

Thrombotic Thrombocytopenia Purpura (TTP)

What is TTP?

- TTP stands for thrombotic thrombocytopenia purpura.
 - › **Thrombotic** means the forming of blood clots.
 - › **Thrombocytopenia** means low platelets. Platelets play an important role in your body's ability to clot your blood when you are bleeding.
 - › **Purpura** means bruising.
- TTP damages the lining of your blood vessels. Platelets stick to the damaged areas to prevent or stop bleeding. This causes very small clots to form. These clots can block the blood flow in your body. These blockages can affect your organs, usually the brain and kidneys.
- Since many of your platelets are being used to prevent or stop bleeding in your damaged vessels, there are less platelets in your bloodstream. This causes more bleeding, and low hemoglobin. **Hemoglobin** is an important protein in your blood that carries oxygen through your body.

What causes TTP?

The cause of TTP is not clear. Sometimes infection (caused by a virus or bacteria), pregnancy, or side effects of medications can lead to TTP.

What are the symptoms of TTP?

- Bleeding and bruising in your:
 - › Gums
 - › Whites of the eyes
 - › Nose
 - › Urine (pee) or stool (poop)
 - › Arms and/or legs (may show up as a pinpoint rash)
- More bleeding, if you have periods
- Fever (temperature above 38 °C or 100.4 °F)
- Weakness
- Tiredness
- Changes in speech
- Headache
- Confusion



How is TTP treated?

Blood tests will be done to check your:

- › Platelets
- › Hemoglobin
- › Lactate dehydrogenase (LDH)

This will help your health care team find out how you respond to treatment.

TTP is usually treated with a combination of:

- **Plasmapheresis:** Your plasma is exchanged by a procedure called apheresis. Plasma is the liquid part of your blood that is made up of water, proteins, and electrolytes (salts).
 - › An intravenous (I.V.) needle is put into a vein in your arm or hand. The I.V. is attached to a tube that goes into a machine. The machine removes the damaged parts of your blood. This includes the factors (special proteins) that affect normal platelet function. It then returns the plasma to your bloodstream.
 - › If your veins are small, the hematologist (a doctor that specializes in blood diseases) will put a special I.V. catheter (tube) in your neck, chest, or groin. The tube will go into a large vein that leads to your heart. The tube will stay in place until all of your treatments are done.
 - › This treatment is done by nurses with special training on the Apheresis Unit in the Systemic Therapy Unit. This unit is on the 4th floor of the QE II, Victoria General (VG) site.
- **IV infusions of plasma:** Your nurse will watch you closely when you get plasma. Possible side effects include hives and fever. You may be given medication(s) to prevent some of these side effects. Rare side effects include:
 - › Lung injury (1 in 10,000 people)
 - › Delayed breakdown of red cells (1 in 7000 people)
 - › Having a severe (very bad) allergic reaction (1 in 40,000 people)
 - › Getting the wrong blood type (1 in 40,000 people)
 - › Bacterial infection (1 in 50,000 people)
 - › Death from bacterial infection (1 in 500,000 people)
 - › Getting West Nile virus (less than 1 in 1,000,000 people)
 - › Getting Hepatitis B (1 in 7,500,000 people)
 - › Getting Hepatitis C (1 in 13,000,000 people)
 - › Getting HIV (1 in 21,000,000 people)
- **Steroids** (like prednisone)
- **Splenectomy** (surgery to remove your spleen)

Your health care team may suggest other treatments.

How can I prevent injury or bleeding problems?

Falls may cause internal (inside) bleeding. This can cause death in people with TTP. To lower your risk of falls:

- Take your time when getting up. Sit on the bed for a minute, then slowly stand up. Standing up too fast or standing after being in bed for a long time can make you dizzy. If you feel dizzy, sit or lie back down. Try again slowly when you feel able.
- Make sure you have enough lighting. Keep areas free of clutter. Secure rugs to the floor to prevent tripping.
- Wear footwear that fits well. Flat shoes with enclosed heels (not slip-on or backless shoes), rubber soles, and laces are best. **Do not wear slippers unless they fit well and have non-slip soles.** Avoid long robes and long pants when walking.
- Avoid ice when walking in the winter.
- Always check that your wheelchair brakes are on before sitting down or standing up. If you have a walking aid (like a cane or a walker), make sure you use it at all times. Ask for help if you cannot reach your walking aid.
- If you are having problems walking, talk to your health care team.

Other ways to lower your risk of bleeding problems:

- **Do not drink alcohol.**
- Avoid contact sports (like football or hockey).
- Protect yourself from getting injured (cut, burned, bumped, or scraped).
- Use an electric razor instead of a straight razor.
- Use a soft toothbrush and brush gently. Rinse with cold water if your gums bleed.
- **Do not let anyone give you a needle unless your health care team says it is OK.**
- Avoid nosebleeds by gently wiping your nose instead of blowing.
- **Do not** use suppositories, enemas, or rectal (bum) thermometers.
- Talk to your nurse or dietitian about keeping your bowel movements (poops) soft and avoid straining.
- ASA (Aspirin®) and ibuprofen (Advil®, Motrin®), can affect how platelets work. **Check with your health care team before taking any medication.**
- Moisturize your lips and skin to prevent drying and cracking.
- **Do not** use tampons or douche.

