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Tioguanine

You will be prescribed tioguanine by a doctor who specialises in cancer treatment.

Your doctor will tell you how many tablets to take each day and for how long to take them.

You will need regular blood tests including blood cell counts and weekly liver function tests.

Your doctor will discuss with you the possibility of unwanted side-effects. You will have an increased risk of infection so it's important you let your doctor know straightaway if you develop a high temperature (fever), your throat becomes sore or you feel generally unwell.

About tioguanine

Type of medicine	An antimetabolite anti-cancer medicine
Used for	Treatment of leukaemia
Also called	Thioguanine (in US)
Available as	Tablets

Leukaemia is a cancer of cells in the bone marrow. The cancerous cells in the bone marrow spill out into the bloodstream. Most types of leukaemia arise from cells which normally develop into white blood cells. There are several different types of leukaemia, and treatments for the different types vary. Tioguanine is a treatment used for [acute myeloid leukaemia \(AML\)](#), [acute lymphoblastic leukaemia \(ALL\)](#), and [chronic myeloid leukaemia \(CML\)](#).

In cancers like leukaemia, certain cells in the body grow and multiply too fast. Anti-cancer medicines like tioguanine work by stopping the growth of the cancer cells. They do this by affecting the genetic material of the cells. This reduces the number of new cells that your body makes.

Before taking tioguanine

Some medicines are not suitable for people with certain conditions, and sometimes a medicine may only be used if extra care is taken. For these reasons, before you start taking tioguanine, it is important that your doctor knows:

- If you are pregnant, or intend to have children in the future.
- If you are breastfeeding.
- If you have ever been told by a doctor that you lack certain enzymes which help remove medicines from your body. In particular, tell your doctor if you know your body produces too little of an enzyme called thiopurine methyltransferase (TPMT).
- If you have any problems with the way your liver works or how your kidneys work.
- If you are taking or using any other medicines. This includes any medicines you are taking which are available to buy without a prescription, as well as herbal and complementary medicines.
- If you have ever had an allergic reaction to a medicine.

How to take tioguanine

- Before you start this treatment, read the manufacturer's printed information leaflet from inside your pack and any other written information you are given. The manufacturer's leaflet will give you more information about tioguanine and a full list of the side-effects which you may experience from taking it.

- Tioguanine will be prescribed for you by a doctor who is experienced in treating your condition. You will be prescribed short courses of tioguanine. Your dose (that is the number of tablets you will need to take) will be calculated from your weight and height, and may also depend upon other treatment you are having. It is important that you take the tablets exactly as your doctor tells you to. The dose you have been prescribed will be printed on the label of your pack to remind you.
- Your body may absorb slightly less tioguanine if you take the tablets with food – for this reason it is preferable to take the tablets at least one hour before a meal or two hours after a meal.
- Swallow the tablets whole with a drink of water.
- If you forget to take a dose, take the next dose when it is due and remember to let your doctor know about the missed dose. Do not take two doses together to make up for a missed dose.

Getting the most from your treatment

- You must try to keep your regular appointments with the doctor or hospital. This is so your progress can be checked. You will need to have regular weekly blood tests during your treatment to check that your liver stays healthy.
- You must avoid getting pregnant or fathering a child while you are on tioguanine. Make sure you have discussed with your doctor which types of contraception are suitable for you and your partner. Many anti-cancer treatments are associated with reduced fertility (particularly in men), so you may also want to ask your doctor for family planning advice if you intend to have children in the future.
- If you are due to have an operation or dental treatment, tell the person carrying out the treatment that you are taking tioguanine.
- Do not have any immunisations (vaccinations) while you are taking this medicine and for several months afterwards, without talking with your doctor first. Tioguanine lowers your body's resistance and there is a chance that you may get an infection from some vaccines.

- Tioguanine may cause your skin to become more sensitive to sunlight than normal. Use a sunscreen that protects against UVA light and has a sun protection factor (SPF) of at least 15, especially in strong sunlight or until you know how your skin reacts. Do not use sunbeds.
- If you buy any medicines, check with a pharmacist that they are suitable to take with tioguanine.
- Any unwanted tablets or medicine must be disposed of in a special way - ask your local or hospital pharmacy for advice about what to do.

Can tioguanine cause problems?

Tioguanine will lower the number of white cells in your blood, increasing the chance of you getting an infection. You should take certain precautions to reduce the risk of infection - if possible, avoid people with infections and let your doctor know if you think you are getting a sore throat or if you have a high temperature.

Your doctor will discuss with you the possibility of unwanted side-effects of treatment. The table below contains some of the most common ones associated with tioguanine. You will find a full list in the manufacturer's information leaflet supplied with your tablets. Let your doctor know if you experience any of the following, or if you develop any other symptoms which you think may be due to this medicine:

Common tioguanine side-effects	What can I do if I experience this?
A high temperature or feeling feverish, sore throat, infections	Let your doctor know about this as soon as possible
Sore mouth, mouth ulcers	Speak with your doctor about this
Feeling sick (nausea) or being sick (vomiting), diarrhoea	Eat simple meals (avoid rich or spicy foods). If this becomes troublesome, let your doctor know, as you can be prescribed an anti-sickness medicine
Tender or swollen tummy (abdomen)	It is important that you let your doctor know straightaway as this could be a sign of damage to your liver

How to store tioguanine

- Keep all medicines out of the reach and sight of children.
- Store in a cool, dry place, away from direct heat and light.

Important information about all medicines

Never take more than the prescribed dose. If you suspect that you or someone else might have taken an overdose of this medicine, go to the accident and emergency department of your local hospital. Take the container with you, even if it is empty.

This medicine is for you. Never give it to other people even if their condition appears to be the same as yours.

Do not keep out-of-date or unwanted medicines. Take them to your local pharmacy which will dispose of them for you.

If you have any questions about this medicine ask your pharmacist.

If you experience side effects, you can report them online through the [Yellow Card website](#).

Further reading

- [Manufacturer's PIL, Tioguanine 40 mg Tablets](#); Aspen Pharma Trading Ltd, The electronic Medicines Compendium. Dated September 2017.
- [Medicines Complete BNF 87th Edition](#); British Medical Association and Royal Pharmaceutical Society of Great Britain, London.

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