

# THYROID HORMONE THERAPY OPTIONS

The following tables have been compiled by Women's International Pharmacy staff pharmacists to represent some of the more frequently prescribed regimens for individuals. The Women's International Pharmacy logo is placed throughout the tables to signify the hormones and dosage forms Women's International Pharmacy compounds. Other therapies may be considered and appropriate depending on individual differences.

This material is for informational purposes. It is not intended as a substitute for medical advice. Please consult a qualified health care professional for individual health and medical advice.



= Compounded by Women's International Pharmacy

#### PORCINE DERIVED WHOLE THYROID GLANDULAR MEDICATIONS

(Note: Liothyronine (T3) and Levothyroxine (T4) are bioidentical in each of the following medications. However, the following medications may not be bio-equivalent and monitoring may be necessary when switching from one thyroid preparation to another. One grain is approximately 60 mg.)

Thyroid Hormones. Drug Facts and Comparisons. Facts & Comparisons [database online]. St. Louis, MO: Wolters Kluwer Health Inc; October, 2019.

Electronic Orange Book. Food and Drug Administration website. http://www.accessdata.fda.gov/scripts/cder/ob/default.cfm. May 2013. Accessed October, 2019.

MEDICATION	DOSAGES AVAILABLE (IN GRAINS)	COMMENTS
Armour® Thyroid tablets (Forest Laboratories)	0.25, 0.5, 1, 1.5, 2, 3, 4, 5	Desiccated porcine thyroid 1 grain = T3 9mcg/T4 38mcg, T3:T4 ratio is approximately 1:4 (Armour Thyroid® [package insert]. Fores Laboratories, Inc., St. Louis, MO; 2012) Contains dextrose derived from corn (Forest Laboratories Medical Information Specialist, personal communication, March 2014.) May contain lactose as present in Thyroid USP (The United Pharmacopeial Convention, USP 36 Official Monographs, Thyroid p. 5383 December, 2013.)
Nature-Throid® tablets (RLC Labs)	0.25, 0.5, 0.75, 1, 1.25, 1.5, 1.75, 2, 2.25, 2.5, 3	Desiccated porcine thyroid 1 grain = T3 9mcg/T4 38mcg, T3:T4 ratio is approximately 1:4 May Contain lactose as present in traceable amount in Thyroid USP. (Nature-Thyroid® [package insert]. RLC Labs Inc., Cave Creek, AZ; 2013) Nature-Thyroid® and Westhroid® are identical to one another. (RLC Labs, Inc., Correspondence; 2010.)
Westhroid® tablets (RLC Labs)	0.5, 1, 1.5	Desiccated porcine thyroid 1 grain = T3 9mcg/T4 38mcg, T3:T4 ratio is approximately 1:4 May Contain lactose as present in traceable amount in Thyroid USP. (Westhroid® [package insert]. RLC Labs, Inc., Cave Creek, AZ; 2011.) Nature-Thyroid® and Westhroid® are identical to one another. (RLC Labs, Inc., Correspondence; 2010.)

#### PORCINE DERIVED WHOLE THYROID GLANDULAR MEDICATIONS CONT.

MEDICATION	DOSAGES AVAILABLE (IN MCG)	COMMENTS
WP Thyroid® tablets (RLC Labs)	0.25, 0.5, 0.75, 1, 1.25, 1.5, 1.75, 2	Desiccated porcine thyroid  1 grain = T3 9mcg/T4 38mcg T3:T4 is approximately 1:4  May contain lactose as present in traceable amount in Thyroid USP.  Only other inactive ingredients are Inulin and Medium Chain Triglycerides.  (WP Thyroid® [package insert]. RLC Labs, Inc. Cave Creek, AZ; 2013.)
NP Thyroid® tablets (Acella)	0.25, 0.5, 1, 1.5, 2	Desiccated porcine thyroid  1 grain = T3 9mcg/T4 38mcg  T3:T4 is approximately 1:4  Contains Calcium Stearate and mineral oil. (NP Thyroid [package insert]. Acella Pharmaceuticals, LLC. Alpharetta, GA; 2019.)  May contain lactose as present in Thyroid USP (The United States Pharmacopeial Convention, USP 36 Official Monographs, Thyroid p. 5383, December, 2013.)
Porcine thyroid capsules (compounding pharmacies)	Currently Unavailable	

## **LIOTHYRONINE (T3) MEDICATIONS**

(Note: Liothyronine (T3) is bioidentical in each of the following medications. However, the following medications may not be bio-equivalent and monitoring may be necessary when switching from one thyroid preparation to another.)

Thyroid Hormones. Drug Facts and Comparisons. Facts & Comparisons [database online]. St. Louis, MO: Wolters Kluwer Health Inc; 2014. Electronic Orange Book. Food and Drug Administration website. http://www.accessdata.fda.gov/scripts/cder/ob/default.cfm. May 2013. Accessed March 2014.

MEDICATION	DOSAGES AVAILABLE (IN MCG)	COMMENTS
Cytomel® tablets (Pfizer)	5, 25, 50	Non-porcine Contains Cornstarch (Cytomel® [package insert].Pfizer, Inc., New York, NY; 2019.) Generics Available
<b>Liothyronine</b> sodium tablets (Various)	5, 25, 50	Non-porcine (Liothyronine sodium. <i>Drug Facts and Comparisons</i> . [database online]. St. Louis, MO: Wolters Kluwer Health Inc; October 2006.)
Triostat® injectable (Par)	10mcg/mL	Non-porcine Refrigeration required Intravenous administration (Triostat® [package insert]. Par Pharmaceuticals, Inc., Chestnut Ridge, NY; 2017.)

## **LIOTHYRONINE (T3) MEDICATIONS CONT.**

MEDICATION	DOSAGES AVAILABLE (IN MCG)	COMMENTS
<b>Liothyronine</b> sodium injectable (X-Gen)	10mcg/mL	Non-porcine Refrigeration required (Liothyronine sodium. Drug Facts and Comparisons. Facts & Comparisons [database online]. St. Louis, MO: Wolters Kluwer Health Inc; October 2006.)
Liothyronine (T3) capsules (compounding pharmacies)	Any	Non-porcine (Liothyronine sodium. <i>Drug Facts and Comparisons</i> . Facts & Comparisons [database online]. St. Louis, MO: Wolters Kluwer Health Inc; October 2006.)

## **LEVOTHYROXINE (T4) MEDICATIONS**

(Note: Levothyroxine (T4) is bioidentical in each of the following medications. However, the following medications may not be bioequivalent and monitoring may be necessary when switching from one thyroid preparation to another.)

Thyroid Hormones. Drug Facts and Comparisons. Facts & Comparisons [database online]. St. Louis, MO: Wolters Kluwer Health Inc; 2014.

Electronic Orange Book. Food and Drug Administration website. http://www.accessdata.fda.gov/scripts/cder/ob/default.cfm. May 2013. Accessed March 2014.

MEDICATION	DOSAGES AVAILABLE (IN MCG)	COMMENTS
Synthroid® tablets (AbbVie)	25, 50, 75, 88, 100, 112, 125, 137, 150, 175, 200, 300	Non-porcine Contains cornstarch and lactose (Synthroid® [package insert]. AbbVie Inc., North Chicago, IL; 2012.) Generics available
<b>Levoxyl</b> ® tablets (Pfizer)	25, 50, 75, 88, 100, 112, 125, 137, 150, 175, 200	Non-porcine (Levoxyl® [package insert]. Pfizer, Inc., New York, NY; 2019.) Generics available
Unithroid® tablets (Jerome Stevens)	25, 50, 75, 88, 100, 112, 125, 137, 150, 175, 200, 300	Non-porcine Contains cornstarch and lactose (Unithroid® [package insert]. Jerome Stevens, Bohemia, NY)

# LEVOTHYROXINE (T4) MEDICATIONS CONT.

MEDICATION	DOSAGES AVAILABLE (IN MCG)	COMMENTS
Tirosint® capsules (IBSA)	13, 25, 50, 75, 88, 100, 112, 125, 137, 150, 175, 200	Non-porcine Contains glycerin and water in a soft gelatin capsule Cannot be cut or crushed. Supplied in blister packs. (Tirosint® [package insert]. IBSA Pharmo, Inc., Parsippany, NJ; 2019.)
<b>Tirosint-Sol</b> ® oral solution (IBSA) Pharma	13, 25, 50, 75, 88, 100, 112, 125, 137, 150, 175, 200	Non-porcine Contains glycerin and water. Supplied in single use ampules. Squeeze entire contents of ampule onto spoon or in mouth and consume immediately. May squeeze contents of amuple into water and consume immediately. (Tirosint® [package insert]. IBSA Pharmo, Inc., Parsippany, NJ; 2018.)
Levothyroxine (T4) capsules (compounding pharmacies)	Any	Non-porcine (Levothyroxine sodium. Drug Facts and Comparisons. Facts & Comparisons [database online]. St. Louis, MO: Wolters Kluwer Health Inc; November 2009.)
<b>Levothyroxine</b> sodium injectable (Various)		Non-porcine (Levothyroxine sodium. Drug Facts and Comparisons. Facts & Comparisons [database online]. St. Louis, MO: Wolters Kluwer Health Inc; November 2009.)

# LIOTHYRONINE (T3) AND LEVOTHYROXINE (T4) COMBINATION MEDICATIONS

(Note: Liothyronine (T3) and Levothyroxine (T4) are bioidentical in each of the following medications. However, the following medications may not be bio-equivalent and monitoring may be necessary when switching from one thyroid preparation to another.)

Thyroid Hormones. Drug Facts and Comparisons. Facts & Comparisons [database online]. St. Louis, MO: Wolters Kluwer Health Inc; 2014. Electronic Orange Book. Food and Drug Administration website. http://www.accessdata.fda.gov/scripts/cder/ob/default.cfm. May 2013. Accessed March 2014.

MEDICATION	DOSAGES AVAILABLE	COMMENTS
Thyrolar® tablets (Allergan)	0.25, 0.5, 1, 2, 3 grains	Non-porcine Contains cornstarch and lactose Any ratio may be compounded T3:T4 ratio is exactly 1:4 (Thyrolar [package insert]. Allergan; Madison, NJ; 2018.) Currently on long-term back order from the manufacturer (http://www.thyrolar.com/, accessed March 6, 2014)
Liothyronine (T3)/ Levothyroxine (T4) capsules (compounding pharmacies)	Any mcg	Non-porcine (Liothyronine sodium. <i>Drug Facts and Comparisons</i> . Facts & Comparisons [database online]. St. Louis, MO: Wolters Kluwer Health Inc; October 2006. Levothyroxine sodium. <i>Drug Facts and Comparisons</i> [database online]. St. Louis, MO: Wolters Kluwer Health Inc; November 2009.) Any ratio may be compounded.

ABioidentical hormones may be bound to various esters to increase the length of activity. Only when the ester is removed from the hormone by the body does the hormone become bioidentical.

Copyright © November 2019, Women's International Pharmacy. This article may not be reproduced without the permission of Women's International Pharmacy