Menopause Handbook

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Menopause Handbook

by Avina Women's Care

Embrace the Chaos!

"The chaos going on inside does not always have to be reflected on the outside. Find reasons to appreciate the aging process instead of fighting it. It's part of how a woman's life changes. You can't stop it, so make peace with it… allow yourself some grace, but also push to be the best version of yourself."

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Welcome to the Avina Women's Care Handbook for Menopause.

At Avina Women's Care, we strive to provide the best and most up-to-date care for the women of Central Ohio, and we hope that this handbook can assist you in navigating this phase of your life.

The average woman can spend well over one third of her life in menopause and, at times, the early symptoms can be quite troublesome.

We have organized this guide into chapters that address the most frequently asked questions and concerns and will provide data driven solutions. The North American Menopause Society ***(NAMS)*** and American College of Obstetrics and Gynecology ***(ACOG)***, two highly respected and data-driven organizations, as well as regional experts in nutrition and physical therapy, have contributed to the materials in this handbook. We believe that the information provided will help you navigate this stage of your life with knowledge and confidence!

Avina Women's Care Providers & Associates

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Chapter 1
Menopause Overview

Menopause Definition

Menopause is defined as the permanent cessation of ovarian function and the transition into the non-reproductive phase of your life.

The official definition is the cessation of periods for 1 year or the surgical removal of the ovaries. It's a profound change in one's life marked by changes in many systems.

The average age of menopause is 50, but the transition can start several years prior, and symptoms can last for years. The transition can present with a multitude of symptoms including hot flashes, depressed mood, sleep disturbances, weight gain, cognitive decline, genitourinary symptoms, joint pain, and breast pain.

Menopause Onset

Once more, menopause is defined as one year without a period *(naturally)* or the removal of the ovaries before the end of menstruation *(surgically)*. The average age of completion is 50, but there are several factors that influence this.

Some ethnic backgrounds may vary in onset *(Japanese women may experience this later than non-Hispanic white women)*. Other variables include the timing of one's first menses *(an earlier first period increases the risk of early menopause)*, heart disease *(early cardiovascular events prior to age 35 are associated with an earlier menopause)*, alcohol intake *(lower consumption is associated with later onset of menopause)*, and cigarette smoking *(associated with earlier onset)* to name a few.

The years leading up to menopause are considered "perimenopause" or "menopause transition ***(MT)***." These are the years where women start to have symptoms as mentioned in the previous section, along with changes in their cycles. If you have heavy or long periods *(lasting longer than 10 days)* or have breast concerns, you should seek advice from your provider.

Chapter 2
Treatment Options

Combating Symptoms Naturally

There are many women who enter the transition with very few symptoms.

Others, however, have severe symptoms. Some natural remedies or lifestyle modifications may be enough to alleviate them.

The following are a few that are supported by the **North American Menopause Society *(NAMS)*.**

For hot flashes and/or sleep disturbances, the following products can be found over the counter:

- **Isoflavones and phytoestrogens** *(soy, flaxseed, lentils, red clover, and chickpeas)*
- **Herbal remedies** *(black cohosh)*
- **Evening primrose oil**

In terms of lifestyle modifications, the following have been shown to have some success:

- Weight loss
- Cognitive Behavioral Therapy
- Hypnosis
- Mindfulness

One study that showed a Vegan diet with ½ cup of cooked soybeans a day was helpful in reducing hot flashes!

Finally, clothing modifications *(dressing in layers)*, cold beverages, limiting alcohol consumption, and actively working to reduce stress are other lifestyle changes you can make to combat some of the symptoms of menopause.

Vaginal dryness can be managed with over-the-counter lubricants such as:

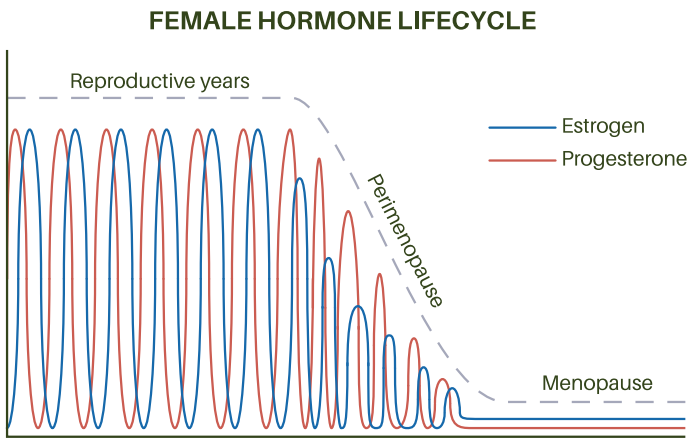
- Replens
- K-Y vaginal moisturizer
- Vagisil

Hormone Replacement Therapy

Hormone replacement therapy remains the most effective treatment for vasomotor symptoms, more commonly known as “hot flashes”. It is also an effective treatment for genitourinary syndrome of menopause, or “vulvar vaginal dryness”, and has been shown to prevent bone loss and fracture. The risks of hormone replacement therapy differ depending on the type, dose, and duration of use. Treatment should therefore be individualized to identify the most appropriate plan of care to maximize benefits and minimize risks.

For women less than 60 years old or within 10 years of the onset of menopause and have no contraindications *(*see p14)* the risk-benefit ratio is most favorable for treatment of hot flashes. The case is the same for those with increased risk for bone loss or fracture.

For women who begin hormone treatment greater than 10 years from the onset of menopause or those 60 years and older, the risk-benefit ratio appears less favorable due to the greater absolute risks of coronary heart disease, stroke, blood clots, and dementia. Longer use of therapy should be individualized based on documented symptoms. For those suffering from genitourinary symptoms that are not relieved by over-the-counter therapies and without indications for systemic hormone use, low dose vaginal estrogen therapy or other therapies are recommended. *(See Chapter 3)*



Combination Estrogen and Progesterone	
Oral Preparation	
Activella/Mimvey	Estradiol/norethindrone acetate
Angeliq	Estradiol/drospirenone
Femhrt/Jevantique lo/	
Jintel	Ethinyl estradiol/norethindrone acetate
Prefest	Estradiol/norgestimate
PremPro	Conjugated estrogen/Medroxyprogesterone
Bijuva	Estradiol/micronized progesterone
Transdermal Preparations (absorbed through the skin)	
ClimeraPro	Estradiol/levonorgestrel
Combipatch	Estradiol/norethindrone acetate
Combination Estrogen & Selective Estrogen Receptor Modulator (SERM)	
DuAvee	Conjugated estrogen/bazedoxifene
Estrogen only products *(for those who do not have a uterus)*	
Oral Formulations	
Brand Name	Generic Name
Estrace	Estradiol
Menest	Esterified Estrogen
Premarin	Conjugated Estrogen
Transdermal (absorbed through the skin)	
Alora	Estradiol patch
Climera	Estradiol patch
Divigel	Estradiol gel
Elestrin	Estradiol gel
Estraderm	Estradiol patch
EstroGel	Estradiol gel
Evamist	Estradiol skin spray
Menostar	Estradiol patch
Minivelle	Estradiol patch
Vivelle	Estradiol patch
Vivelle Dot	Estradiol patch
Vaginal Insert (absorbed through the vaginal wall)	
Femring	Estradiol Acetate
Progesterone products *(oral)*	
Prometrium	Micronized progesterone
Provera	Medroxyprogesterone acetate
Aygestin	Norethindrone

NOTE: There are multiple generic formulations of many of the medications listed

The risks of hormone therapy differ based on whether there is a need for a progesterone to be added to estrogen therapy. This is for protection from the risk of endometrial cancer from taking estrogen alone when a woman still has her uterus. Therefore, if someone has a hysterectomy, no progesterone is needed.

***Conditions to be discussed with your physician before starting hormones:**

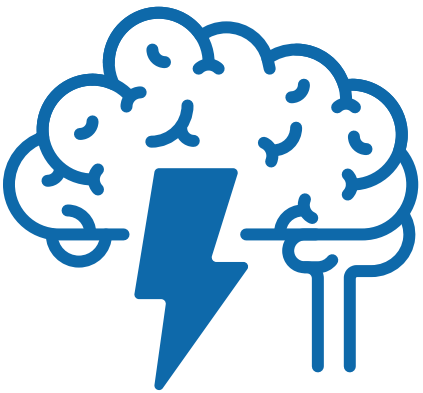
- Vaginal bleeding
- History of breast or uterine cancer
- History of a blood clot, stroke, or heart attack
- Liver disease
- Reaction to hormone medication in the past

Non-Hormonal Options

For those who choose not to take hormone therapy, or are not eligible, there are several non-hormonal treatments to consider:

- Venlafaxine *(Effexor)*
- Paroxetine *(Brisdelle)*
- Gabapentin *(Neurontin)*
- Clonidine

NEW, non-hormonal, options recently approved for hot flashes:



Hot flashes are triggered in the hypothalamus *(our thermoregulatory area of the brain)*. Recently, researchers have found that the KNDy receptor may be where hot flashes begin. They learned that these receptors remain inactive when estrogen binds them. Once this stops, neurotransmitters are released that trigger the feeling of being "hot".

A new treatment for vasomotor symptoms has been approved! Its name is **Veozah** ***(Fexolinetant)***. It is a Neurokinin 3 Receptor Antagonist *(it works in the thermoregulatory area of the brain)* and its use will likely be for women who cannot take traditional therapies. It's recommended that blood work be performed prior to starting to check the liver and kidneys. Please contact your provider for further information if interested.

Compounded hormone therapy has been discussed as an option for some women. The following are statements regarding this topic from **NAMS** and **ACOG**.

NAMS/ACOG Statements

Women are frequently asking about the use of compounded hormone therapy and salivary hormone testing. NAMS has the following to say about this:

"Compounded hormone therapies are prepared by a compounding pharmacist using a provider's prescription and may combine multiple hormones *(estradiol, estrone, estriol, dehydroepiandrosterone [DHEA], testosterone, progesterone)*, use untested, unapproved combinations or formulations, or be administered in nonstandard *(untested)* routes such as subdermal implants, pellets, or troches. Compounded HT has been prescribed or dosed on the basis of salivary hormone testing; however, salivary testing for HT is considered unreliable because of differences in hormone pharmacokinetics and absorption, diurnal variation, and interindividual and intraindividual variability. Prescribers should only consider compounded HT if women cannot tolerate a government-

approved therapy for reasons such as allergies to ingredients or for a dose or formulation not currently available in government-approved therapies. With interim guidance on compounding safety and quality control from FDA, quality control of compounded HT may improve."

Key points:

- Compounded bioidentical HT presents safety concerns such as minimal government regulation and monitoring, overdosing or underdosing, presence of impurities or lack of sterility, lack of scientific efficacy and safety data, and lack of a label outlining risks.
- Salivary hormone testing to determine dosing is unreliable.
- Prescribers of compounded bioidentical HT should document the medical indication for compounded HT over government-approved therapies, such as allergy or the need for dosing or a formulation not available in FDA-approved products.

The American College of Obstetricians and Gynecologists' Committee on Gynecologic Practice and the Practice Committee of the American Society for Reproductive Medicine make the following conclusions and recommendations:

- Evidence is lacking to support superiority claims of compounded bioidentical hormones over conventional menopausal hormone therapy.
- Customized compounded hormones pose additional risks. These preparations have variable purity and potency and lack efficacy and safety data.
- Because of variable bioavailability and bioactivity, both underdosage and overdosage are possible.
- Conventional hormone therapy is preferred over compounded hormone therapy given the available data.
- Despite claims to the contrary, evidence is inadequate to support increased efficacy or safety for individualized hormone therapy regimens based on salivary, serum, or urinary testing.

Based on the statements above, we recommend that all women refer to their gynecologist before seeking compounded hormone therapy.

Adjustments

"Make adjustments that allow you to be
comfortable. Change your wardrobe, shoes,
makeup … your mindset.
Don't try to be 20…30 (and for some of us… 40).
Be/look/feel fabulous!
Stay off of social media pages with very young
influencers. It's not where/who you are,
and that is OKAY!!!
Be realistic with your expectations.
Don't set yourself up for mental misery."

Chapter 3 Genitourinary Symptoms of Menopause *(GSM)*

Symptoms are Treatable

Vaginal atrophy or dryness is a direct result of the low estrogen state associated with menopause, resulting in changes in the genitourinary tract *(vagina, urethra, and labia)*.

The North American Menopause Society estimates that 10–40% of menopausal women will experience one or more symptoms of vaginal atrophy. Vaginal atrophy causes bothersome symptoms commonly associated with menopause including vaginal or vulvar dryness, discharge, itching, painful intercourse and urinary dribbling. These changes result in narrowing of the vagina, thinning of the labia, and thinning of the tissues surrounding the urethra.

Vaginal pH becomes more alkaline, which may alter the vaginal bacteria and increase the risk of infection. Vaginal secretions may decrease, but occasionally increase from inflammation caused by dryness and changes in pH. These changes from vaginal dryness can lead to significant dyspareunia (painful intercourse), which can impair sexual function.

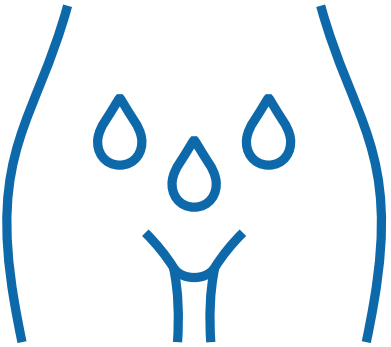
Measures of sexual dysfunction are noted to be present at higher rates in women with vaginal dryness than in unaffected menopausal women. Collectively, these symptoms may have a detrimental effect on a woman's quality of life, self-esteem, and sexual intimacy.

In addition, many women experience urinary leakage. This is a result of the thinning of tissues around the urethra. This can present with "dribbling" or increasing leakage with physical activity.

There are several **GSM** therapies available. Most women begin by using over-the-counter vaginal moisturizers, ***(Replens, KY products, Astroglide, and coconut oil to name a few)***. If these are ineffective, we encourage you to speak with your provider about other options. The effectiveness of vaginal estrogen has been demonstrated to be relatively high, and there are several products available.

Vaginal Creams:

- Estradiol
- Estrace
- Premarin



Vaginal Inserts:

- Estradiol tablets
- Yuvafem
- Vagifem
- Imvexxy
- Estring

Oral Selective Estrogen Modulators

(oral products for the vagina):

- Ospemifene
- Osphena

Chapter 4
Nutrition

Principles of Nutrition in Menopause

Enjoying a nutritious, balanced eating plan along with regular physical activity and other healthy lifestyle habits during menopause supports an easier transition and quality of life.

Plant Based

Plant-based diets are associated with lower risks of many of the diseases associated with aging and weight management. Focusing on plants is part of focusing on “what to eat.” Plants provide fiber and antioxidants which are particularly beneficial during menopause for gut health and their anti-inflammatory properties.

Eat vegetables, fruits, whole grains, and legumes for their benefits to your health and well-being. Vegetables and fruits are the food prescription for brain, gut, eye and heart health, cancer, and diabetes prevention and more.

Start with vegetables – aim to include 2 or more cups of non-starchy vegetables every day. Reflect on your current vegetable intake and consider if there are adjustments you can make.

Fruits also provide a great deal of nutrition and are low in calories. Eating up to 1 cup of fruit per day can fit easily within your calorie needs.

Make your grains whole grains for optimal health benefits. White grains provide little nutrients other than calories. While whole grains provide fiber, antioxidants, vitamins and minerals.

Legumes (chickpeas, soybeans, kidneys beans, lentils, etc.) are particularly high in minerals, fiber, and a good source of protein.

Timing Matters

You should feed your body during daytime hours. This is when your body will best metabolize food and when it generally needs more fuel. This is most important to help with weight management. Consuming a large amount of calories in the evenings is associated with weight gain. Aim to spread food consumption throughout the day and consume no more than 1/3 of your daily calories during dinner/evenings.

When we eat, our bodies make more insulin. Insulin is a hormone that causes fat storage. This is important for absorbing the nutrition we need into our cells. However, in general we have more insulin resistance in the evenings than earlier in the day. When we eat our largest meal or a lot of evening snacks this results in the body producing a large amount of insulin in the evening.

Give your body a break from eating overnight for at least 12 hours if possible. Giving your body this break from insulin production that occurs with eating is associated with health benefits and weight management. Metabolically, it makes sense to take this 12 to 16-hour break from food when it is dark out, which includes evening and nighttime. An example is having your last food consumed in the day by 6-7 pm and breakfast around 8-9 am.

Having a break from food in the evening and night often helps you sleep better.

Focus on Protein and Moderate Carbohydrate Intake

Getting enough protein can help reduce muscle loss that naturally occurs as women make less estrogen during menopause. Focusing on maintaining muscle has many benefits including:

- A higher metabolism
- Bone & joint health
- Strength and injury prevention

Protein sources to choose every day*:

- Lean meats (poultry, seafood, eggs)
- Legumes such as beans, lentils, tofu, edamame, quinoa & other nuts & seeds
- Low fat cheese
- Greek yogurt

**Aim to include protein containing foods at each meal*

Portions to Match Your Energy Needs

Energy needs do go down as women go through menopause. This is related to a change in body composition. So, maintaining muscle through exercise and protein intake helps keep the body's resting metabolic rate from dropping significantly. We will further discuss weight management below.

Nutrients for Bone Health *(for more info, see Chapter 5)*

Bones provide structure to our bodies and protect vital organs. Bones are also living and always replacing themselves. Bone disease occurs when new bone cells do not keep up with the pace of losing old bone cells.

Women reach their peak bone density around age 30. After that, women gradually lose bone density with age. The pace of bone loss picks up around menopause but then stabilizes a few years after menopause is complete.

Osteoporosis is the diagnosis of low bone density and a serious health risk for longevity and quality of life with aging. Many women not diagnosed with osteoporosis still have lower bone density that can increase risk of bone fractures or lead to osteoporosis.

Risk factors for low bone density include:

- Caucasian or Asian ethnicity
- Thin bone frame
- Some medical conditions including hyperthyroid disease, diabetes, inflammatory bowel disease, kidney disease and rheumatoid arthritis
- Consuming more than 2 alcoholic drinks per day
- Smoking
- Sedentary lifestyle

Everyone loses bone, but it is the amount that counts.
Diet and lifestyle play an important role in a woman's bone health throughout their life. Some risk factors for low bone density are things you can't control. However, concentrate on what you can control for your bone health going forward. Vitamin and mineral intake, in addition to exercise, play an important role in keeping your bones healthy.

Calcium

We need and store more calcium in the body than any other mineral. It plays a role in maintaining heart rhythm, nervous system communication, and muscle contraction. Calcium also makes up a large amount of our bone structure. Bones serve as a reserve of calcium for the body. If we are not getting enough calcium from our diet, the body uses calcium from our bones for these other vital functions.

A steady and adequate intake of calcium from food and dietary supplements allows our bodies to prevent stealing the calcium from our bones and provides them with enough calcium to repair old bone cells.

After age 50, the body does not absorb calcium as well. The recommended calcium intake for women age 50+ goes up from 1,000 mg per day to 1,200 mg per day.

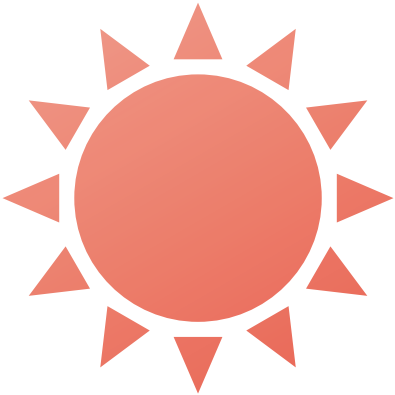
Approximate Amount of Calcium Per Serving	High-Calcium Food Options *(Source: Academy of Nutrition and Dietetics Nutrition Care Manual)*
400 mg	8 oz yogurt without added fruit 8 oz fortified nut, oat or coconut milk ½ cup evaporated skim milk ½ cup dry milk powder
300 mg	8 oz cow or soy milk 8 oz fruited yogurt ¼ cup parmesan cheese ½ cup part-skim ricotta cheese 1 oz Swiss or Gruyere cheese ½ cup calcium-treated tofu 3 oz canned sardines with bones 1 calcium-fortified cereal bar
200 mg	1 oz natural cheese 1 serving calcium-fortified cereal *(may contain up to 1,000 mg calcium)* 150 mg 1 packet calcium-fortified instant oatmeal ½ cup pudding, custard, or flan ½ cup cooked collards 3 oz pink canned salmon with bones 2 calcium-fortified graham crackers 1 serving calcium-fortified bread 4 oz calcium-fortified orange juice
100 mg	1 oz nonfat cream cheese ½ cup turnip greens or bok choy 1 oz almonds ½ cup ice cream, ice milk, or frozen yogurt ½ cup white beans
50 mg	½ cup broccoli ½ cup kale or mustard greens ½ cup most dried beans ½ cup cottage cheese 1 medium corn tortilla 1 medium orange 1 Tbsp dry milk powder

Vitamin D

Vitamin D maximizes your body's calcium absorption and is just as important for bone health. Vitamin D is known as the "sunshine vitamin" because it is produced in the skin when exposed to UV rays from the sun. Although the body can make vitamin D, most adults do not make enough.

Risks for low vitamin D levels:

- Using sunscreen SPF 8 and above *(although is a recommended practice by dermatologists for skin health)*
- Having darker skin
- Being overweight
- Aging
- Low consumption of vitamin D rich foods



Recommendations for vitamin D:

- Ages 1-71 years old- 15 mcg *(600 IU)* per day
- Ages 71 and above- 20 mcg *(800 IU)* per day

Foods With vitamin D

- Milk: 8 oz *(1 cup or 250 mL)* has 2.5 micrograms *(mcg)* or 100 IU *(international units)* vitamin D
- Some brands of juice; the amount of vitamin D varies *(but juice consumption should be limited for weight management)*
- Margarine: 1 Tbsp has 1.5 mcg *(60 IU)* vitamin D
- Soy milk: the amount of vitamin D varies
- Yogurt: 1 cup has 1-2 mcg *(40-80 IU)* vitamin D
- Cod liver oil: 1 Tbsp has 34 mcg *(1,360 IU)* vitamin D
- Egg yolks: 1 yolk has 0.625 mcg *(25 IU)* vitamin D
- Fatty fish, such as tuna, mackerel, and salmon: 3 - 4 oz has 9 mcg *(360 IU)* vitamin D

Supplements

If you don't think that you can get enough calcium or vitamin D from your diet *(or the sun)*, consider talking with your doctor about taking a supplement. Supplements for these nutrients are generally well absorbed and a reasonable option to consider, especially during and after menopause. Many women find it hard to get enough calcium and vitamin D without eating too many calories. To meet their needs from a combination of food and supplements, some women aim for 2 servings of dairy food and supplement 600 mg calcium per day.

Other Recommended Foods for Bone Health *(For more information on bone health, please visit Chapter 5: Osteoporosis)*

Specifically for bone health, have at least 5 to 6 oz lean meat or beans each day. These foods provide the protein your bones need. Also have 5 or more servings of vegetables and fruits each day. Fruits and vegetables provide vitamin C, magnesium, vitamin K, and potassium to strengthen bones.

Foods Not Recommended

A lower-sodium diet helps the body keep calcium, instead of losing it in urine. The milligrams of sodium in a food can be found on the Nutrition Facts label. In general, foods with more than 300 mg sodium per serving may not fit into a lower-sodium meal plan. To follow a lower-sodium diet, avoid the following foods:

- Salt added at the table
- Salted snack foods
- Pickles
- Anything packed in brine, such as sauerkraut
- Canned soups and canned meats
- Processed meats, such as ham, bacon, or luncheon meats
- Smoked or canned fish *(except as listed in Recommended Foods)*

(Source: Academy of Nutrition and Dietetics Nutrition Care Manual)

Weight Management

Weight gain is often one of the main concerns of women during menopause. It occurs for most people in mid-life. On average women gain 1.5 pounds per year in their 40's and 50's. Even if someone does not gain weight, aging is associated with losing muscle and gaining fat. Because muscle burns more calories than fat, this causes a reduction in calorie needs and can contribute to weight gain when we don't adjust our eating habits. As women make less estrogen in menopause, this also makes it more likely to gain weight around the stomach. The change in body composition tends to stabilize 2 years after a woman's last menstrual period *(SWAN study)*.

The increased fat percentage serves a purpose for post-menopausal women - fat releases estrogen. So, as the ovaries make less estrogen after menopause, fat cells provide some estrogen for women. Fat cells can also protect weakening bones associated with aging.

However, excess fat cells are also associated with some diseases that increase with aging. These include type 2 diabetes, high blood pressure, joint pain, heart disease, and some cancers.

So, while a change in body composition and fat gain are expected, exercise and food choices can play an important role in maintaining muscles and keeping weight gain at a healthier level.

- **It is not just about the scale – even if weight does not change.**
- **Think about health versus the number on the scale.**
- **There are no forbidden foods – focus on "what to eat" for your health goals most of the time.**

Estimated Average Calorie Needs for Women based on Age to Maintain Weight

Age	Sedentary	Active
41-45	1800	2000
46-50	1800	2000
51-60	1600	1800
61-65	1600	1800
66 and above	1600	1800

(Source: https://www.ncbi.nlm.nih.gov)

Think About Your Drink

Over half of a woman's body is composed of water. Not getting enough to drink can worsen some symptoms of menopause such as fatigue and constipation. According to the **CDC** ***(Center for Disease Control and Prevention)*** people over 55 are more likely to drink less than 4 cups of water per day than younger people.

You know you are getting enough fluid when your urine is light yellow in color. Many people find this occurs with around 64 ounces per day. Exercise or spending time in hot or dry climates where you are producing more sweat can increase fluid needs.

What to drink:

Water should make up the majority of what you drink. However, there are ways to have variety in what you are drinking that help you stay hydrated in a healthy way. Focus on choosing drinks that have very few or no calories.

When drinking calories, most people do not eat less food and caloric drinks can easily cause weight gain. Sugar sweetened beverages *(regular soda, sweetened coffee and tea, juice, some smoothies)* are also associated with accumulation of belly fat. Since weight gain during menopause already commonly occurs around the mid-line, avoiding sweetened drinks in this life stage should be very strongly considered. Sugar sweetened beverages are also linked to a higher risk of developing type 2 diabetes, fatty liver disease, and having high triglycerides.

Drinks to choose:

- Water
- Unsweetened Tea and herbal tea *(hot or cold)*
- Water flavored with fresh or crystalized fruit
- Regular or decaf coffee *(black or with milk/milk alternatives added)*
- Seltzer water *(plain or flavored)*
- 8 oz milk/milk alternative
- Zero-calorie flavored drinks

  It is OK to add calorie free sweeteners such as Stevia to beverages or choose artificially sweetened beverages.
- Aim to keep caffeine intake no higher than 400 mg per day

Stevia is a natural sweetener that will not add calories to your diet.

Alcohol Considerations:

If we drink in moderation, alcohol can be part of a healthy diet. However, guidelines recommend if you don't currently drink alcohol, do not start. Drinking any alcohol is associated with a higher risk of breast cancer. Also remember that alcohol is a calorie source and can cause weight gain.

The recommendation for women is one or less drink equivalents per day. *(Sorry, but it doesn't work to save them up for the weekend.)*

12 oz 5 oz 1.5 oz

What is one drink equivalent:

- Beer *(5% alcohol)*: 12 fluid ounces
- Wine *(12% alcohol)*: 5 fluid ounces
- Distilled spirits, such as rum, gin, vodka and whisky *(80-proof, 40% alcohol)*: 1.5 ounces

Drinking more than the recommended amount regularly can have negative health consequences. Differences in body composition and chemistry cause women to absorb more alcohol than men. It also takes a woman's body longer to break alcohol down. Because of these factors, alcohol affects women faster and the effects last longer.

Excessive drinking can also cause longer term health problems in women compared to men. For example:

- **Liver – the risk of disease caused by alcohol overconsumption is higher for women.**
- **Brain – women are more vulnerable to dementia caused by excessive drinking.**
- **Heart – women who drink excessively are at higher risk of heart damage.**
- **Cancer risk – drinking alcohol increases risk for mouth, throat, esophagus, liver, colon, and breast cancers among women.**

Some women find that alcohol aggravates their hot flashes, but there is no definitive research on the connection. Alcohol can also affect sleep quality, which can already be a challenge for many women during menopause.

Pulling it All Together/Sample Eating Plan

There are many ways to think about what to eat. The most important thing is to find a plan that makes sense to you and can become a lifestyle.

One way to think about what to eat is called the Plate Method. Using the Plate Method is simple, but it works! It fits well with following the principles of nutrition in menopause. Start with an 8-9" size plate.

With the plate method:

- Make ½ of your plate vegetables. You can also do ⅔ of this space vegetables and add ⅓ of this section as fruit if desired.
- ¼ of the plate is a lean protein *(around the size of the palm of your hand)*.
- ¼ of your plate is the carbohydrate food- whole grains, whole fruit, or milk/yogurt.
- Healthy fats can be added. To fit calorie needs use up to 2 tsp of oil/mayo, 1 tsp butter, 1 Tbsp salad dressing, 1/8 -1/4 cup avocado or nuts/seeds.

You can fill a 9" plate while still meeting calorie needs.

Aim for the following amounts from each food group per day to meet nutrition needs:

- 4 servings or more of non-starchy vegetables
- 2-3 servings of fruit
- 4 servings of *(whole)* grains or starches
- 2-3 servings of dairy foods
- 8 servings of protein foods including meat, eggs, legumes
- 4 healthy fat servings. Focus on unsaturated fat sources *(olive oil, avocado, nuts)* and keep saturated fat sources *(butter, sour cream)* to 1 or less per day.

Vegetable serving is ½ cup cooked, 1 cup raw or leafy

Fruit serving is 15 g carb & 60 calories- 1 small *(tennis ball size)* or ½ large, ½ cup canned unsweetened, 1 cup berries or melon, 2 Tbsp dried.

Starch serving is 15 g carb & 80 calories- 1 slice bread, ½ cup starchy vegetables & cooked cereal, 6" tortilla or chapatti.

Dairy serving is 1 cup milk, 6 oz yogurt, 1 oz cheese

Protein serving is 1 oz meat, 1 egg, ⅓ cup legumes or tofu. Aim to choose lean meats such as poultry, fish, and sirloin, flank and tenderloin cuts of beef, pork or other meats.

Fat serving is 5 g fat- 1 tsp oil, mayonnaise, butter or ghee, 1 Tbsp salad dressing, nuts or 2 Tbsp avocado or sour cream

Sample day 1600 calories:

Breakfast 8 am:

- 1 slice whole grain bread with 1 tsp olive oil spread or peanut butter
- 1 egg *(boiled or cooked without added fats)*
- 1 serving fruit
- 1 cup milk/milk alternative *(could be added into coffee/tea)*

Lunch 12 pm:

- 1.5 cups salad veggies
- 3 oz chicken breast
- 1 serving fruit
- 1 Tbsp salad dressing & 2 Tbsp nuts/seeds
- 1 oz whole grain roll or 6 whole grain crackers

Snack 3 pm:

- Greek yogurt cup
- ¾ cup blueberries

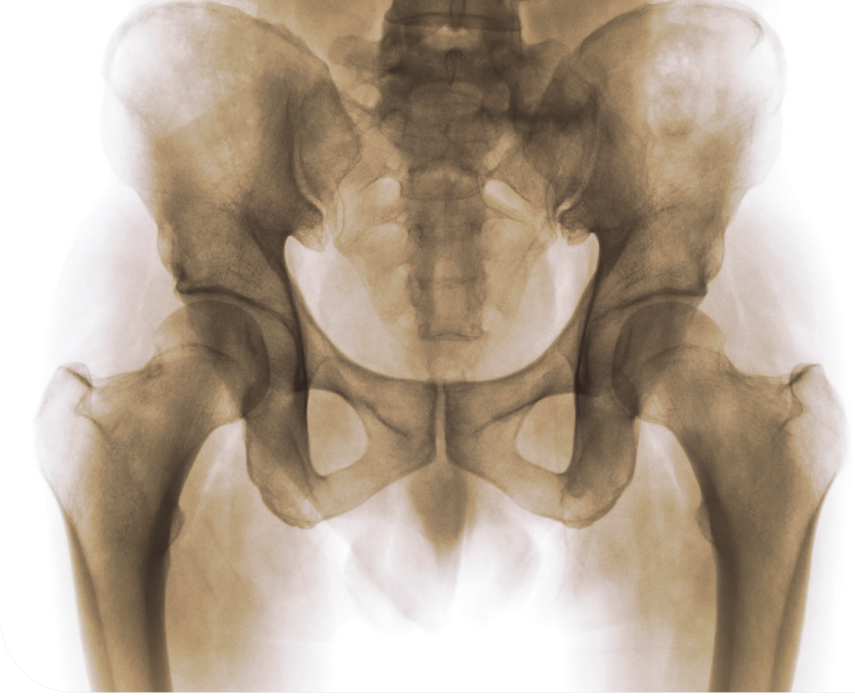
Dinner 6 pm:

- 4 oz salmon or other lean meat
- 1.5 cups roasted vegetables drizzled with 1-2 tsp olive oil per serving
- ⅔ cup brown rice/ quinoa mix

Chapter 5
Bone Health

Osteoporosis
is an acquired illness that affects women disproportionately.

Over 12 million Americans have osteoporosis and an additional 34 million are at risk. OBGYN physicians are in a unique position to assist in identifying and managing this illness. It is a significant illness for many post-menopausal women.



The standard test to identify if a woman has bone loss is called the **DEXA** ***(Dual-energy x-ray absorptiometry)*** test. This is a simple x-ray of the hip, spine, and possibly the wrist. The World Health Organization designed an arbitrary scale for these classifying results. A **T-score** is a score comparing your results to that of healthy young individuals, both male and female. The goal is to compare you to the ideal, not other post-menopausal women who also are likely to get this condition. The Z-score, which is often reported, is you compared to your peer group.

The definitions are as follows:

Normal: any T-score of greater than or equal to -1.0

Osteopenia: any T-score greater than -1.0 to -2.5

Osteoporosis: any T-score greater than or equal to -2.5

The bone is a living organism and requires constant stimulation and turnover in order to be healthy. Osteoblasts allow new bone to be laid down and osteoclasts stimulate absorption of bone. Many diseases and medications interfere at this level, causing bone to be less healthy. Disuse, or sedentary lifestyle, is a common risk factor for osteoporosis,

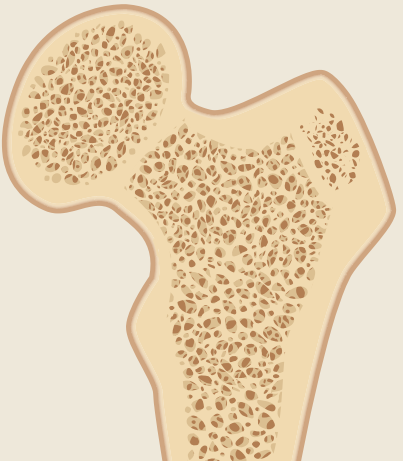
but major obesity, prolonged bedrest and other illnesses have a direct effect upon this illness. An extensive list of these diseases is not possible, but include celiac disease and other malabsorption conditions, lactose intolerance, eating disorders, thyroid disease, prolactin or parathyroid disorders, premature ovarian failure, rheumatoid arthritis, and chronic renal failure, to name a few.

Medications also can increase your risk of bone loss, including corticosteroids (inhaled or injected), anticoagulants, anti-convulsants, gastric reflux medicines *(ex. Nexium)*, thyroid medications, aromatase inhibitors *(to treat breast cancer)*, Depo-Provera *(long-term use)*.

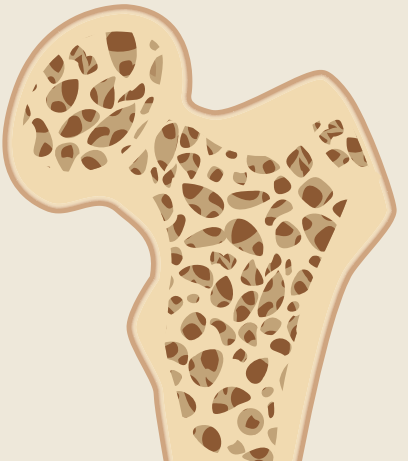
Several dietary and lifestyle habits also put you at higher risk of osteoporosis. As previously mentioned, a sedentary job or lifestyle, alcohol consumption of more than 5 servings per week, cigarette smoking, carbonated beverages, and caffeine to excess.

So, what is a post-menopausal woman to do? Most of our bone loss occurs during the first 5 years after our periods disappear. We peak our bone density at age 30 and go downhill after this. It seems as if there is not a lot of hope to avoid this disease. However, while we may lose bone density after menopause, it is very possible to diminish these losses and actually INCREASE our bone mineral density no matter what age! Regular exercise and fall prevention are 2 important key actions.

Healthy Bone



Osteoporosis



Weight-Bearing vs. Weightlifting

Weight bearing and weightlifting have similar benefits regarding bone health. Weight bearing exercise means there is a heel-strike and shock wave sent to the bone matrix that allows it to signal microfractures, repair and produce new bone. Activity such as walking, jogging, jumping rope, Pilates, dance, or use of a treadmill or elliptical machine would qualify as weight bearing.

Weightlifting, also known as resistance training, is another approach to improve bone health by increasing muscle mass, and therefore increasing the "load" on the bones. This stimulates both bone building as well as decreases bone resorption. The greatest benefit regarding bone health is the concept of progressively increasing resistance over time. Free weights, resistance bands, and weight machines are several methods that can be beneficial in bone building and maintenance. These are best done with the assistance of a physical trainer to develop the correct form for both injury prevention as well as optimal muscle and bone health.

Activities like swimming and water aerobics, though excellent with respect to cardiovascular exercise, don't offer the same bone stimulation and maintenance benefits.

Fall prevention is very important to avoiding fracture if a woman has developed osteopenia or osteoporosis. Handrails are necessary to provide stability and support while navigating stairs. Choosing appropriate footwear also provides stability and affords fall prevention; it is important to choose comfortable, well-fitting shoes with a sole that provides support. Wearing high heels, shoes without backs, or shoes/slippers that have minimal grip can increase risk of slipping or falls, significantly increasing the risk of fracture in women.

Common Questions

- **“I’m on Prolia, so I stopped my calcium and vitamin D.”** This can be a costly mistake. All of these medications for osteoporosis can ONLY work if the vitamin D is adequate and the calcium is being taken in adequate amounts, with food and in divided doses throughout the day.
- **“I take one Citracal a day with D, so I don’t need any additional vitamin D.”** This is another misconception. While calcium requirements are independent of where you live, Vitamin D requirements are not, due to variations in sun exposure. Even though the RDA recommends 600-800 IU of Vitamin D daily, these can vary depending on where you live. In central Ohio, some suggest up to 2,000 IU daily.
- **“My PCP checked my vitamin D level, and it was adequate.”** As previously stated, one size does not fit all! Vitamin D levels have a wide range from 30-100 IU, and certainly fluctuate based on seasonality and location. The average vitamin D level drops two points a month from October to May in Central Ohio, due to our grey winters. Furthermore, clothing and sunglasses prevent our skin exposure and retinal absorption of vitamin D2 and proper conversion to the active form, vitamin D3. Therefore, many women with adequate vitamin D levels in the summer months will find it necessary to supplement with vitamin D through the fall and winter months, just to maintain levels in the appropriate range.

Most importantly, a healthy diet with calcium-rich foods and avoidance of excessive alcohol (no more than 5-7 per week), any tobacco use, and minimization of carbonated beverages will result in healthier bones and a better quality of life in menopause!

Timing is Everything

"Time waits for no one, so don't waste it anxiously waiting for the 'former you' to come back. Embrace the 'new you' and all the wonderful experiences that lie ahead… let it happen while educating yourself and maintaining a good attitude.
Face the fear, headfirst.
Don't let it ruin the woman you (still) are!"

Chapter 6
Physical Therapy

The Pelvic Floor
can be impacted during menopause.

This section will assist in identifying symptoms you may experience, explain the reasons why, and provide educational resources to aid in getting the support that is right for you.

Pelvic Anatomy

The pelvis is a bony structure shaped like a bowl at the base of the spine, where the legs form the hip joints and where reproductive organs are contained. At the bottom of the pelvis, there are three layers of muscle. This muscle group is commonly called the pelvic floor.

The jobs of the pelvic floor:

- Support the pelvic organs
- Sexual function
- Strength and stability
- Sphincteric function - the round muscles that keep the urethra and rectum open/closed
- Sump pump - circulation within the lymphatic system

Pelvic Floor Symptoms in Menopause

Estrogen is the main hormone discussed in menopause literature. A decrease in estrogen levels can result in decreased collagen production and decreased blood flow to tissues. Thinning of vaginal and vulvar tissue, decreased lubrication, and decreased blood flow to pelvic floor muscles can all contribute to:

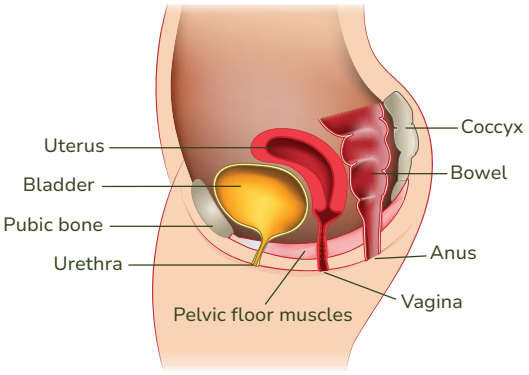
Incontinence

The lining of the bladder and urethra become less elastic, causing a decrease in the strength of the muscles' ability to hold urine in. This leakage can occur in a variety of ways:

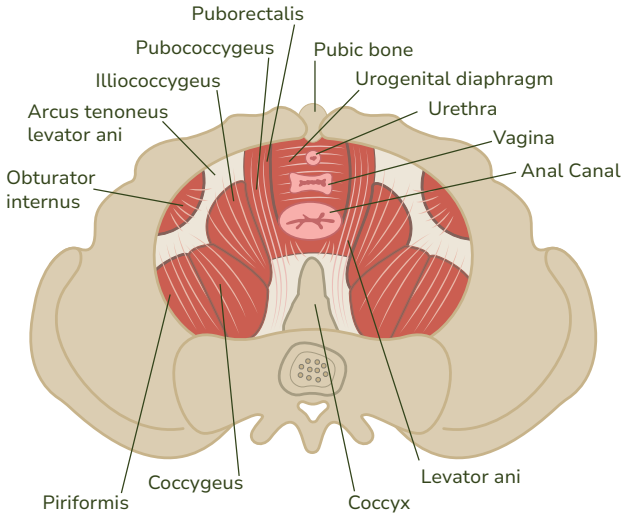
- Stress urinary incontinence: leakage of urine with coughing, sneezing, running, jumping, lifting or any forceful activity that increases pressure on the pelvic floor muscles
- Urge urinary incontinence: rushing to the bathroom frequently without the ability to delay or peeing "just in case" to prevent leakage from occurring
- Mixed urinary incontinence: a combination of stress and urge urinary incontinence
- Tip - Notice how often you are using the bathroom and in what circumstances you leak. Typical time between urination is between 2 and 4 hours with a volume of 9 to 12 ounces.

It is important to be able to identify the area and structure that is affected when describing your symptoms to a health professional. Many symptoms of menopause described are related to the organs and structures identified in the graphics here.

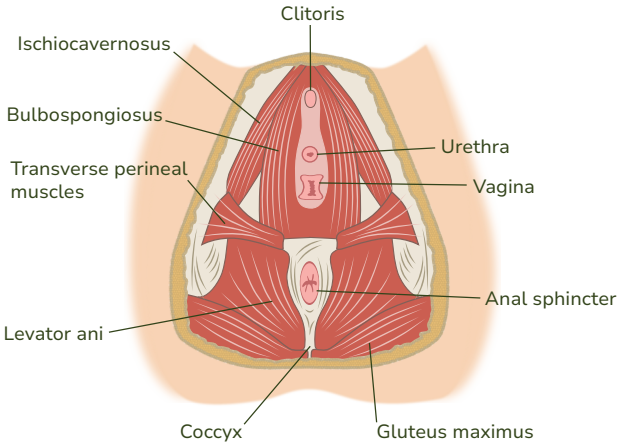
Side view of the pelvis



Top-down view of the pelvis and pelvic floor



The external anatomy of the pelvis

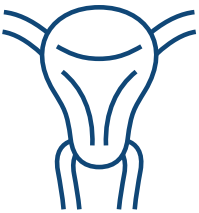


A common mistake made in female genital organ naming is the difference of the vulva and the vagina: the vulva is the outside area where clothing touches the skin. The vagina is the inner tube-like structure.

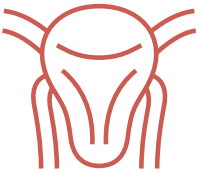
Vaginal Dryness

This could feel like scratchiness, burning, discomfort, irritation with peri-care *(wiping)*, or even bleeding due to tissue fragility. This is directly related to sexual function, as the decrease in vaginal lubrication can lead to painful intercourse/intimacy. These symptoms can affect sexual desire. As previously stated, sexual function is a job of the pelvic floor, and can be explored further with your pelvic health professional.

Tip - Moisturize! Coconut oil, vitamin E oil, and water-based lubricants are useful and easily available options.



Healthy Uterus



Prolapsed Uterus

Pain and Prolapse

Pelvic organ prolapse *(you might see it as POP in other educational materials)* can feel like bulging or heaviness in your vagina or vulva. It might feel like there is something 'falling out'. Your pelvic organs - the bladder, uterus and rectum, specifically - can shift or drop into the vaginal wall. There are often other contributing factors in addition to menopause, such as previous birth injury or surgery.

Tip - Lying flat or elevating the hips and legs can be a relieving factor for these symptoms. Prioritize sleep *(horizontal!)* to allow your pelvic floor to rest as well.

Please be encouraged to avoid minimizing any of these symptoms. They are common, but rarely discussed openly. You do not need to suffer or wait until the symptoms are intolerable to seek care. Any level of severity of these symptoms is valid to be addressed. Physical health and mental health are directly impacted by pelvic health function. These changes in sleep, sexual desire, pain and mood are a large part of menopause. Appropriately addressing both the physical issues as well as the mental and emotional components contribute to improving quality of life.

Bone Health *(See Chaper 5 for more information)*

The bony anatomy of the pelvis reviewed above is not the only area of the body that can be affected by changes in bone integrity during menopause. The decrease in estrogen increases the speed at which you lose bone mass. This causes:

- **Osteoporosis/osteopenia: Bone loss versus bone softening. The severity can be determined by bone density testing by your medical provider. Bone density changes occur in all parts of the body, but wrists, vertebrae, hips and pelvis are especially vulnerable. The change in bone strength creates an increased risk of fractures.**
- **Loss of vertebral height: A rounded, hunched posture is a key sign of bone loss in the spine.**

Symptoms related to bone density changes can include back or joint pain, as the anti-inflammatory properties of estrogen are impacted as the hormone level changes.

How Physical Therapy Can Help

Pelvic Floor

The concept of "just do your Kegels" is great if:

1.) you know how to do them and perform them correctly ***and***

2.) weakness is your sole problem.

Most often, Kegels are done incorrectly and can contribute to symptoms. At other times, they are not the solution. For example, if the muscles are tight, repetitive squeezing can make them tighter and cause an increase in symptoms. Proper examination and assessment of the pelvic floor muscle strength, coordination, and tone can help provide a framework for individualized care by correcting or modifying activities and providing strategies to avoid straining compromised tissues.

Tip - Maintain hydration. Adequate fluid intake makes many body systems happy. Limit carbonated, caffeinated and acidic beverages that can be bladder irritants. Around two hours before bedtime, stop consuming to allow your bladder and pelvic floor the best chance to maintain continence overnight!

Bone Health

Strength training and regular physical activity are large contributors to bone health. Resistance training or lifting weights in combination with weight bearing exercise, like walking, hiking or dancing, can strengthen bones. Mentioned earlier, postural changes can be a result of changes in bone integrity. Training posture and body mechanics can improve ease of mobility, decrease fall risk and decrease pain. Since osteoporotic bones are at an increased risk for fracture, balance training can be an effective means to decrease fall risk as well.

Tip - Accidents happen, but preventing falls is a great way to maintain your independence. Fractures can limit mobility, requiring increased care, even if for a short period of time. A combination of supplements or medications as prescribed by your provider, balance and strength training and proper body mechanics will keep your bones as healthy as possible!

Menopause can feel overwhelming and isolating no matter what symptoms you experience if you aren't aware of the support and resources available to help. Pelvic floor physical therapy is not just for the worst-case scenario or when you have no other options. It is often a successful intervention technique to help a large variety of symptoms, as discussed.

The screening tool below can help you identify if you are experiencing any pelvic floor issues. If three or more items apply to you, a pelvic floor physical therapy evaluation is recommended.

Cozean Pelvic Dysfunction Screening Protocol:

- I sometimes have pelvic pain (in genitals, perineum, pubic, or bladder area, or pain with urination) that exceeds a 3 on a 1-10 pain scale, with 10 being the worst pain imaginable.
- I can remember falling onto my tailbone, lower back or buttocks *(even in childhood).*
- I sometimes experience one or more of the following urinary symptoms:
    - Accidental loss of urine
    - Feeling unable to completely empty my bladder.
    - Having to urinate within a few minutes of a previous urination.
    - Pain or burning with urination.
    - Difficulty starting or frequent stopping/starting of urine stream.
- I often or occasionally have to get up to urinate two or more times a night.
- I sometimes have a feeling of increased pelvic pressure or the sensation of my pelvic organs slipping down or falling out.
- I have history or pain in my low back, hip, groin, or tailbone or have sciatica.
- I sometimes experience one or more of the following bowel symptoms:
    - Loss of bowel control
    - Feeling unable to completely empty my bowel movements
    - Straining or pain with a bowel movement
    - Difficulty initiating a bowel movement
    - I sometimes experience pain or discomfort with sexual activity or intercourse.
- Sexual activity increases one or more of my other symptoms.
- Prolonged sitting increases my symptoms.

Chapter 7
Heart Health

In the United States,
the leading cause of death among women is heart disease.

A woman's risk may increase with the onset of menopause, regardless of the several contributing factors (lifestyle, family history, etc.)

The American Heart Association's Summary of Cardiovascular Disease and Menopause

"Hot flashes and night sweats – they are the hallmark symptoms of menopause."

But there's something else happening to women entering their late 40s and early 50s that they can't see or feel and may not even know about: Their cardiovascular disease risks are rising.

"As women transition through menopause, they experience a lot of changes," said Samar El Khoudary, a professor of epidemiology at the University of Pittsburgh's School of Public Health.

They produce less estrogen. They accumulate more belly fat. Excess abdominal fat is part of a cluster of symptoms that becomes more common after menopause. Known as metabolic syndrome, it is when a person has at least three of the following: abdominal obesity; high triglycerides; low "good" HDL cholesterol; high blood pressure or high blood sugar.

And, "their arteries become more vulnerable to disease, getting thicker and stiffer," said El Khoudary, who chaired the writing committee for a 2020 American Heart Association scientific statement on how the menopause transition affects cardiovascular disease risk. "All of those changes accelerate during menopause."

Heart disease is the leading cause of death for women in the U.S., who typically develop the condition several years later than men. But women are largely unaware of their risk for heart disease, which is more likely to kill them than all forms of cancer combined. According to the most recent **AHA** survey, awareness that heart disease is the leading cause of death among women actually fell between 2009 and 2019, particularly among Black, Hispanic and younger women, for whom primary prevention may be most effective.

The decrease in awareness came as knowledge about women's cardiovascular risks increased, El Khoudary said. "Over the last two decades, we've learned a lot about how menopause contributes to heart health," she said.

For example, menopause-related hot flashes and night sweats have been linked to a greater risk for high blood pressure and other cardiovascular risk factors. Research also shows depression during the menopause transition is strongly linked to higher cardiovascular disease risk.

Blood Pressure	Systolic *Top Number*		Dyastolic *Bottom Number*
Normal	**<120**	**and**	**<80**
Elevated	**120-129**	**and**	**<80**
High Blood Pressure Stage 1 Hypertension	**130-139**	**or**	**80-90**
High Blood Pressure Stage 2 Hypertension	**>140**	**or**	**>90**
Hypertensive Crisis Seek Medical Attention	**>180**	**and/or**	**>120**

In addition, women who experience natural menopause at a later age have a lower risk of cardiovascular disease and death. Factors that may influence an earlier start to menopause include worse cardiovascular health during reproductive years, cigarette smoking and possibly genetics.

Dr. JoAnn Manson, chief of preventive medicine at Brigham and Women's Hospital and a professor of medicine at Harvard Medical School in Boston, said women would benefit from intensifying cardiovascular prevention efforts in the years leading up to menopause.

"That stage of life is a window of opportunity for making lifestyle changes," said Manson, who also co-authored the 2020 **AHA** scientific statement that called on health care professionals to consider an aggressive prevention-based approach for women in midlife to decrease the chance of cardiovascular disease in the future.

Research suggests the most effective ways to prevent heart disease *(see QR code below)* include not smoking, being physically active, eating a healthy diet, maintaining a healthy weight, getting enough sleep, and keeping cholesterol, blood pressure and blood glucose levels under control. But "very, very few people are good at following all of those," Manson said.

"Perhaps the most bang for the buck comes from increasing physical activity," she said. "It is the magic bullet for good health because it reduces the risk for heart disease, stroke, high blood pressure, Type 2 diabetes and

cancer and improves bone health, weight control, sleep and mental health. If there were a pill you could take that had all of those benefits, everyone would be clamoring for it."

But not enough people meet federal guidelines for physical activity, which are at least 150 minutes per week of moderate-intensity aerobic exercise, 75 minutes per week of vigorous aerobic exercise or a combination of both.

While it's never too late to add or increase physical activity levels, Manson said, "the earlier you do it in life, the greater the health benefits. Also, maintaining good habits is easier than reversing bad ones."

https://www.ahajournals.org/doi/full/10. 1161/CIR.0000000000001078

Trust Yourself

"Seek out strong, educated advocates to help you, mentally and physically. You'll know who to let into your personal circle. Don't change who you are because estrogen is leaving your body. Communicate with your partner so they understand what you're going through – they are likely going through things as well!"

Glossary

Contraindication – something (such as a symptoms or condition) that makes a particular treatment or procedure inadvisable

Dysfunction – impaired or abnormal functioning

Dyspareunia – painful intercourse

Genitourinary – relating to the genital and urinary organs or function

Incontinence – leaking of urine

Neurotransmitter – a substance (such as norepinephrine) that transmits nerve impulses

Progestogen – a naturally occurring or synthetic progestational steroid

Thermoregulatory – the ability to keep the body temperature within certain boundaries

Unopposed – when a progesterone is not co-administered with estrogen to reduce the potential risk for uterine cancer

Vasomotor - hot flashes or night sweats. Episodes of profuse heat accompanied by sweating and flushing, experiences predominantly around the head, neck, chest, and upper back.

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