THORNE

Fertility Guide

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Fertility

Overview

For women of childbearing age, fertility – the ability to conceive a biological child – is a common health concern. Whether it's "when," "where," "how," or "if," questions around fertility abound. This Wellness Guide is designed to help you understand and support your reproductive health with information and recommendations regarding hormones, nutrition, lifestyle, and more.

Reproductive life planning

The American College of Obstetricians and Gynecologists (ACOG) recommends a reproductive life plan for every woman, whether she chooses to have a child or not. A reproductive life plan starts with the question, "Would you like to have children, and if so, when?" Because many women are choosing to have children later in life, considering this question early can help you make healthy choices for supporting your fertility long-term. ACOG recommends reviewing your reproductive life plan with your OB-GYN each year to help you choose the best birth control for you or to choose the best next steps toward a healthy pregnancy – wherever you might be in your reproductive journey.

Fertility vs infertility

Infertility is generally considered to be the inability to become pregnant (to conceive) after at least one year of trying (unprotected sex). Difficulty carrying a pregnancy to term can also be considered infertility. For women age 35 or older, most doctors will evaluate potential causes of infertility after six months of trying without achieving pregnancy. Women older than 40 can be referred to a reproductive specialist even before trying to get pregnant.

Fertility by the numbers

87%

Number of women who expect to give birth at least once in their lifetime

~3.7 million

Number of births in the United States in 2021

1 in 4

How many women in their 20s and 30s will become pregnant in a single menstrual cycle

9x

The increase in number of women older than age 35 who gave birth for the first time from 1990 to 2012

~12%

The amount of women who use fertility services

Reproductive life plan

What are my desires for having children?

- [ ] I don't know/maybe/not sure yet
- [ ] I would like to have children one day in the future
- [ ] I would like to have a child in the next year
- [ ] I do not want to have children

How will I protect myself from sexually transmitted infections that can negatively impact fertility?

- [ ] Practicing safer sex (male or female condoms, dental dams, etc.)
- [ ] Get screened and treated for STIs
- [ ] Ask my partner if they have been screened for STIs

How will I prevent pregnancy until I am ready for children or if I don't plan to have children?

- [ ] Long-acting reversible birth control (IUD, hormonal implant)
- [ ] Short-acting reversible birth control (condoms, hormonal contraceptive pill, vaginal ring, or patch)
- [ ] Non-reversible birth control for those who plan to never have children (sterilization)

Create an active statement reflective of your reproductive life plan.

Example: I would like to have a child one day in the future so I will protect myself from STIs by practicing safer sex and prevent pregnancy until I am ready with an IUD.

Note: Your reproductive life plan may change over time. Revise this worksheet annually and review your reproductive life plan with your OB-GYN or midwife. Use the information in this guide to help understand your reproductive health and how to support it with nutrition, exercise, and lifestyle recommendations.

Biomarkers related to fertility

Hormones

Whether you are actively trying to conceive or simply want a better understanding of your reproductive health, testing can provide valuable insights. Below is an overview of 15 biomarkers that play a key role in fertility.

Estrogens

Estradiol, estriol, and estrone are a group of hormones, called estrogens, that play an important role in reproductive health.

Estradiol (E2) is the most potent and active form of estrogen. It is involved in the development of secondary sex characteristics, like breast development, and is necessary for maintenance of the menstrual cycle. During the first half of the menstrual cycle, estradiol increases gradually as an egg develops and matures. Estradiol spikes rapidly just before ovulation, triggering the release of the mature egg. Along with progesterone, estradiol stimulates thickening of the uterine lining to prepare for implantation of a fertilized egg. If fertilization does not occur, estradiol will decline, eventually reaching a low enough level to trigger menstruation – the shedding of the uterine lining. Estradiol should be tested on cycle day 3 as part of a fertility evaluation.

Estrone (E1) is a weaker estrogen that remains relatively low until menopause, when it becomes the primary form of circulating estrogen. Estrone is produced in the adrenal glands, in fatty tissue, and in the ovaries, where it can be converted to estradiol as needed.

Estriol (E3) is primarily produced by the placenta. It rises throughout pregnancy and is highest right before childbirth. Estriol supports uterine health during pregnancy and helps prepare the mother's body for labor, delivery, and breastfeeding. Although it is present in non-pregnant women, the levels are nearly undetectable.

Progesterone

Progesterone is secreted by the adrenal glands and the corpus luteum – a structure in the ovary that remains after a mature egg is released. Progesterone rises in the second half of the menstrual cycle and works with estrogen to stimulate thickening of the uterine lining to prepare for implantation of a fertilized egg. If fertilization does not occur, the corpus luteum breaks down and progesterone declines. If a fertilized egg does implant in the uterus, the corpus luteum will continue to produce progesterone, supporting development of the placenta and fetal growth until around week 8 of gestation when the placenta begins to produce most of the progesterone needed for pregnancy. Progesterone should be tested seven days after ovulation (cycle day 21 of a 28-day cycle) to measure the progesterone peak.

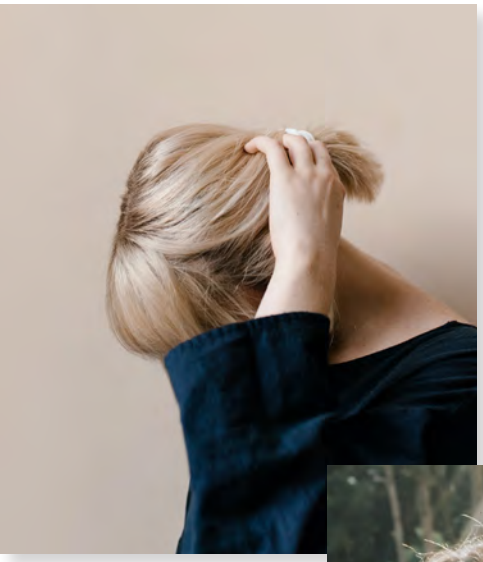
Testosterone

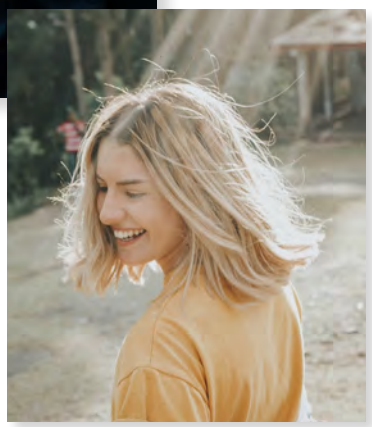
Typically thought of as a "male hormone," testosterone is also important for women's reproductive health. Both too much and too little testosterone can interfere with fertility. A high level of testosterone in women is often associated with polycystic ovary syndrome (PCOS). Testosterone is typically tested on day 3 of the menstrual cycle.

DHEAs

Dehydroepiandrosterone sulfate (DHEAs) is a hormone produced by the adrenal glands that can be converted to estrogen and testosterone in other tissues. DHEA production naturally declines with age. Too much or too little DHEA is associated with decreased egg quality and reproductive hormone imbalances. DHEAs is typically tested on cycle day 3.

Biomarkers related to fertility





SHBG

Sex hormone binding globulin (SHBG) is a protein that attaches to testosterone and estrogen in the blood. Although SHBG mainly helps establish a healthy testosterone level, too much or too little SHBG is associated with an imbalance in testosterone that can adversely affect fertility. An SHBG test might be ordered along with hormone testing as part of a fertility evaluation.

LH

Luteinizing hormone (LH) triggers ovulation. LH generally remains low throughout the menstrual cycle, then spikes rapidly just before ovulation, causing an egg to be released. LH stimulates progesterone production from the corpus luteum that remains following ovulation. LH is typically tested on cycle day 3.

FSH

Follicle stimulating hormone (FSH) is the hormone that begins a new menstrual cycle. Produced by the pituitary gland, FSH rises during menstruation, triggering the maturation of an egg within the ovaries and stimulating estrogen production. There is also a brief FSH spike associated with ovulation, but once ovulation has occurred, FSH is low for the remainder of that menstrual cycle. FSH should be tested on cycle day 3.

Prolactin

Prolactin is primarily produced in the pituitary gland in the brain. Prolactin contributes to breast-tissue development and induces milk production for breastfeeding. In women who are not pregnant or lactating, the level of prolactin circulating in the body is normally low. An abnormally elevated prolactin level is associated with irregular periods and infertility. If you are experiencing infertility, then your doctor might order a prolactin test.

AMH

Anti-mullerian hormone (AMH) is produced by cells inside follicles of the ovaries. AMH levels are connected to egg count – i.e., higher AMH levels are associated with more eggs/higher ovarian reserve – although AMH alone does not predict fertility or when menopause will occur. AMH is typically tested on day 3 of the menstrual cycle.

Cortisol

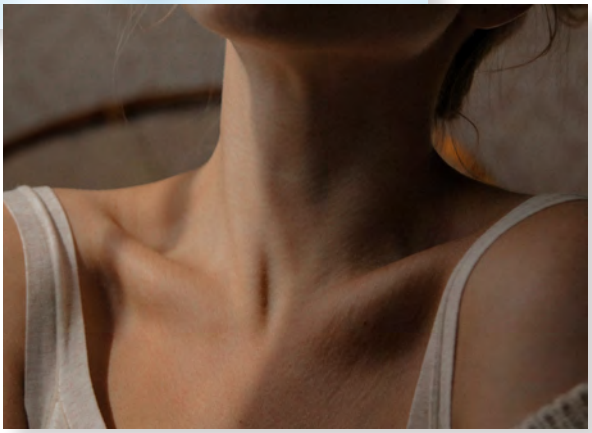
Cortisol is an adrenal hormone that is secreted in response to stress and is beneficial when increased to meet a short-term need. However, chronic stress can lead to a long-term increase in cortisol production that disrupts the normal function of many body systems, including reproductive health.

Vitamin D

Vitamin D is a fat-soluble vitamin that also acts as a hormone in the body. It can be obtained from certain foods or supplements and can be made in the body after exposure to direct sunlight. While vitamin D is well-known as an important nutrient for bone and immune health, vitamin D levels in the body are also associated with reproductive health.*

*These statements have not been evaluated by the Food and Drug Administration. These products are not intended to diagnose, treat, cure, or prevent any disease.

Biomarkers related to fertility



Thyroid and Fertility

Thyroid function that is either too high (hyperthyroidism) or too low (hypothyroidism) can interfere with fertility. Autoimmune antibodies can also have a negative impact on fertility, even if thyroid function is normal. If your thyroid function is out of balance, then it is important to work closely with your doctor before, during, and after pregnancy.

TSH

Thyroid stimulating hormone (TSH) is secreted by the pituitary gland in the brain. TSH stimulates the production of T4 and T3 in the thyroid gland. An abnormal TSH level is often the first sign of thyroid dysfunction.

T4

Thyroxine (T4) is the predominant hormone secreted by the thyroid gland; more than 80 percent of hormone produced by the thyroid is T4. However, T4 is the inactive form. It is converted to the active form (T3) as needed throughout the body to maintain metabolism and function.

T3

Triiodothyronine (T3) is the active and most potent form of thyroid hormone. Some T3 is produced by the thyroid gland; however, most T3 is converted from T4 in the body as needed.

TPO Antibodies

Thyroid peroxidase antibodies (TPO antibodies) are proteins made by the immune system that can attack an important enzyme needed for producing thyroid hormones. If TPO antibodies are present in large enough quantities, this can signal an autoimmune condition that interferes with thyroid function and can negatively impact fertility.

Thyroglobulin Antibodies

Thyroglubulin antibodies (TgAbs) are proteins made by the immune system that can attack the thyroid gland. If TgAbs are present in large enough quantities, this can signal an autoimmune condition or another thyroid disorder.

Fertility Test

Are you interested in exploring your biomarkers related to fertility? It's important to note that many factors can affect the way biomarker results should be interpreted, and the biomarkers described in this guide are best utilized in consultation with your health-care provider. While Thorne's Fertility Test does not include every biomarker described in this guide, it does provide insights by measuring a woman's reproductive hormones, thyroid function, and stress response.

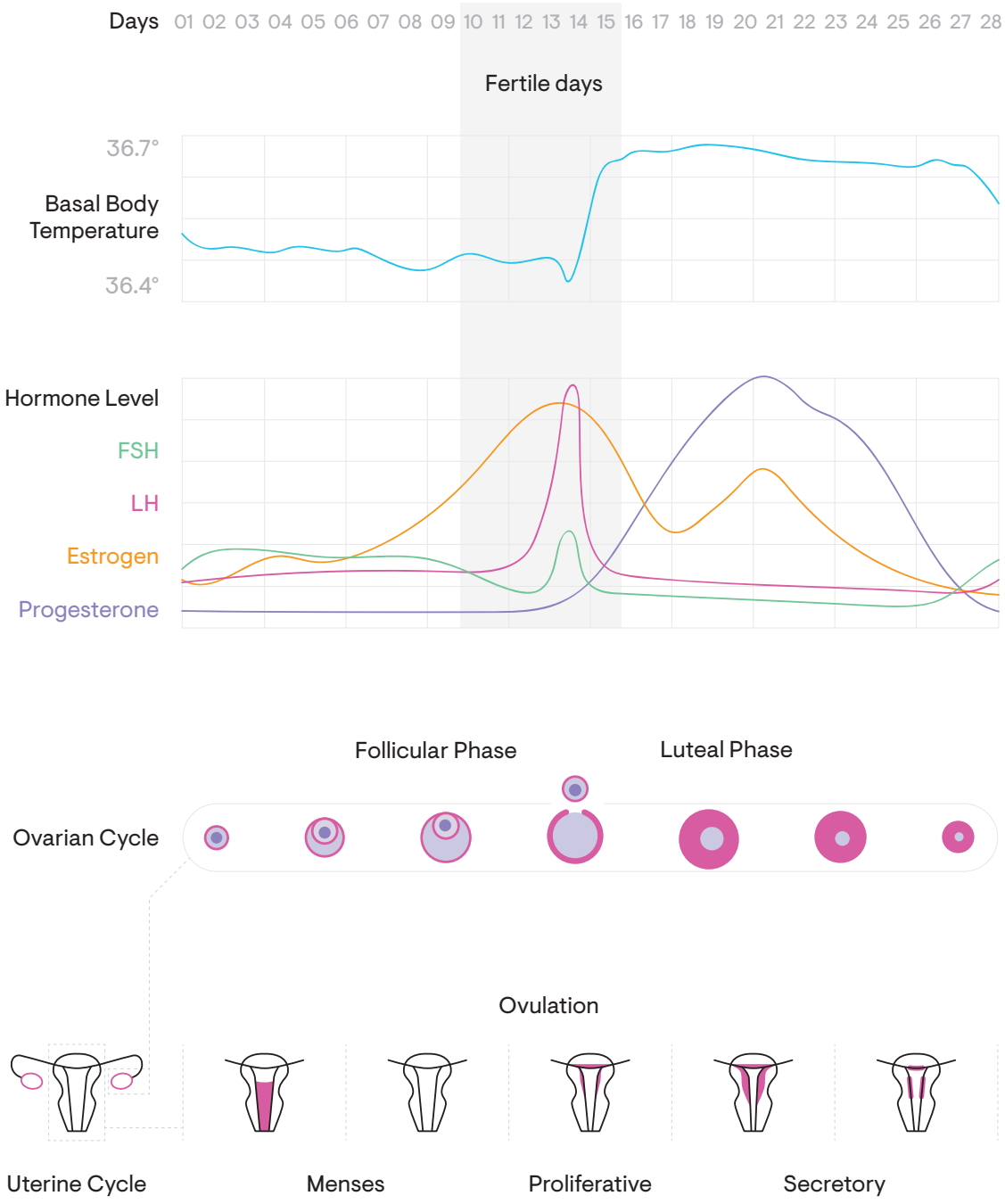
Lab test records

Track your lab results and discuss optimal levels for fertility with your doctor.

Lab Test	**Date:_____**	**Date:_____**
Estradiol (E2)*		
Progesterone**		
Testosterone (Total)		
Testosterone (Free)		
DHEAs		
FSH*		
LH*		
AMH*		
Vitamin D		
Thyroid Stimulating Hormone (TSH)		
T4 (free)		
T3 (free)		
Thyroid Peroxidase Antibodies (TPO)		
Thyroglobulin Antibodies		

Note: *Draw on cycle day 3 / ** Draw on cycle day 21 (or 7 days after ovulation)

Reproductive hormone cycle



Menstrual cycle and fertility

Cycle Mapping

One of the best ways to gain an understanding of your fertility is to track your menstrual cycle. Cycle mapping can provide important insights into hormonal balance, your most fertile days, and symptoms you might be experiencing that are related to your cycle. There are three methods for cycle mapping, each can be used individually or together: Calendar Mapping, Cervical Mucus, and Basal Body Temperature.

Calendar Mapping Method

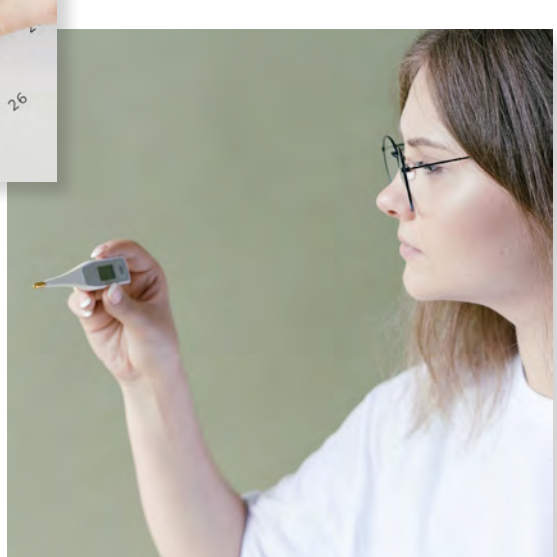
Using a calendar (or smartphone app) jot down how you are feeling each day, physically and mentally. Record the first day of your menstrual period – the first day of full flow (not just spotting) – as cycle day 1. Note the last day of your menstrual flow as well. Continue to number each day chronologically, noting any changes in mood, energy, cravings, etc. Start over with day 1 on the first day of your next menstrual period.

Cervical Mucus Method

The texture, color, and amount of cervical mucus changes throughout the menstrual cycle along with cyclical hormone changes. Immediately following menstruation, there will be little to no cervical mucus/discharge. As estrogen increases during the follicular phase, cervical mucus becomes thick/creamy, white to yellowish, and not stretchy or elastic. It will become thinner and cloudier toward the end of the follicular phase as ovulation nears. Clear, stretchy, “egg white” cervical mucus signals ovulation. Following ovulation, as progesterone increases, cervical mucus becomes thicker, dryer, and more paste-like. Check your cervical mucus by examining discharge on your underwear each day, by wiping your vaginal opening with toilet tissue before using the toilet, or by inserting a clean finger just inside the vaginal opening then examining the texture of the mucus between your finger and thumb.

Basal Body Temperature Method

One of the best ways to understand if and when you are ovulating is by measuring basal body temperature (BBT). Check your BBT first thing in the morning, before getting out of bed, by using a thermometer that records two decimal points. This allows you to monitor small changes in BBT. Try to measure your BBT at about the same time every morning, recording it on your cycle map each day. After ovulation, BBT will increase 0.5-1 degree (Fahrenheit) and remain elevated for about 10 days. BBT will drop just before menstruation begins.



Cycle mapping calendar

Key:

Week Day: M-S

Cervical Mucus Type: M = menstruation, W = watery, EW = egg white, C = creamy, S = sticky, N = none

Mood: +, -

Energy: rate 1-10; 1 = very low, 10 = very high

Sleep: R = restful, I = interrupted

Date															
Week Day															
Cycle Day	1	2	3	4	5	6	7	8	9	10	11	12	13	14	15
Basal Body Temperature (BBT) 99.60															
99.50															
99.40															
99.30															
99.20															
99.10															
99.00															
98.90															
98.80															
98.70															
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97.60															
97.50															
97.40															
97.30															
97.20															
Cervical Mucus															
Mood															
Energy															
Sleep															

16	17	18	19	20	21	22	23	24	25	26	27	28	29	30	
															99.60
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Nutrition & fertility

Mediterranean-style diet and fertility

Studies show reproductive health benefits of a pattern of eating known as “The Mediterranean diet,” which focuses on whole, fresh foods and is predominantly plant-based. Although research tends to focus specifically on the term “Mediterranean diet,” many traditional diets around the world are centered on the same concepts – focusing on fresh fruits, vegetables, legumes, herbs, spices, nuts, seeds, lean animal protein sources in modest amounts, and unprocessed whole grains. Healthy fats high in essential fatty acids (EFAs) are another feature of this way of eating. Olive oil, avocado, nuts and seeds, fish, seafood, and algae are all good dietary sources of EFAs.

Inflammation and fertility

Following a Mediterranean-style diet that focuses on nutrient-rich whole foods and essential fatty acids decreases exposure to inflammatory factors and is beneficial for reproductive health. Inflammation can have a negative impact on fertility because it can interfere with implantation and play a role in fertility-related conditions like PCOS. Studies have shown that women who eat a Mediterranean-style diet are less likely to experience fertility issues compared to women who eat a Western diet (higher in meat, fried foods, and simple carbohydrates). One study found that following a Mediterranean diet pattern increased chances of becoming pregnant by 40 percent in women undergoing IVF.

Antioxidants and fertility

Along with essential fatty acids, a Mediterranean-style diet is also high in antioxidant-rich foods, like fresh fruit and vegetables. Free-radical accumulation in the ovaries naturally increases with age and can play a role in age-related fertility decline. Foods high in antioxidant content can benefit fertility by decreasing oxidative stress and inflammation. While some oxidative stress in the ovaries is necessary for ovulation to occur, too much can lead to chronic inflammation, impaired mitochondrial function, and less healthy oocytes (egg cells). The plant components (phytochemicals) that give fruits and vegetables their vibrant colors are the antioxidants, for example: red = lycopene and resveratrol; green = indoles and glutathione; blue and purple = anthocyanins; and orange and yellow = carotenoids. Aim to consume a variety of colorful fruits and vegetables to maximize antioxidant intake and balance oxidative stress.

Common nutrient deficiencies & fertility

Vitamin D

Although vitamin D is primarily associated with bone health and immune function, vitamin D status plays a role in fertility, pregnancy, and lactation, too.* Multiple studies have shown an association between vitamin D deficiency and lower fertility. In fact, in northern countries there is a seasonal peak in pregnancy rates in summer and fall – the two seasons with the most sunshine and highest serum vitamin D levels. The human body makes vitamin D when exposed to direct sunlight, but vitamin D can also be obtained through the diet and from supplements. Dietary sources of vitamin D3 include dairy products, fish, egg yolks, and foods fortified with vitamin D, like cow's milk, soy milk, and orange juice. Mushrooms are a source of vitamin D2, which requires additional conversion to the active form in humans.

Folate

Folate is an important nutrient for neurological and red blood cell health.* An adequate folate level is important for preventing neural tube defects in the first trimester of pregnancy, and evidence also suggests a higher blood folate level can improve the chances of becoming pregnant.* A 2015 study of women undergoing assisted reproduction examined the association between serum folate levels and the likelihood of becoming pregnant. In the study, women with the highest folate levels were 1.5-times more likely to become pregnant compared to women with the lowest folate levels.* Dietary sources of folate include dark leafy greens (kale, spinach, chard), broccoli, Brussels sprouts, chickpeas, pinto beans, lentils, asparagus, and avocado.

Vitamin B12

Similar to folate, vitamin B12 supports the nervous system and red blood cell formation and is associated with an increased likelihood of becoming pregnant.* One study showed women with the highest vitamin B12 levels were twice as likely to become pregnant than women with the lowest levels of vitamin B12.* Food sources of vitamin B12 include milk, cheese (especially Swiss, cottage, and feta), yogurt, beef, fish, and eggs.

Iron

Low blood levels of iron have been noted in women with infertility, and one study showed increased iron consumption can decrease the risk of ovulatory infertility.* Meat, poultry, and fish are dietary sources of heme iron, while lentils, beans, leafy greens (spinach, kale, turnip, collard), green peas, nuts, seeds, and blackstrap molasses are food sources of non-heme iron. Current research suggests consumption of non-heme iron is more beneficial for ovulatory fertility compared to heme iron consumption.

Essential fatty acids

Essential fatty acids play a key role in numerous aspects of health, including cognitive function, cardiovascular health, maintenance of healthy body weight, skin health, reproductive function, and healthy inflammatory balance.* The omega-3 fatty acids EPA and DHA are particularly important for reproductive health.* In one study, omega-3 intake was associated with cyclical FSH, estrogen, and progesterone peaks that were more favorable for fertility.* Another study showed higher DHA intake was associated with a lower risk of infertility.* Additionally, higher omega-3 consumption has been associated with increased probability of both natural pregnancy and pregnancy following IVF.* DHA and EPA are mainly found in fish, seafood/shellfish, and algae sources, but they can also be converted from alpha-linolenic acid (ALA). ALA is another omega-3 fatty acid found in many plants, such as flax, chia, and walnuts. The rate of conversion from ALA to DHA and EPA is low; however, nuts and seeds are beneficial nutritional sources for reproductive health.

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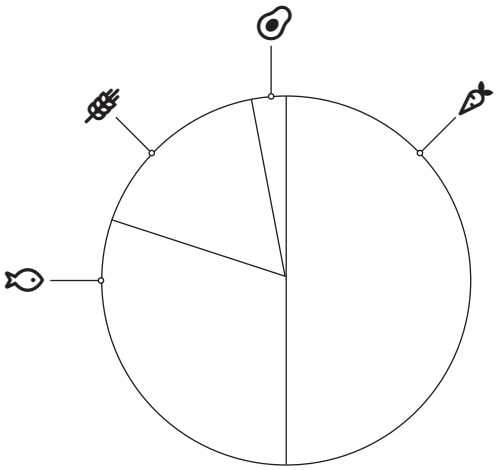
Getting started with a Mediterranean-style diet

Build a nutritious plate

Creating a healthy, fertility-supportive meal is easy! Using the lists below as a guide, choose foods from multiple categories, including a variety of colors and spices. Aim for the following portion goals per meal:

- 1-2 cups **vegetables**; can include ½ -1 cup **fruit**
- ½ cup **whole grains**, potatoes, squash, beans, or lentils
- 4 ounces animal **protein sources** or tofu, beans, or lentils for vegetarian meals
- 1 tablespoon **healthy fats** (olive oil, nut or seed butters) or ⅓ of a medium avocado

Reference the 3-day sample meal plan and recipes at the end of this guide for additional ideas.



Foods to include that support fertility

Vegetables

Eat lots of vegetables. Vegetables are a focal point of a Mediterranean-style diet, from leafy greens to roasted veggies on pizza, in fragrant soups, or fresh on their own.

- Dark leafy greens (spinach, kale, arugula, etc.)
- Tomatoes
- Cauliflower, broccoli
- Green beans
- Brussels sprouts
- Bell peppers
- Squash, zucchini
- Sweet potatoes

Fruits

Pick fresh fruit for a sweet pairing. Colorful fruits are good sources of antioxidants, vitamins, minerals, and fiber.

- Fresh citrus
- Apples
- Pears
- Pomegranate
- Bananas
- Berries – strawberry, blueberry, raspberry, blackberry
- Melon – cantaloupe, honeydew, watermelon
- Tropical fruits like pineapple, papaya, passionfruit, mango

Meat

Change the way you think about meat. If you eat meat, then consider a smaller portion added as a side dish rather than as the main entrée.

- Chicken
- Eggs
- Turkey
- Grass-fed beef (95% ground, tenderloin, sirloin)
- Pork tenderloin

Seafood

Eat seafood twice a week. Fish and shellfish are good sources of omega-3 fatty acids.

- Salmon
- Tuna
- Cod
- Flounder
- Shrimp
- Clams
- Mussels
- Crab

Vegetarian

Cook a vegetarian meal one night a week. Build meals around legumes, vegetables, and whole grains.

- Beans
- Lentils
- Soy – edamame, tofu, tempeh

Whole grains

Focus on whole grains. Traditional and ancient grains can be nutty and delicious options with extra nutrients and fiber compared to refined grains.

- Millet
- Barley
- Farro
- Brown or wild rice
- Teff
- Quinoa
- Oats

Healthy fats

Use healthy fats. Healthy fat sources provide essential fatty acids for supporting a healthy inflammatory balance.

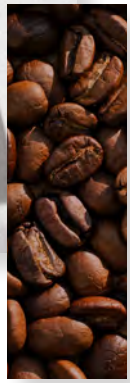
- Olive oils
- Avocado (whole and oil)
- Nuts
- Seeds

Dairy

Enjoy some dairy in moderation. Dairy provides fertility-supporting nutrients, like calcium and vitamins B12 and D, along with probiotics in fermented forms such as yogurt or kefir.

- Yogurt
- Kefir
- Milk
- Assortment of cheeses

Getting started with a Mediterranean-style diet



Foods to limit or avoid

High-fructose corn syrup

Consumption of high-fructose corn syrup (HFCS) is associated with unwanted weight gain and inflammation, which can interfere with ovulation and fertility. Additionally, a high-fat, HFCS diet can lead to dysfunction of the corpus luteum, a structure that forms on the ovary following ovulation and secretes progesterone to prepare the uterine lining for implantation of a fertilized egg and to maintain the placenta in early pregnancy. Common dietary sources of HFCS include sodas, candy, sweetened cereals, baked goods, condiments like ketchup and salad dressings, fruit juices, granola bars, and flavored yogurt. Limit consumption of HFCS by focusing on fresh fruit for sweet treats and using natural, unrefined sweeteners in moderation.

Caffeine

Although the evidence is conflicting, some studies indicate that caffeine consumption can interfere with fertility. Limit caffeine intake to one cup of tea or coffee daily and avoid HFCS-sweetened caffeinated beverages.

Alcohol

Alcohol consumption can negatively affect the chances of becoming pregnant. In an analysis of 19 different studies, there was an inverse relationship between alcohol consumption and a woman's ability to conceive; in other words, as alcohol consumption went up, the chance of conceiving went down. Even moderate alcohol consumption (3-6 drinks per week) can interfere with conception. Limit alcohol to no more than 1-2 drinks per week or replace a spiked beverage with sparkling water or a mocktail instead.

Lifestyle and fertility

Stress

Stress can adversely impact every system of the body, including the ability to conceive. An analysis of 31 studies found individuals who had higher stress ratings also had significantly lower chances of conceiving when utilizing assisted reproduction therapies. In addition, severe stress can have a negative impact across generations. In a population study of 660 thousand Danish women, those whose mothers had experienced severe stress during the first trimester of pregnancy were more likely to have trouble becoming pregnant themselves when they reached reproductive age.

Although you cannot remove all stress from your life, knowing its potential negative effects on your health and fertility can help direct the way you handle stress. Some activities that can help you manage stress include practicing yoga and meditation, engaging in affectionate behavior, and exercising regularly.

Tips to manage stress

Breathe deeply

When you are driving, working at your desk, or watching television, take deep, abdomen-filling breaths. The more often you practice deep breathing, the more likely it will become your normal way of breathing.

Create a gratitude journal

Doing something as simple as thinking thoughts of gratitude has been shown to reduce stress hormones and slow down and regulate heart rhythm. Take a few moments each day to jot down three things you are grateful for or that bring you joy.

Go forest bathing

Forest bathing means spending time in nature. Going for a walk among trees has been shown to improve mood, lower heart rate and blood pressure, and promote optimal immune function. Spending as little as 10-20 minutes per day outdoors promotes well-being.

Lifestyle and fertility

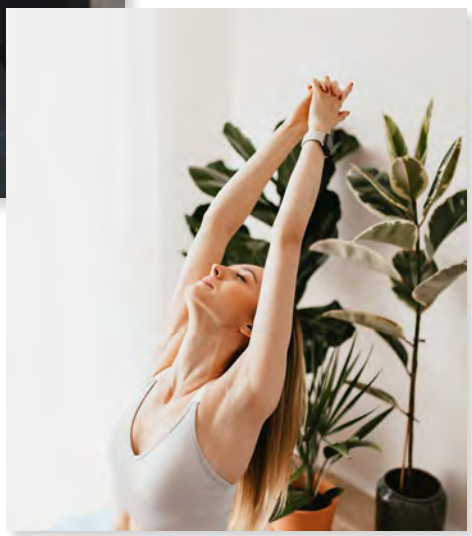
Sleep

The degree to which sleep and fertility interact has not been fully studied; however, sleep disturbances are associated with changes in reproductive health, particularly in relation to hormonal balance. Lower quality sleep has been shown to negatively affect fertilization rates in women undergoing assisted reproduction therapies. If you are trying to conceive, then taking simple steps to improve sleep quality can benefit the chance of becoming pregnant.

Enhance your sleep quality with these tips:

- Set a **sleep routine** by going to bed at the same time each night and waking up at the same time each morning.
- Aim for **7–8 hours** of uninterrupted sleep nightly.
- Make the bedroom a **dedicated space** for relaxation, sleep, and sexual activity. Move work, exercise, television, and other activities to other areas of the home.
- Incorporate **soft warm light** to help maintain your sleep cycle by using dim or red-hued lighting in the evenings.
- **Turn off** electronic devices (smartphone, TV, tablets, etc.) an hour before bedtime. If you use an e-reader in the evenings, then use a blue-light filter to reduce exposure to bright light.
- **Avoid** a large meal, caffeine, alcohol, and sugar before bedtime.
- Relax with a cup of **herbal tea** after dinner.
- Incorporate an evening **mindfulness, meditation, or prayer routine**.

Lifestyle and fertility



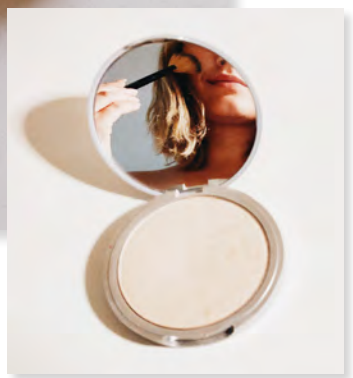
Exercise

Regular physical activity is important for healthy conception and pregnancy. Regular exercise helps keep blood sugar in check, relieves stress, improves sleep, and promotes balanced hormones. Focus on engaging in a balanced program of strength training, endurance exercise, and mobility/flexibility work. The American College of Obstetricians and Gynecologists recommends 150 minutes per week of moderate-intensity aerobic activity for healthy pregnant and postpartum women. Getting started with an exercise program before pregnancy not only promotes fertility, it also makes it easier to maintain regular physical activity throughout pregnancy and during the postpartum period.

Tips for getting started:

- If you are new to exercise, then begin **gradually** and increase your intensity and duration little by little.
- Place an exercise step, treadmill, or stationary bicycle in front of the television and **work out while you watch your favorite TV show**. You can also use this venue to do abdominal and other floor exercises.
- Find a **walking buddy** so you can encourage each other.
- Use half of your lunch break for a short **15-30 minute walk** or do squats and abdominal exercises in your office when you can't get outside.
- Enroll in an **exercise class** that meets regularly (dance, yoga, Zumba, etc.) or search YouTube to find **free online exercise classes** you can do at home.
- If you have a job that requires sitting for long periods, then **stand up, stretch, and walk** at least once per hour.
- Find a **local meet-up group** for hiking or other outdoor activities.
- Join an adult **recreational sports league**.
- Find a variety of exercises you enjoy doing and **switch them up**.

Environmental concerns and fertility



Environmental toxins interfere with the body's endocrine system, negatively affecting reproductive health. Both natural and man-made chemicals, known as endocrine disruptors, mimic or interfere with the way hormones function in the body. Estrogen is particularly affected by endocrine disruptors, but progesterone, testosterone, and thyroid hormones can be impacted as well.

Endocrine Disruptors

Reducing environmental exposures can help support reproductive health. Here are some common environmental toxins to look out for:

Bisphenol A (BPA)

Commonly found in plastic containers that store food and beverages, BPA resins are also used to coat metals, like the inside of food cans. BPA can bind to the estrogen receptors in the body, affecting hormonal processes like menstrual regularity and triggering symptoms of PMS. Awareness has led to a decrease in the use of BPA, and containers are now often labeled BPA-free. However, BPA-free does not mean endocrine-disruptor free as plastics are made from a variety of endocrine disrupting chemicals. Opt for plastic-free food and beverage containers whenever you can.

Phthalates

Another endocrine disrupting group of chemicals found in plastics, phthalates are used to make plastic softer and more flexible (think flexible plastic wrap versus a hard plastic bowl). Phthalates are also found in beauty products, like nail polish, lotions, soaps, and hair care. Shown in studies to be anti-androgenic, phthalates decrease testosterone and can negatively affect reproductive, neurological, and developmental systems. Again, choosing plastic-free food and beverage containers whenever possible is a good plan of action, particularly for hot foods or when re-heating. Personal care products can be a bit trickier – phthalates are often used in fragrances, which can be proprietary and therefore not listed on the label. Choosing fragrance-free products is one way to reduce phthalate exposure. Look for "phthalate-free" on labels as well.

Parabens

Cosmetics and body-care products often contain parabens used as preservatives. Like BPA, parabens can bind to estrogen receptors in the body, and like phthalates, they can decrease testosterone production. Parabens have been linked to menstrual dysregulation, decreased fertility, and increased risk of pre-term birth. Look for "paraben-free" on the labels of personal care products and check the ingredients list for words that end in "-paraben" like methylparaben, propylparaben, etc.

Triclosan

Although not as ubiquitous in products as it once was, triclosan is still found in toothpaste, soaps, deodorants, and cosmetics. Triclosan is an antimicrobial agent used to reduce or prevent bacterial contamination. In 2017, the FDA issued a ruling limiting the use of triclosan in certain over-the-counter antiseptic products, and in 2019, the ban on triclosan in hand sanitizers was finalized. However, the use of triclosan in many other products remains. Along with its endocrine-disrupting function, as an antimicrobial, triclosan contributes to bacterial resistance and can negatively affect a healthy microbiome. Check product labels for triclosan as an ingredient.

Environmental concerns and fertility

Pesticides and herbicides

Consumption of fruits and vegetables high in pesticide or herbicide residue has been linked with reduced fertility. Pesticides and herbicides contain endocrine-disrupting chemicals, particularly those that exhibit estrogen-like properties. Wash produce under cool water before peeling, cooking, or eating to help remove pesticide and herbicide residues. Consider buying organic for the “dirty dozen” – fruits and veggies that have the most pesticide and herbicide use in commercial farming.

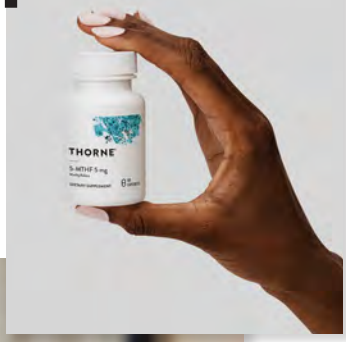
Mercury

Exposure to mercury can alter estrogen levels and function, which negatively affects fertility. Mercury exposure has been linked to PCOS, menstrual irregularities, and premature menopause among other hormonal concerns. Consumption of fish or shellfish high in mercury is the primary source of mercury exposure; however, fish and seafood are important food sources of omega-3 fatty acids. Consuming low-mercury fish or seafood twice weekly can increase omega-3 fatty acid intake while limiting potential mercury exposure. Anchovies, Atlantic mackerel, catfish, clams, crab, crawfish, flounder, haddock, mullet, oysters, pollock, salmon, sardines, scallops, shrimp, sole, squid, tilapia, trout, and whiting are considered “Best Choices” in the Dietary Guidelines for Americans.

Tips for reducing exposure to environmental toxins:

- Opt for **plastic-free** food and beverage containers.
- Reheat food in **glass** containers.
- Check ingredient labels for **endocrine disruptors** like parabens, phthalates, and triclosan.
- Choose **fragrance-free** cosmetics and household products.
- Review the annually updated **“Dirty Dozen” and “Clean 15”** produce lists from the Environmental Working Group.
- Buy fresh foods from **local sources**, like farmer’s markets, where you can ask vendors directly about any potential environmental toxins.
- **Wash** all produce before consuming.
- Limit consumption of fish that are high in **mercury**, opting for low-mercury fish and seafood instead.
- Choose **antibiotic- and hormone-free** animal food products.

Supplements



A modern lifestyle can make it difficult to consistently obtain the nutrients needed for supporting reproductive health. Explore Thorne's fertility-supportive nutritional supplements and work with your health-care professional to determine the best plan for you.

5-MTHF 1 mg

1 capsule
1-3 times daily

5-MTHF – an active, tissue-ready form of folate – is an essential B vitamin that supports heart, brain, and blood health.* Folic acid is especially important before conception and during early pregnancy, because the mother's biggest need is during the first trimester – when a woman might not know she is pregnant. A folic acid deficiency is linked to low-birth-weight infants and neural tube birth defects.

Basic Prenatal

\+

3 capsules
daily with food

Basic Prenatal is specifically formulated with the special needs of conception, pregnancy, and breastfeeding in mind.* It contains well-absorbed, tissue-ready vitamins and minerals that are gentle on the stomach and non-constipating. Basic Prenatal is made without the additives and coatings generally found in mainstream prenatal supplements.

Prenatal DHA

2 gelcaps
daily

Prenatal DHA provides nutritional support for reproductive health before, during, and after pregnancy.* DHA is especially important for healthy fetal and infant development, accumulating in a baby's developing brain primarily during the third trimester of pregnancy through the first two years of the child's life.* DHA supports a healthy pregnancy, in addition to helping maintain a healthy inflammatory response.*

*These statements have not been evaluated by the Food and Drug Administration. These products are not intended to diagnose, treat, cure, or prevent any disease.

Supplements

Ovarian Care

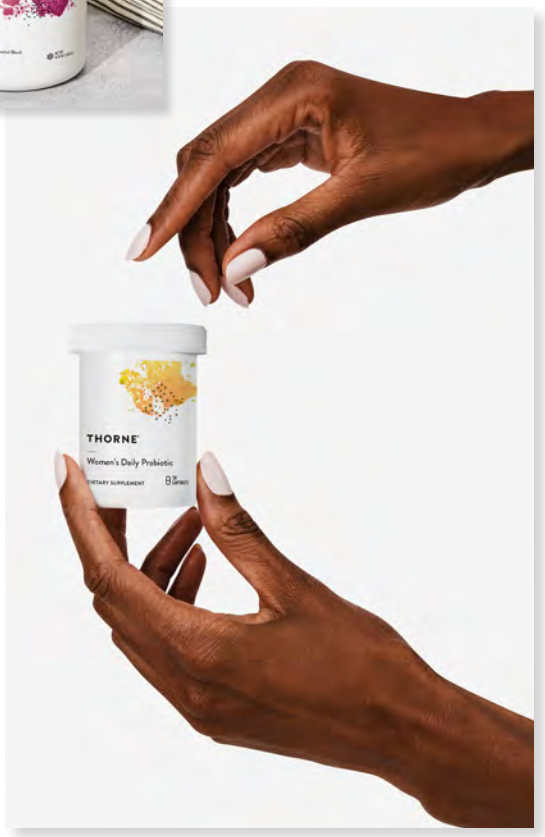
1 scoop w/ at least 8 oz. water
two times daily

Ovarian Care offers a unique blend of nutrients and botanical extracts for a woman seeking support for menstrual regularity and various aspects of reproductive health by helping to balance hormones, supporting a healthy insulin response, and providing antioxidant support* – all in a mixed-berry flavored supplement that is gluten-free, dairy-free, and soy-free. Ovarian Care can be mixed with water or a beverage of your choice.

Women's Daily Probiotic

1 capsule
daily

Women's Daily Probiotic provides advanced support for your microbiome that goes beyond gut health, with well-studied probiotic strains found specifically in healthy urinary and vaginal tracts.* Women's Daily Probiotic helps establish and maintain a balanced microbial population in the vaginal and urinary tracts for promoting immune function, balance, and comfort in a woman's delicate tissues.*



*These statements have not been evaluated by the Food and Drug Administration. These products are not intended to diagnose, treat, cure, or prevent any disease.

Sample meal plan

On the go or in need of some fast nutrition? Try one of the shakes in the recipe section!

Day 1

Breakfast	Berry blast overnight oats
Lunch	Italian white bean soup
Dinner	Baby Bok choy & kimchi burger cup with cucumber salad
Snack	Crunchy roasted chickpeas Garlic stuffed olives

Day 2

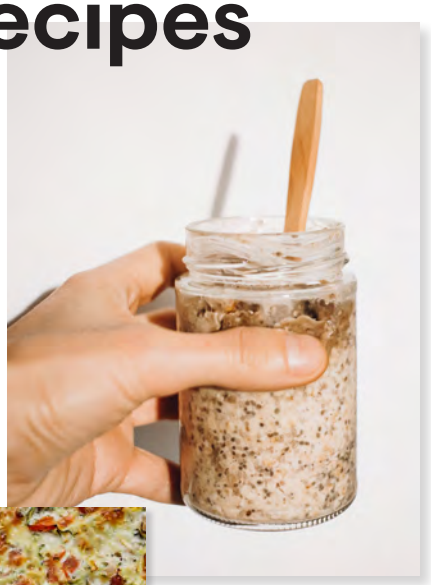
Breakfast	Breakfast greens with avocado and spiced seeds
Lunch	Cherry chipotle veggie chili
Dinner	Poached salmon with spring onions and white wine Roasted Brussels sprouts Quinoa tabouli
Snack	Apple slices with cinnamon and nut or seed butter

Day 3

Breakfast	Vegetable frittata with feta Berry citrus fruit salad
Lunch	Arugula salad with spiced seeds, goat cheese, and crunchy roasted chickpeas
Dinner	Slow cooker chicken stew Long-grain brown rice Roasted asparagus
Snack	Herb & olive oil hummus Veggie sticks (carrots, bell pepper, celery, broccoli, etc.)

Recipe included in Recipe section

Breakfast recipes



Berry blast overnight oats

Recipe from **Thorne's *Take 5 Daily***

Serves 1

Ingredients

½ cup	Rolled oats
½ cup	Unsweetened coconut, almond, or other alternative milk source (for example, cashew)
½ cup	Vanilla vegan yogurt (cashew or coconut works best)

Fruit addition

½ cup	Mixed berries like raspberries, blueberries, and/or blackberries
Pinch	Finely chopped mint (optional)
Pinch	Fresh grated lemon zest (optional)

Directions

Mix the ingredients for the oatmeal base, stir well, and place in a container to sit **overnight** in the refrigerator.

In the morning, if the oats are still too stiff, then mix in a small amount of coconut or almond milk to the **desired consistency**.

When desired consistency is achieved, **fold in** the fruit addition along with any of the optional ingredients you have chosen.

Variation: Using lemon yogurt can brighten up this breakfast offering. Either substitute out fully for the vanilla yogurt or use equal parts of both the vanilla and lemon.

Vegetable frittata with feta

Serves: 2

Ingredients

4 handfuls	Coarsely chopped vegetables (e.g., squash, peppers, broccoli, onions, mushrooms, etc.)
½ cup	Crumbled feta cheese
4	Eggs
1 tbsp	Olive oil
1 tbsp	Dried herbs or finely chopped fresh herbs (e.g., basil, lemon thyme, chives, etc.)

Directions

Steam vegetables until tender, then set aside. Whisk eggs and herbs.

Add oil to a large frying pan and place on low heat. Add **half** of egg mixture to pan and cook for one minute.

Top with vegetables and crumbled feta then cover with remaining egg mixture. Cover and cook on **low** heat until cooked through.

Breakfast recipes

Breakfast greens

with avocado and spiced seeds

Recipe from
Thorne's *Take 5 Daily*

Serves: 1-2

Ingredients

Spiced seeds

1 tbsp	Pumpkin seeds
1 tbsp	Hemp hearts
1 tbsp	Sunflower seeds
½ tsp	Cumin powder
½ tsp	Coriander powder
½ tsp	Paprika powder
1 tsp	Garlic powder
1 tbsp	Olive oil

Avocado mixture

1	Ripe avocado
2 tsp	Raw apple cider vinegar
½ tsp	Coriander powder
¼ tsp	Minced garlic
¼ tsp	Cumin powder

Warm kale salad mixture

2 cups	Lacinato kale, destemmed and chopped
1 tbsp	Olive oil
2 tbsp	Sweet onion, diced
2 tbsp	Red bell pepper, diced
1 tsp	Minced garlic
1 tsp	Lemon juice
Pinch	Lemon zest
Etc	Salt and pepper, to taste

Directions

Wash, destem, and chop the kale until you have two heaping cups (it will shrink when cooking).

In a large skillet, on medium heat, add the tablespoon of olive oil. When the oil begins to glisten add in the onion, garlic, and bell pepper. **Sauté** the mixture, stirring regularly, until the onion begins to clarify (usually takes 3-4 minutes).

Add in the chopped kale and the lemon juice; stir, cover, and reduce heat to low. Let the mixture **simmer** for 3-4 more minutes. Uncover and stir and check to see if the kale has **wilted until soft, but not soggy**. If it is still a bit too crunchy, then cover and wait 1-2 more minutes. After the mixture is cooked you can plate.

Prep the avocado by cutting it in half, lengthwise. Squeeze the two halves into a bowl and remove the large seed. Then add the vinegar, garlic, pepper, and spices. **Mash** with a fork until the texture is soft.

Place the mixture of seeds, spices, and oil in a small bowl. **Mix well** with a fork to ensure the oil and spices cover the entire seed mixture.

In a skillet, on low heat, add the seasoned seed mix and stir to make a single layer in the skillet. **Heat** for 1-1.5 minutes, stirring to ensure it doesn't burn. The mixture should be fragrant.

When completely cooked, place the seeds on the plate on top of the salad, and add the salt and pepper to taste with a dollop of the avocado mixture.

Variation: If you are not a fan of kale, then switch it out for any salad or greens mix. If shifting to a cold salad, then don't cook the onion or bell pepper.

Lunch & dinner recipes

Baby bok choy & kimchi burger cup

with cucumber salad

Recipe from
Thorne's *Take 5 Daily*

Serves: 4

Ingredients

Burger cup

2 lbs	Grass-fed ground beef
1 tsp	Fish sauce
1 tsp	Pepper
1 tsp	Minced garlic
1 ½ tbsp	Coconut aminos
1 tsp	Shichimi togarashi (optional)

Cucumber salad

1 medium	Cucumber, sliced in crescents
1 cup	Grape tomatoes, quartered lengthwise
½ cup	Rice wine vinegar
1 tsp	Sugar or honey
½ tsp	Sambal oelek
1 tsp	Coconut aminos

Baby bok choy kimchi mixture

3 small	Baby Bok choy, chopped and separated (stems and leafy greens)
2 cups	Baby bella mushrooms, sliced
1 cup	Kimchi, chopped
1 tbsp	Ghee or olive oil

Directions

Preheat the oven to **350 degrees**.

In a large bowl, **mix the burger cup ingredients** together until they are evenly incorporated in the meat. Let sit while you prep the veggie mixture.

In a large skillet, on medium heat, add the **ghee or olive oil** and heat.

Add the chopped Bok choy stems and the mushrooms. **Sauté** for 5-6 minutes, stirring frequently until they begin to soften.

Add the greens of the Bok choy and kimchi to the mixture. Sauté, stirring frequently for 3-4 minutes. Remove from heat.

Divide burger meat into 4 equal size balls, place them on a foiled cookie sheet. Using a small bowl or large-bottom glass, press down to begin **forming a bowl shape** with the meat. You might need to finish molding the overall shape by hand.

Once each bowl shape is achieved, **fill** each burger cup with the skillet veggie mixture.

Place a tented piece of foil over the burger cups and **bake for 30 minutes**.

While the burgers are cooking, prep the cucumber salad.

Using a peeler, remove small section of lengthwise peel to make a striped appearance (optional).

Cut the cucumber in half, lengthwise, and discard the seed material using a small spoon.

Carefully slice each cucumber in half thinly and **add** slices to a medium-sized bowl.

Quarter the tomatoes lengthwise and add to the bowl, and gently mix.

In a small bowl, **mix** the vinegar, sugar or honey, sambal, and coconut aminos together. Once mixed, **drizzle** the mixture over the cucumber/tomato mixture and stir to evenly coat. Let salad sit while burgers cook, stirring regularly.

Pull burgers out of the woven, plate with cucumber salad and enjoy!

Lunch & dinner recipes

Cherry chipotle veggie chili

Serves: 6-8

Recipe adapted from **Thorne's *Take 5 Daily***

This recipe works well as a make-ahead meal. For an easy lunch, freeze individual portions and place one in the refrigerator the night before to thaw then warm up at lunch time.

Ingredients

2	Carrots, diced
1	Yellow onion, diced
3 tbsp	Diced garlic
2	Red bell peppers, diced
28 oz	Canned diced tomatoes (or swap for fresh tomatoes if available – one can equals about 10-12 whole peeled tomatoes)
2 cups	Pitted black cherries (frozen or fresh)
3	Chipotle chilis from a can, finely diced
⅓ cup	Brown sugar
1 cup	Water
1 cup	Low sodium vegetable broth
15 oz	Canned red kidney beans
15 oz	Canned great northern or cannellini beans
2 tbsp	Olive oil

Seasonings

2 tsp	Cumin
½ tsp	Turmeric
½ tsp	Chili powder
¼ tsp	Cayenne pepper
¼ tsp	Cinnamon
¼ tsp	Ground ginger
1 tbsp	Adobo sauce (from canned chipotle peppers)
Etc	Salt / garlic salt (to taste)
	Fresh ground black pepper (to taste)

Directions

Drain and rinse beans, then set aside.

In a large pot over medium heat, **heat** the 2 tablespoons of olive oil.

Sauté carrots, onion, garlic, and bell peppers until they are soft (about 5-8 minutes).

Stir in the **seasonings** – cumin, turmeric, chili powder, cayenne pepper, cinnamon, ground ginger, and adobo sauce.

Add tomatoes, cherries, chipotles, brown sugar, water, and vegetable broth. Stir everything together and bring to a boil. Cover and **reduce to a low simmer**, stirring occasionally.

Cook for 10 more minutes, then **add** the beans. Cook for another 3-5 minutes, then remove from heat. Let chili cool for 5-10 minutes before serving.

Garnish options: shredded cheese, plain yogurt, diced green onions, fresh cilantro, jalapeno slices, lime wedges.

Lunch & dinner recipes

Poached salmon

with spring onions and white wine

Serves: 4-6

Ingredients

2 lbs	Wild salmon fillet
2	Spring onions
3-4	Sprigs fresh thyme
3 tbsp	Extra-virgin olive oil
½ cup	White wine
Optional	Salt, pepper, lemon, garlic, other spices

Directions

Rinse the fish and pat dry. **Place** into pan skin-side down.

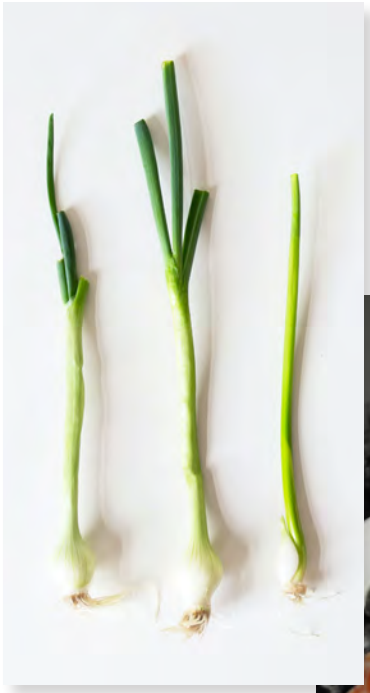
Trim the ends off the onions and cut in half lengthwise; **run** under cool water to remove any dirt or sand.

Place the onions and fresh thyme on top of salmon. **Drizzle** with olive oil.

Add the white wine to the pan and **season** the fillet with salt and pepper and other preferred spices.

Cover and **poach** over medium/medium-low heat for 10-12 minutes. **Serve** immediately.

This recipe is from *Nourishing Meals: Healthy Gluten-free Recipes for the Whole Family,* by Alissa Segersten and Tom Malterre.



Soup & stew recipes

Slow cooker chicken stew

Serves: 4-6

Serve this stew over cooked long-grain brown rice with a salad on the side. Using a slow cooker the flavors come together beautifully and the chicken is very tender.

Ingredients

1 cup	Diced shallots
3 stalks	Celery, diced
4	Carrots, peeled and diced
1 ½ lbs	Boneless chicken breast, cut into chunks
14 oz	Canned crushed fire-roasted tomatoes
1 cup	Water
⅓ cup	Dry white wine
¼ cup	Extra virgin olive oil
1 tbsp	Italian seasoning
1-2 tsp	Herbamare or sea salt
Etc	Ground black pepper

Directions

Add all ingredients to a slow cooker and cook on high for 4-5 hours or on low for 6-8 hours.

Oven variation: Place all ingredients in a covered casserole dish and bake for 2.5 hours at 300 degrees.

This recipe is from *Nourishing Meals: Healthy Gluten-free Recipes for the Whole Family*, by Alissa Segersten and Tom Malterre.

Italian white bean soup

Serves: 12

Ingredients

2-3 tbsp	Extra virgin olive oil
12 cups	Chicken stock
1 large	Onion, chopped
4 cups	Diced tomatoes
3-4 cloves	Garlic, crushed
3-4 tbsp	Tomato paste
1 tsp	Paprika
6 cups	Cooked navy beans
1 tsp	Ground black pepper
2-3 cups	Thinly sliced kale
2 tbsp	Italian seasoning
½-1 cup	Chopped parsley
4-5	Carrots, diced
3 tsp	Herbamare or sea salt
3-4 stalks	Celery, chopped
½ lb	Green beans, cut into 2-inch pieces

Directions

Heat an 8-quart pot over medium heat and add olive oil, then add onion; **sauté** for 8-10 minutes or until soft and beginning to change color.

Add garlic, spices, and herbs; sauté one minute more. Then add carrots, celery, and green beans; sauté for 2 minutes. Then add stock, tomatoes, and tomato paste, and **cover and simmer** for 20-25 minutes or until the vegetables are tender.

Stir in cooked beans, kale, and parsley; simmer 5 minutes more. Add salt; taste and adjust salt and seasonings if necessary. Store leftovers in the refrigerator for up to a week.

This recipe is from *Nourishing Meals: Healthy Gluten-free Recipes for the Whole Family,* by Alissa Segersten and Tom Malterre.

Side dishes

Arugula Salad

Serves: 1

Recipe from
Thorne's *Take 5 Daily*

Ingredients

1 cup	Baby arugula
1 tbsp	Sweet onion, diced
1 tbsp	Red bell pepper, diced
¼ cup	Mandarin orange segments
1 tsp	Olive oil
Squeeze	Lemon
Pinch	Lemon zest
Etc	Salt and pepper, to taste

Greek salad with chickpeas

Serves: 6

Ingredients

1 head	Romaine lettuce, rinsed and spun dry
2 cups	Cherry tomatoes, cut into halves
2 cups	Cooked chickpeas, rinsed and drained
1 cup	Pitted kalamata olives, sliced
½ small	Red onion, diced
1 large	Cucumber, sliced
Etc	Fresh mint leaves (optional) Crumbled feta cheese (optional)

Greek Dressing

½ cup	Extra virgin olive oil
6 tbsp	Squeezed lemon juice
1-2 cloves	Garlic
2 tbsp	Fresh oregano leaves
½ tsp	Sea salt
½ tsp	Ground black pepper

Directions

Chop the romaine lettuce, place it in a large salad bowl, and **top** with the remaining salad ingredients. **Add** fresh mint leaves and feta cheese.

Place dressing ingredients into a blender and blend until smooth. Pour the dressing over the salad and **toss together**. Store extra salad in the refrigerator for up to two days. Dressing will last about 10 days in the refrigerator.

Variation: To make this dressing citrus-free, replace the lemon juice with organic red or white wine vinegar.

This recipe is from *Nourishing Meals: Healthy Gluten-free Recipes for the Whole Family,* by Alissa Segersten and Tom Malterre.

Side dishes

Roasted brussel sprouts

Recipe adapted from **Thorne's *Take 5 Daily***

Serves: 2-4

Ingredients

1 pound	Brussels sprouts, washed, trimmed, and quartered
1 tbsp	Olive oil
Etc	Salt and pepper

Directions

Preheat the oven to 400 degrees. Prep the Brussels sprouts and place the quartered sprouts on a baking tray. Drizzle the olive oil over the sprouts and sprinkle with salt and pepper. Mix thoroughly on the baking sheet so everything is coated evenly.

Bake the Brussels sprouts for 25 minutes, stirring once halfway through.

Quinoa tabouli

Serves: 6-8

Ingredients

6 cups	Cooked quinoa
1 large	Cucumber, diced (~3 cups)
2 cups	Fresh tomatoes, diced
½ cup	Fresh mint, finely chopped
½ cup	Parsley, finely chopped

Dressing

½ cup	Fresh lemon juice
⅓ cup	Extra virgin olive oil
2 cloves	Garlic, crushed
1 tsp	Herbamare

Directions

Place **cooled** quinoa into a large bowl. **Add** diced cucumber, tomatoes, fresh mint, and parsley. In a small bowl **whisk** the ingredients for the dressing.

Pour dressing over quinoa and vegetables. **Toss** together and serve.

Store leftovers in the refrigerator for up to five days.

This recipe is from *Nourishing Meals: Healthy Gluten-free Recipes for the Whole Family*, by Alissa Segersten and Tom Malterre.

Roasted Asparagus

Recipe adapted from **Thorne's *Take 5 Daily***

Serves: 2-4

Ingredients

1 bunch	Asparagus (on the thinner side), trimmed
3 tbsp	Olive oil
¼ tsp	Minced garlic
Etc	Salt and pepper
	Balsamic vinegar (optional)

Directions

Preheat the oven to 425 degrees. **Chop** off the woody portion of the asparagus stems. **Place** the asparagus in a mixing bowl and toss with the oil, garlic, salt, and pepper until evenly coated.

Place on a baking sheet and roast for 12-14 minutes or until slightly tender.

Snacks

Herb & olive oil hummus

Yield: 4 cups

Hummus is a traditional Middle Eastern dish made from garbanzo beans, also called chickpeas, and tahini. Use it as a dip for raw vegetables.

Ingredients

3 cups	Cooked garbanzo beans, or 2 cans drained
1 tsp	Ground cumin
¼ cup	Bean cooking liquid or water
½ cup	Sesame tahini
½ cup	Squeezed lemon juice
¼ cup	Extra virgin olive oil
2-3 cloves	Garlic, crushed
1-2 tbsp	Fresh marjoram leaves
1 tsp	Ground cumin
1-2 tsp	Sea salt or Herbamare®
Small	Handful fresh parsley
2-3 tbsp	Fresh oregano leaves

Directions

Place all ingredients **except** for the fresh herbs into a food processor fitted with the "s" blade and process until smooth and **creamy**. You will want to taste the hummus to see if it needs more lemon, tahini, garlic, or salt. Add more water if needed for a thinner consistency and process again. **Add** the fresh herbs and pulse until combined, but not completely pureed.

Place the hummus into serving dishes and **sprinkle** with extra chopped herbs and a drizzle of extra virgin olive oil. Store in a covered glass container in the refrigerator for up to a week.

Nutrition Tip: Along with being fertility supportive, a Mediterranean-style diet also has protective effects on our hearts. Some researchers attribute this to the beneficial phenolic compounds found in the fruits, vegetables, and the high-quality olive oil used in the Mediterranean Diet. One study found that when people used olive oil exclusively in food preparation, the likelihood of coronary heart disease reduced by 47%. When saturated fat was replaced with olive oil, total cholesterol dropped 13.4% and LDL-cholesterol dropped 18%.

This recipe is from *Nourishing Meals: Healthy Gluten-free Recipes for the Whole Family,* by Alissa Segersten and Tom Malterre.

Snacks

Crunchy Roasted Chickpeas

Recipe from
Thorne's Take 5 Daily

Serves: 2-3

Ingredients

2 cans	Chickpeas	**1 tsp**	Onion powder
~1 tbsp	Olive oil	**2 tsp**	Baking powder
1 tsp	Cumin	**Etc**	Salt, to taste
2 tsp	Garlic powder		Pepper, to taste

Directions

Preheat the oven to 445 degrees.

Put foil **over** a baking sheet and **coat** with non-stick baking spray.

Open and **drain** liquid from the chickpeas. **Pour** chickpeas in a strainer and rinse. Use a paper towel to **pat dry** the chickpeas. The drier the chickpeas, the crispier and crunchier they will be, so get them as dry as possible.

Place chickpeas in a mixing bowl. **Coat** the chickpeas in baking powder and salt. Do not season them yet with anything but salt so the seasonings won't burn up.

Place chickpeas on the foil-lined baking sheet and **place** in oven.

Cook for about 40-45 minutes. **Remove** from oven and let them cool. In a bowl, **mix** olive oil and seasonings then add the cooled chickpeas. Cover and shake or stir to coat chickpeas with seasonings.

Shake the bowl and enjoy.

Kale Chips

Recipe from
Thorne's Take 5 Daily

Serves: 6

Ingredients

~2	Small bunches of organic kale, washed with stems trimmed	**1 tsp**	Ground pepper
		¼ tsp	Garlic salt
1 tbsp	Extra-virgin olive oil	**1 tsp**	Salt

Directions

Preheat the oven to 400 degrees.

Remove rough stems from the kale by tearing the leaves off. Toss out stems and **place** leaves in a mixing bowl.

Pat leaves dry with a paper towel.

Toss leaves with olive oil and seasonings. Be sure to **coat** the leaves evenly and thoroughly.

Place leaves on 2-3 lightly greased baking sheets. Be sure the leaves don't overlap, or they won't get crispy (make the chips in batches if needed).

Place baking sheets in oven and **roast** for about 10-13 minutes – until brown and crispy.

NOTE: If you want them to be green but crispy, you can roast them in a cooler 300-degree oven for a longer time. Be sure to keep an eye on them.

Remove from oven, **cool, and serve.**

Snacks

Nutty Granola

Yields: 4-5 cups

Ingredients

1 cup	Raw almonds	**2 tsp**	Cinnamon
1 cup	Raw pecans	**¼ tsp**	Nutmeg
1 cup	Raw walnuts	**¼ tsp**	Salt
½ cup	Raw sunflower seeds	**¼ cup**	Maple syrup or honey
½ cup	Raw pumpkin seeds	**¾ cup**	Dried cranberries/raisins
2-3 tbsp	Whole chia seeds	**¼ cup**	Vegetable oil or melted coconut oil

Directions

Preheat oven to 300 degrees. **Line** a large baking dish, rimmed cookie sheet, or jelly roll pan with parchment paper.

Place the **almonds, pecans, and walnuts** in a food processor and process until you have a chunky, coarse meal. **Pour** into a medium-sized mixing bowl.

Add the sunflower seeds, pumpkin seeds, chia seeds, cinnamon, nutmeg, and salt. **Stir** together to evenly distribute the spices and salt.

Add the syrup or honey and **mix** using a large spoon. Spread on the parchment-lined cookie sheet and **bake for 35-40 minutes.**

Remove from the oven and **stir in the dried cranberries/raisins**. Let cool completely on the cookie sheet, then **transfer** to a glass jar to store.

This recipe is from *Nourishing Meals: Healthy Gluten-free Recipes for the Whole Family,* by Alissa Segersten and Tom Malterre.

Berry Citrus Fruit Salad

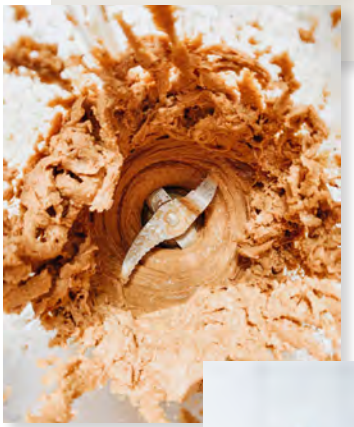
Recipe adapted from Thorne's *Take 5 Daily*

Serves: 1

Ingredients

¼ cup	Mixed berries like raspberries, blueberries and/or blackberries
1	Clementine, peeled and sectioned
1 pinch	Finely chopped mint
1 pinch	Fresh grated lemon zest
¼ tsp	Lemon juice

Desserts



Chocolate sunbutter cookies

Yields: 12-15 cookies

These cookies provide great nutrition and high fiber in every bite! Sunbutter is made from ground roasted sunflower seeds. It is a great high-protein alternative to nut butters. Serve these grain-free, vegan cookies with a glass of raw almond milk or a green smoothie.

Wet ingredients

1 cup	Organic Sunbutter
⅓ cup	Coconut nectar
1 tbsp	Ground chia seeds
3 tbsp	Water
1 tsp	Vanilla

Dry ingredients

¼ cup	Cocoa powder
½ tsp	Baking soda
¼ tsp	Sea salt
½ cup	Mini chocolate chips (optional)

Directions

Preheat oven to 350 degrees. Lightly grease a cookie sheet with coconut oil. In a medium-sized mixing bowl, using an electric mixer, beat together the wet ingredients until light and fluffy. Add the dry ingredients. Beat together until thickened and combined then mix in the chocolate chips.

Roll equal-sized balls of dough in your hands making 12-15 balls. Press dough ball down using the tongs of a fork into a crisscross pattern. Bake for approximately 12-15 minutes. Cool on a wire rack. Cookies will be fragile and crumbly when hot but will firm up when completely cooled.

This recipe is from *Nourishing Meals: Healthy Gluten-free Recipes for the Whole Family,* by Alissa Segersten and Tom Malterre.

Berry parfait

with orange cashew cream

Serves: 4-6

Ingredients

1 cup	Raw cashews, soaked for 3 hours
½ cup	Freshly squeezed orange juice
2	Dates, pitted
½ tsp	Orange zest
Pinch	Sea salt
Dash	Maple syrup (optional)
4 cups	Fresh organic berries
Etc	Hemp seeds

Directions

To make the cashew cream, drain and rinse the cashews, place them into a blender along with the orange juice, dates, orange zest, and salt.

Blend on high until smooth and **creamy**. You might need to turn off the blender, scrape down the sides, and blend again a few times. Taste and add a dash of maple syrup for a sweeter cream and blend again if needed.

Set out 4-6 parfait cups or clear juice glasses. Add a **layer** of berries to the bottom of each cup or glass, then a thin layer of the cashew cream, then another layer of berries, then a final layer of cashew cream. **Sprinkle** the top layer with hemp seeds.

Nutrition Tip: Making your own orange juice from fresh oranges is much more nutritious than buying it store-bought. Pasteurization will kill harmful bacteria to prolong shelf life, but it will also destroy live enzymes and vitamins. Fresh orange juice contains all of the enzymes, vitamin C, and antioxidants present in the orange, which makes the juice far more digestible and easier to assimilate.

Shakes

Blueberry Banana

Serves: 2

Ingredients

2 servings	Vanilla protein powder
16–20 oz	Liquid of choice (milk, coconut milk, almond milk, cashew milk, water, soymilk)
1 cup	Blueberries (frozen or fresh)
1	Banana (frozen or fresh)
¼ cup	Walnuts
1 tbsp	Chia or flaxseed
1 cup	Ice

Chocolate Almond

Serves: 2

Ingredients

2 servings	Chocolate protein powder
16–20 oz	Liquid of choice (milk, coconut milk, almond milk, cashew milk, water, soy milk)
½ cup	Almonds
1 tbsp	Chia or flaxseed
1 cup	Ice

Apple Pie

Serves: 1

Ingredients

1 serving	Vanilla protein powder
4 oz	Unsweetened organic applesauce
8–10 oz	Liquid of choice (milk, coconut milk, almond milk, cashew milk, water, soy milk)
¼ tsp	Cinnamon

For an extra cold shake: Freeze single serving containers of apple sauce.

Nutty Vanilla

Serves: 1

Ingredients

1 serving	Vanilla protein powder
¼ cup	Cashews blended with 2 ounces of water until creamy
8–10 oz	Liquid of choice (milk, coconut milk, almond milk, cashew milk, water, soy milk)
⅛ tsp	Organic vanilla powder or vanilla extract
1 tbsp	Chia seeds

For a strawberry twist: Add ¼ cup organic strawberries.

Shakes

Peaches & Cream

Serves: 1

Ingredients

1 serving	Vanilla protein powder
1	Peach (fresh or frozen)
8–10 oz	Liquid of choice (milk, coconut milk, almond milk, cashew milk, water, soy milk)
4–6	Ice cubes
Dash	Vanilla or almond extract (optional)

Super Green

Serves: 1

Ingredients

1 serving	Vanilla protein powder
1 handful	Baby spinach or kale
½	Banana (fresh or frozen)
1 tbsp	Almond butter
8–10 oz	Liquid of choice (milk, coconut milk, almond milk, cashew milk, water, soy milk)

Peanut Butter Chocolate

Serves: 1

Ingredients

1 serving	Chocolate protein powder
2 tbsp	Peanut butter
4–6	Ice cubes
8–10 oz	Liquid of choice (milk, coconut milk, almond milk, cashew milk, water, soy milk)

Thorne's Whey Protein Isolate, VeganPro Complex®, or your favorite protein powder can be used in any of the shake recipes

A final word

As you can see, healthy lifestyle choices play a major role in supporting reproductive health. We hope you have found this guide to be informative and helpful, and we encourage you to reference it frequently as you move forward in your fertility journey.

Understanding your hormones and menstrual cycle coupled with the right combination of nutrition, exercise, stress reduction, and nutritional supplementation can help to support your individual reproductive timeline.

At Thorne, we consider ourselves your partner in managing your health.

Take 5 Articles

Can Your Diet Boost Your Fertility? Get the Facts From Mayo Clinic

The Most Frequent Cause of Female Infertility? PCOS

12 Biomarkers that Impact Your Fertility

Managing Stress When Trying to Conceive

4 Benefits of Inositol for Women's Metabolic Health and Hormone Balance*

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Four Common Endocrine Disruptors and How to Avoid Them

Meet the Sex Hormones and Their Role in Your Health

What is a Modified Mediterranean Diet?

How Does Methylation Affect Fertility?

Prenatal Vitamins and Lead: What A Woman Needs to Know

Why is DHA Important During Pregnancy?

Common but Sneaky Symptoms of Low Iron During Pregnancy

Can You Take Vitamin D During Pregnancy?

How Will Pregnancy Affect My Blood Sugar Levels?

6 Women's Health Allies to Support You During Every Life Phase

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