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Thiazide diuretics

Thiazide diuretics are mainly used to treat high blood pressure (hypertension). They are occasionally also used for heart failure.

What are thiazide diuretics?

A diuretic is a medicine which increases the amount of water that you pass out from your kidneys. A diuretic causes an increase in urine, called a diuresis. So, they are sometimes called 'water tablets'. There are different types of diuretics which work in different ways and thiazide diuretics are one type of diuretic.

Thiazide diuretics are a common treatment for [high blood pressure \(hypertension\)](#). They are also occasionally used to clear fluid from the body in conditions where your body accumulates too much fluid, such as [heart failure](#). However, a different type of diuretic called a [loop diuretic](#) is more commonly used to treat heart failure.

Thiazide diuretic examples

There are a number of thiazide diuretics - they include:

- [Indapamide](#).
- [Bendroflumethiazide](#).
- [Chlortalidone](#).
- [Cyclopenthiazide](#).
- [Xipamide](#).

Each drug has a number of different brand names.

How thiazide diuretics work

One of their effects is to make the kidneys pass out more fluid. They do this by interfering with the transport of salt and water across certain cells in the kidneys.

Thiazide diuretics tend to have only a weak action on the kidneys so you don't notice a great increase in urine if you take these (compared with loop diuretics).

They also have the effect of widening (dilating) blood vessels. A combination of these two effects reduces the blood pressure.

Thiazide diuretics side-effects

Side-effects are uncommon, as the dose needed to lower blood pressure is low. The leaflet which comes in the tablet packet provides a full list of possible side-effects. So, it is important to read that leaflet if you are prescribed a thiazide diuretic.

Common or serious possible side-effects include:

- A possible increase in your blood sugar level. Some people with diabetes may need more treatment to keep the blood sugar level normal.
- A possible increase in the level of uric acid. So, if you have gout, you may have more gout attacks. A first attack of gout is sometimes triggered by taking a diuretic.
- The salt balance in the bloodstream is sometimes upset which can cause a low blood level of potassium, sodium and magnesium, and a high level of calcium. These effects may cause weakness, confusion and, rarely, abnormal heart rhythms to develop. You may be advised to have a blood test to check for these problems.

- Other problems, such as:
 - Upset stomach.
 - Dizziness on standing – due to too [low blood pressure \(hypotension\)](#).
 - Erection problems (impotence) – often reversible on stopping treatment.
 - Skin sensitivity to sunlight.

How to use the Yellow Card Scheme

If you think you have had a side-effect to one of your medicines you can report this on the Yellow Card Scheme. You can do this online at www.mhra.gov.uk/yellowcard. The Yellow Card Scheme is used to make pharmacists, doctors and nurses aware of any new side-effects that medicines or any other healthcare products may have caused. If you wish to report a side-effect, you will need to provide basic information about:

- The side-effect.
- The name of the medicine which you think caused it.
- The person who had the side-effect.
- Your contact details as the reporter of the side-effect.

It is helpful if you have your medication – and/or the leaflet that came with it – with you while you fill out the report.

Other considerations

Most thiazide diuretics are taken once a day in the morning. Any reduction in blood pressure is maintained throughout the 24 hours by this once-a-day dose. However, the effect of passing extra urine wears off within 12 hours.

So, you will not have to get up in the night to make extra trips to the toilet. Indeed, the dose used to treat high blood pressure (hypertension) is quite low, and many people barely notice an increase in the amount of urine that they pass.

Further reading

- [Hypertension in adults: diagnosis and management](#); NICE (August 2019 - last updated November 2023)
- [Burnier M, Bakris G, Williams B](#); Redefining diuretics use in hypertension: why select a thiazide-like diuretic? *J Hypertens.* 2019 Aug;37(8):1574-1586. doi: 10.1097/HJH.0000000000002088.
- [Pham D, Grodin JL](#); Dilemmas in the Dosing of Heart Failure Drugs: Titrating Diuretics in Chronic Heart Failure. *Card Fail Rev.* 2017 Nov;3(2):108-112. doi: 10.15420/cfr.2017:10:1.

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