WHAT IS HYPOTHYROIDISM?

Hypothyroidism, also called underactive thyroid, occurs when the thyroid gland makes too little thyroid hormone.

The thyroid gland, located in the neck, makes two kinds of thyroid hormones: T3 (triiodothyronine) and T4 (thyroxine). Thyroid hormones regulate how the body uses and stores energy. These hormones also help the brain, heart, muscles, and other organs work properly.

The pituitary gland, found at the base of the brain, controls thyroid function by making TSH (thyroid-stimulating hormone). TSH tells the thyroid gland to make T3 and T4. The thyroid makes much more T4 than T3. But the body can change T4 to T3, the more active hormone, as needed.

DI Did you know?

Synthetic (manufactured) T4 is exactly the same as the T4 made by your body.

WHAT IS THE TREATMENT FOR HYPOTHYROIDISM?

People who have hypothyroidism must take a pill containing synthetic thyroid hormone every day to replace the thyroid hormone they lack. Synthetic T4 is the best medicine for hypothyroidism because it works the same way as your own thyroid hormone.

IMPORTANT INFORMATION ABOUT TYPES OF THYROID HORMONE PILLS

Levothyroxine (synthetic T4) comes in brand name and generic versions. Different kinds of pills can have different ingredients, even when the hormone doses are the same. These differences can affect the way the body absorbs thyroid hormone. Sometimes changing the kind of pill—such as going from a brand name to a generic or from one generic to another—can mean you get a different dose of hormone. Taking too much or too little thyroid hormone can cause health problems. Check your prescription refills to make sure you always get the same type of pill.

Finding the right dose of thyroid hormone can take time. Your doctor will base your starting dose on your weight, age, and medical conditions. After 6 to 8 weeks, your doctor will check your blood hormone levels. If needed, the amount of hormone will be adjusted until tests show that you are taking the right amount.

Some groups of patients with hypothyroidism need careful adjustment of thyroid hormone doses:

• People older than 60 years old may need smaller doses than younger people. Slow adjustment of doses prevents problems such as heart trouble.
• Women who are pregnant will likely need a change in their doses of thyroid hormone during pregnancy.
• Infants, children, and teenagers should have gradual dose increases and frequent checkups. They need smaller doses than adults, since doses are based in part on body weight.

Adults and children who have had thyroid cancer also need careful dose adjustment. They take thyroid hormone to keep the pituitary gland from making TSH. Without TSH, thyroid tissue
doesn’t grow and thyroid cancer is less likely to grow back. This group of patients should have frequent checkups to make sure they’re taking the right amount of hormone. Careful dosing helps prevent heart and bone problems that can result from too high a dose.

WHAT ARE OTHER TREATMENT OPTIONS?

Levothyroxine is the preferred way to replace thyroid hormone. Two other options are considered for some patients, but have disadvantages:

• Pills that provide T3 and T4. This type of pill can cause unpleasant side effects, such as anxiety. Research has not shown that a pill with T3 and T4 is better than taking T4 alone. However, some patients say they feel better on pills with both T3 and T4.

• “Natural” hormones made from the dried thyroids of pigs or cows. Dried animal thyroid can help replace the missing hormone but is seldom prescribed nowadays. Its balance of T3 and T4 is different from human thyroid hormone. In addition, different batches of animal thyroid can have different amounts of T3 and T4, which can affect a patient’s health. Experts agree that synthetic thyroid hormone is safer than animal thyroid.

WHAT DO YOU NEED TO KNOW ABOUT TAKING THYROID HORMONE PILLS?

Hypothyroidism is a lifelong condition, but taking thyroid hormone pills every day can prevent related health problems. You should get a checkup at least once a year to make sure your dose of thyroid hormone is still right for you.

Questions to ask your doctor

• Do I have hypothyroidism?
• What treatment do I need for it?
• What are the risks and benefits of each of my treatment options?
• What tests will I need? When?
• Should I see an endocrinologist?

RESOURCES

• Find-an-Endocrinologist: www.hormone.org or call 1-800-HORMONE (1-800-467-6663)
• Hormone Health Network information about thyroid disorders: www.hormone.org/thyroid/index.cfm
• National Endocrine and Metabolic Diseases Information Service (NIH): www.endocrine.niddk.nih.gov/pubs/Hypothyroidism/
• Mayo Clinic: www.mayoclinic.com/health/hypothyroidism/DS00353
• American Thyroid Association: www.thyroid.org/patients

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The Hormone Health Network offers free, online resources based on the most advanced clinical and scientific knowledge from The Endocrine Society (www.endo-society.org). The Network’s goal is to move patients from educated to engaged, from informed to active partners in their health care. This fact sheet is also available in Spanish at www.hormone.org/Spanish.