

- fever
- vomiting
- diarrhoea
- a skin rash that looks like sunburn
- peeling patches of skin on the feet and hands
- muscular aches
- headaches
- a sore throat
- red eyes
- confusion
- a drop in blood pressure
- joint pains
- sensitivity to light
- kidney failure
- collapse.

TSS and risks of tampon use

It is the toxin made by the bacteria that causes TSS, rather than the actual presence of the bacteria.

Staphylococcus aureus is a common type of bacterium that lives on the skin and inside the nose. In most cases it is harmless, but it can cause a wide range of infections if it enters the bloodstream.

For TSS to occur, these particular types of bacteria must first over-grow and make large amounts of the TSS

toxin, which then enters the bloodstream.

Tampons can increase the risk of TSS in two ways, including:

- Tampons (especially super-absorbent varieties) that are left in the vagina for a long time may encourage the bacteria to grow.
- Tampons can stick to the vaginal walls, especially when blood flow is light, causing tiny abrasions when they are removed.

Treatment for toxic shock syndrome

If you think you could have toxic shock syndrome, stop using tampons immediately and go to the emergency department of your nearest hospital.

Treatment for TSS includes:

- a stay in hospital
- medication (antibiotics) to kill the infection
- fluids given through a drip (intravenously) to increase blood pressure and treat dehydration
- medical treatment for any complications, such as kidney failure.

Reducing the risk of toxic shock syndrome

Given the number of women worldwide who regularly use tampons, TSS is a very rare condition. Suggestions to reduce the risk include:

- Change tampons regularly (at least every four hours).
- Avoid using super-absorbent tampons.
- Only unwrap the tampon if you are going to use it immediately.
- Do not handle the tampon more than you need to.
- Wash your hands thoroughly before and after inserting the tampon.
- Be gentle when inserting and removing tampons.
- Avoid applicator tampons, as the applicator may scrape the vaginal walls.
- Use pads (sanitary napkins) instead of tampons overnight.
- Maintain personal hygiene during your period.
- Do not wear tampons when you do not have your period.
- Consider using pads or panty liners during the last day or so of your period when your flow is light.
- Use a lubricating jelly when inserting tampons in the last day or so of your period when your flow is light.

There are no clinical trials supporting the use of menstrual cups to reduce the risk of TSS.

Where to get help

- In an emergency, always call an ambulance by dialling triple zero (000)
- Your doctor
- Emergency department of your nearest hospital

Things to remember

- Toxic shock syndrome (TSS) is a rare and potentially life-threatening illness that is thought to be caused by infection with certain types of bacteria.
- Women who have their period (are menstruating) are most at risk of getting TSS, as it is thought to be associated with tampon use.
- Suggestions for reducing the risk of TSS include changing tampons regularly and using pads instead of tampons overnight.

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Royal Children's Hospital - Centre for Community Child Health

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