

# Thyroid Hormone Administration: A Guide for Families

## What is thyroid hormone?

Thyroid hormone is the medication prescribed by your doctor to treat hypothyroidism, also known as an underactive thyroid gland. The body makes two forms of thyroid hormone, T4 and T3. Generally, prescribed thyroid hormone comes in the form of T4, which is converted by the body to the active form, T3. This medication is available in generic form as levothyroxine. Brand names you may encounter for this medication include Levothroid, Levoxyl, Synthroid, and Unithroid. This medication comes in a pill form. Babies who need thyroid hormone because of hypothyroidism must be given this medication on a regular basis so that their brains will develop normally. Babies and older children also need thyroid hormone for normal growth, among other important body functions.

## How should thyroid hormone be administered?

For infants and small children, because there is no reliable liquid preparation, the pill should be crushed just before administration and mixed with a small volume of water, breast milk, or formula. This mixture can be given to the infant using a spoon, dropper, or infant syringe. The dropper, syringe, or spoon should be “washed through” with more liquid two more times until all the thyroid hormone has been given to the child. Making a mixture of crushed tablets and water or formula for storage is not recommended, because this preparation is not stable. Some pharmacies will prepare a compounded suspension of levothyroxine, but its stability is questionable and it is more expensive. Levothyroxine is tasteless and should not be a problem to give.

Older children and teens should be encouraged to swallow the tablets whole or with water or to chew the tablets if they cannot swallow them.

In general, thyroid hormone should be given at the same time of day every day. Despite the instructions you may receive from your pharmacy, thyroid hormone does not need to be taken on an empty stomach. However, its absorption may be affected by food, so it should be taken consistently either with or without food. However, please avoid consuming the following with your thyroid hormone which may prevent it from being fully absorbed

- soy protein formulas/soy milk
- concentrated iron
- calcium supplements, aluminum hydroxide
- fiber supplements
- sucralfate

You do not need to worry about thyroid hormone interacting with other medications, as we are simply replacing a hormone your child is no longer able to make.

A good way to keep track of your child’s doses is to get a 7-day pill box and fill it at the beginning of the week. If one dose is missed, then the dose should be taken as soon as possible. If you find out one day that the previous dose was missed, it is fine to double the dose the next day.

## What are the side effects of thyroid hormone medication?

The rare side effects of thyroid hormone are related to an overdose, or too much medication, and can include rapid heart rate, sweating, anxiety, and tremors.

If your child experiences these signs and symptoms, you should contact your prescribing physician. A child will NOT have these problems if the dose of thyroid hormone prescribed is only slightly more than is needed.

## Is it OK to switch between brands of thyroid hormone?

Some endocrinologists believe that this may not always be a good idea. It is possible that different brands have different bioavailability of the “free” hormone; therefore, if you need to switch between name brands, or switch from a name brand to a generic levothyroxine, you should let your endocrinologist know so that if the endocrinologist feels it is necessary, your child’s thyroid function tests can be checked.

Remember, in general, thyroid hormone replacement is very safe, even in babies and infants. Once-daily administration and close follow-up with your endocrinologist is what is needed to ensure the best possible results.

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