



A Teaching Affiliate
of Harvard Medical School

Aromatase Inhibitors

Medication Teaching

The Center for Breast Cancer
Mass General Cancer Center



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Topics to Discuss

- What are Aromatase Inhibitors? How do they work in the body?
- Reasons for taking an Aromatase Inhibitor
- Types of Aromatase Inhibitors
- How Aromatase Inhibitors are taken
- Storage, Handling, and Disposal
- Drug Interactions
- Side Effects & How to Manage
- Supportive Care Resources
- Your Breast Cancer Team
- When to Call and Important Phone Numbers



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What are Aromatase Inhibitors? How do they work in the body?

- Aromatase Inhibitors are a class of medications which suppress estrogen in the body.
- They inactivating aromatase, an enzyme which converts androgens to estrogens.
- Aromatase Inhibitors lower the level of estrogen in the body. This:
 - decreases the chance of breast cancer returning (recurrence)
 - decreases tumor size
 - delays hormone receptor positive tumors from spreading (progression)

Reasons for taking an Aromatase Inhibitor

- Because you have a personal history of hormone receptor positive breast cancer or DCIS (ductal carcinoma in situ).
 - Generally given to post-menopausal females
 - Can be given to pre-menopausal females if administered with Lupron or Goserelin for ovarian suppression
- Your care team will talk with you about how long you will need to take this therapy.
 - It is common to be on therapy for 5-10 years.



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Types of Aromatase Inhibitors

- There are several types of of aromatase inhibitors. They can cause similar side effects.
 - Femara (letrozole)- 1 tablet a day (2.5 mg)
 - Arimidex (anastrozole)- 1 tablet a day (1 mg)
 - Aromasin (exemestane)- 1 tablet a day (25 mg)



How are Aromatase Inhibitors taken?

- Aromatase Inhibitors can be taken morning or night
- It is important to take at the same time each day
- Aromasin should be taken within 30 minutes after a meal
- Arimidex and Femara may be taken without regard to meals
- Swallow whole with water and do not break, chew, or crush your tablet
- If you miss a dose, skip the dose. Do not take 2 doses at the same time to make up for the missed dose

Storage and Handling of Aromatase Inhibitors

- Keep this medicine in its original bottle or in a separate pill box. Do not mix other medicines into the same pill box.
- Store at room temperature in a dry location away from direct light.
- Keep out of reach from children and pets.
- Wash your hands before and after handling.
 - If someone else will be handling your Aromatase Inhibitor, have them wear gloves so they do not come into direct contact with the medicine.

Disposal of Aromatase Inhibitors

- If you have unused medication, do not throw it in the trash and do not flush it down the sink/toilet.
- You may dispose of this medicine by:
 1. Calling your city or county's trash and recycling service for information on hazardous drug take-back programs in your community.
 2. Bringing unused Aromatase Inhibitors to MGH and disposing in the blue drug take-back receptacles. One receptacle is located outside of the Main Lobby Yawkey elevators and another is near the retail pharmacy in the Wang building.
 3. Asking your treatment team or pharmacist for more information.

Aromatase Inhibitors have many drug interactions

- Some drugs or supplements should **not** be taken at the same time as other drugs because they can cause side effects or cause the drug to not work well. This is called a drug interaction.
- Some common drug interactions with Aromatase Inhibitors include:
 - Black Cohosh
 - Ginseng supplements
 - Red Clover
 - St John's Wort (with Exemestane)



Aromatase Inhibitors have many drug interactions

- Tell your treatment team of all prescription and over-the-counter medications (this includes vitamins and herbal products).
- Talk with your treatment team or pharmacist before starting any new medications or supplements.

Common Side Effects of Aromatase Inhibitors

- Joint and muscles aches/stiffness
- Hot flashes
- Bone density loss
- Vaginal dryness
- Loss of interest in sex
- Swelling of the hands and/or feet
- Fatigue or tiredness
- Dizziness or feeling lightheaded
- Nausea
- Headache
- Hair thinning
- High blood pressure
- Effects on cholesterol



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Managing Side Effects: Hot flashes

- Take part in mild, regular exercise
- Stay in a cool environment and use fans
- Wear layers that you can remove
- Avoid/limit caffeine, spicy food, and alcohol, which can worsen hot flashes
- Tell your treatment team if your hot flashes are bothersome. We may be able to prescribe medicine to help you.

Managing Side Effects: Supplements for Hot flashes

- The following supplements can be tried for hot flashes:
 - Vitamin E- 400-800IU daily
 - Evening Primrose Oil-500-1000mg daily
 - Evening Primrose Oil supplements shouldn't contain other estrogen-promoting ingredients. Ask your care team to look over the ingredients before taking if you are not sure.
- Tell your treatment team before starting any herbal supplements to treat hot flashes. Some supplements should not be taken during and after breast cancer treatment because they can cause harm.



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Managing Side Effects: Vaginal Dryness

- Vaginal moisturizers are helpful for daily use (not just before sex).
 - Absorbed into the skin & cling to the vaginal lining in a way that mimics natural secretions - maintains vaginal moisture & acidity
 - Examples: Luvena, Fresh Start, K-Y Silk-E, Moist Again, Replens, K-Y Liquibeads
 - Most are available over the counter at your local pharmacy or online
- A lubricant may be used in addition to a moisturizer for lubrication & comfort, especially with sex.
 - Lubricants work by reducing friction associated with thin, dry genital tissue
 - Applied to the vagina and vulva right before sex
 - Examples: Astroglide, FemGlide, K-Y Jelly, Pre-Seed, Slippery Stuff, Coconut Oil
- If the products listed above are not effective, your care team may be able to prescribe Vaginal Estrogen.

Managing Side Effects: Joint and Muscle Pain

- What can help?
 - Regular exercise and stretching
 - Yoga
 - Swimming
 - Hypnosis
 - Acupuncture
 - Tylenol (do not take more than 3000mg/day)
 - Switching to an alternate Aromatase Inhibitor or taking a brief treatment holiday

Managing Side Effects: Bone Density Loss

- Bone density loss is not something patients feel, but can be measured on a bone density scan.
- Bone density scans are repeated every 2 years while you are on an Aromatase Inhibitor.
- To prevent bone loss:
 - Take Calcium and Vitamin D supplements. Your care team can help you determine the best dosage.
 - Exercise regularly, including weight bearing exercise
- We may prescribe medication to slow bone density loss if you are in the osteoporosis range.
 - Examples: Fosamax, Reclast (zoledronic acid), Prolia (Denosumab)



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Supportive Care Resources

- Yoga
- Acupuncture / Acupressure
- Massage
- Support groups
- Survivorship programs
- Workshops
- Music therapy
- To learn more about all our of Supportive Care offerings log onto: cancercenterpx.org

Your Breast Cancer Team

- Oncologist
- Nurse Practitioner
- Pharmacist
- Oncology Social Worker
- Practice Nurse
- Infusion Nurse

When to call?

If experiencing:

- New swelling in arms/legs, face
- Severe mood changes
- Any skin change, rash, or hives
- Severe muscle or joint pains
- Dizziness
- Heart palpitations



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Contact Information

- Phone Numbers
 - Boston: 617-726-6500
 - Waltham: 781-487-6100
- Patient Portal:
 - patientgateway.org