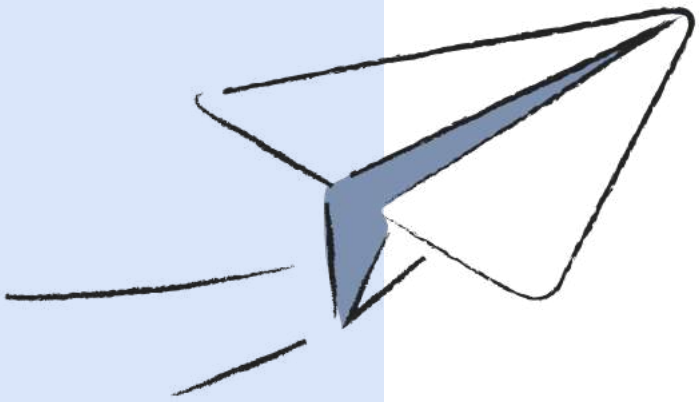
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Your Guide to Thyroid Medication



Learn more at
palomahealth.com



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A note from Paloma Health

Paloma Health is the first online medical practice focused on hypothyroidism. We offer at-home blood test kits, live video consultations with thyroid specialists, and prescription management.

In this guide, you'll learn everything you need to know about medication for hypothyroidism.



What is hypothyroidism?

Located at the base of the neck, the thyroid gland produces hormones that regulate your body's energy use, along with many other important functions. When your thyroid hormone production drops, your body processes slow down and change, affecting virtually every system in your body.

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FDA Regulations

All standard pharmaceutical products are evaluated to make sure that they work. The role of the FDA is to protect public health by ensuring the safety, efficacy, and security of human and veterinary drugs, biological products, and medical devices.

FDA approval means that the benefits of a drug conceivably outweigh the risks. A drug without approval is not necessarily harmful; and while these unapproved drugs are sometimes allowed to be sold, they are typically not covered by insurance.

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FDA Regulations

There are many formulations of thyroid hormone replacement medication, and no one-size-fits-all option. We are each unique with individual sensitivities. Our bodies will not all react the same way to a specific medication or dosage.

FDA Approved

Levothyroxine
Synthroid
Levoxyl
Tirosint
Unithroid
Levo-T
Liothyronine
Cytomel

Not Approved

Armour
Nature-Throid
NP Thyroid
Thyroid USP
Westhroid
WP Thyroid
Compounded medicines



T4-Only Formulations

The thyroid gland produces two hormones: thyroxine (T4) and triiodothyronine (T3). Similarly, thyroid replacement medication comes in T4 and T3 formulations. In a healthy thyroid gland, the inactive T4 hormone is released into circulation and then converted by the body into the active T3 hormone. Often, treatment for thyroid replacement starts with T4-only formulations, assuming that the body can successfully do the conversion on its own.

Levothyroxine

A synthetic form of T4 that successfully treats the symptoms of hypothyroidism in most patients. Your physician may specify a brand name because the potency of generic thyroxine has a history of varying considerably.

*Fillers in levothyroxine include gluten, lactose, cornstarch, sucrose, and dyes.

Synthroid

As of 2019, Synthroid is the most commonly prescribed medicine in the United States, with tens of millions of prescriptions per month.

*Fillers in Synthroid include lactose, cornstarch, and dyes.

Levoxyl

Levoxyl is another brand-name formulation of generic levothyroxine. Levoxyl uses different types of binders and is gluten- and lactose-free. Some patients find this medication more comfortable to take because of a gentler rate of absorption.

*Fillers in Levoxyl include dyes.

Tirosint

Tirosint is yet another brand-name formulation of generic levothyroxine. It comes in a gel capsule instead of a tablet, which may help with faster absorption.

*There are no fillers in Tirosint.

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Unithroid

Unithroid is another brand-name formulation of generic levothyroxine. Unithroid contains no ingredients made from a gluten-containing grain like wheat, barley, or rye. Most commercially insured patients only pay $3 for a 30-day prescription at most pharmacies.

*Fillers include lactose, cornstarch, and dyes.

Euthyrox

Euthyrox is the first generic levothyroxine sodium available in blister packs, which ensures stability of the medication for the longest time. Euthyrox does not contain dyes, lactose, or gluten.

*Fillers in Euthyrox include corn.

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Compounded T4 Formulations

Compounded medication is personalized medication in which drug ingredients are combined, mixed, or altered to solve for specific patient needs. Thyroid medication can be compounded to a specific strength or ratio, and can use hypoallergenic fillers. The Food and Drug Administration (FDA) approves all commercially available T4 medication, except compounded T4.





T3-Only Formulations

If your body has a hard time converting T4 to T3, or you take an interfering medication, standard T4 medicines may not be sufficient for you. For the few patients who do not feel completely normal taking a synthetic preparation of T4 alone, the addition of T3 may be of benefit.

Liothyronine

The generic formulation of thyroid hormone, T3. T3 is the active thyroid hormone that works at the cellular level to help with the delivery of oxygen and energy to cells, tissues, and glands throughout the body. Typically, liothyronine is used in combination with T4.

*Fillers in liothyronine include cornstarch.

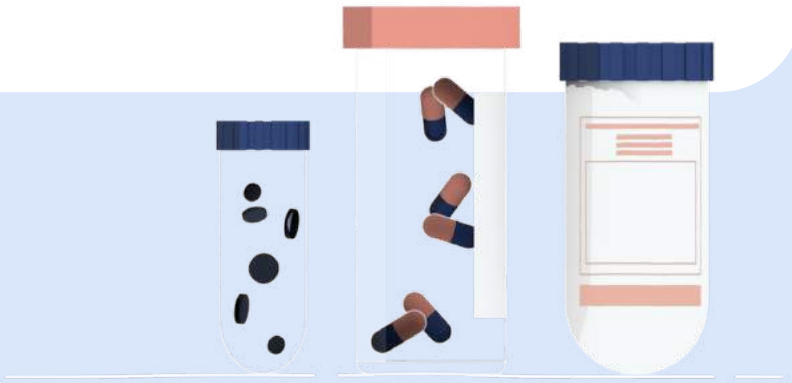
Cytomel

The most common brand-name version of liothyronine. It is short-acting, so it is best dosed twice a day.

*Fillers in Cytomel include cornstarch and sucrose.

Other T3 Formulations

Like T4, compounded T3 is an option for those who are sensitive to fillers or don't respond to available T3 formulations. Compounded T3 often contains cornstarch. Work with your doctor to determine the best treatment for you. If you decide that compounded medication is the best option, make sure that the pharmacy is accredited by the Pharmacy Compounding Accreditation Board. These pharmacies must go through an extensive process to achieve full compliance with the specified standards, and this accreditation proves to physicians and patients that their pharmacy meets a very high standard.





T4/T3 Combination Therapies

You may prefer combination therapies if you're interested in a more natural approach. There are two main types of combination thyroid medications - desiccated and compounded.

Like compounded T3, compounded T4/T3 is custom-made in specializing compounding pharmacies to provide the strength and ratio that a patient needs. Combination therapies give the most flexibility for those who need a precise dosage.

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Armour

Armour is the most common T4/T3 combination treatment. It is a brand-name of natural desiccated thyroid. Natural desiccated thyroid (NDT) is derived from the dried (desiccated) thyroid glands of pigs or cows and provides T3, T4, and other thyroid hormones found in the human thyroid. Pigs produce T4 to T3 at a 4:1 ratio, which is lower than the human proportion of 14:1. Due to this difference, some patients may have to supplement with additional T4 hormone.

Some patients love Armour Thyroid, while others feel better with an alternate option. As always, it's important to work with your doctor to find the right treatment for you.

*Fillers in Armour include cornstarch.

Nature Throid

Nature-Throid is another T4/T3 combination medication also made of desiccated pig thyroid but uses different binders and fillers, which affects how different people absorb the medicine.

*Fillers in Nature-Throid include lactose.

NP Thyroid

NP Thyroid, manufactured by Acella, is another T4/T3 combination medication. It is gluten-free, dye-free, and dissolves under the tongue, which may be helpful to those who have difficulty swallowing pills.

*There are no fillers in NP Thyroid.

Non-active Ingredients

Thyroid medications often include supplementary ingredients known as fillers. These inactive ingredients are the part of the product that do not increase or affect the medicinal properties of the active ingredient. These non-active ingredients help to ensure that a drug has consistent and reproducible quality.

Both active and inactive ingredients can cause adverse reactions or allergies. It's important to know which fillers are in the medication you take so that you can avoid possible reactions like rash, bloating, diarrhea, or headaches.

Fillers in T4

	GLUTEN	LACTOSE	CORN	SUCROSE	DYES
Levothyroxine	X*	X	X*	X*	X
Synthroid		X	X		X
Unithroid		X	X		X
Levoxyl					X
Tirosint					
Euthyrox			X		

*Select manufacturers (for levothyroxine generic, Lannett, and Mylan are gluten free)

Fillers in T3

	GLUTEN	LACTOSE	CORN	SUCROSE	DYES
Armour			X		
Nature-Throid		X			
NP Thyroid		X	X		X
WP Thyroid		X			
Cytomel			X	X	
Liothyronine			X*		

*Select manufacturers (liothyronine manufactured by Sigma Pharma has corn)



Side Effects

If taken at the right dose, thyroid replacement therapies should not cause side effects. Side effects may be an indication that you are taking too much thyroid hormone.

Talk to your doctor if you experience any of these side effects.

- Fast heartbeat
- Difficulty sleeping
- Dull, brittle hair
- Heat sensitivity
- Hunger
- Nervousness or anxiety
- Shakiness
- Sweating
- Tiredness
- Weight loss

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Which one is right for you?

While there is no perfect formulation, medication can help optimize thyroid function. We are all unique with individual sensitivities, so it's necessary to weigh the pros and cons for your specific needs.

T4-Only Formulations



This type of therapy is FDA approved, least expensive, and includes only one pill.



This type of treatment relies on your body to convert to T3 and contains many fillers & dyes.

T4 + T3 Therapy



Increase T3 levels for those with reduced ability to convert T4 to T3.



Requires two pills and an experienced doctor for dosing.

T4/T3 Combination



May require only one pill, and it is a more natural approach with less fillers and dyes



Expensive, not regulated by the FDA, and has a lower T4:T3 ratio than is needed in humans.

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Tips for taking medication

Thyroid hormone replacement drugs are powerful, so it's critical to be under careful medical supervision, especially when starting a new brand or increasing dosage.

1

Take your pill at the same time every day. Make it part of your daily routine.

2

Swallow your pill with any liquid other than soy milk, grapefruit juice, or coffee.

3

Learn about interactions that may prevent you fromabsorbing your medication.

4

Stick to one brand. Small differences in formulation can make a difference.



You deserve better care.

Schedule a free call with a care advisor to determine if Paloma can help you manage your condition.

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