

# YOUR TREATMENT TOOLKIT

Breast Radiotherapy  
Supportive Care Guide

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Evidence-based protocols from ASTRO, NCCN guidelines,  
and recent clinical trials on breast cancer radiotherapy

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# Welcome to Your Breast Radiation Journey

You are about to start a challenging but manageable treatment. Breast radiation is usually **3–6 weeks** of daily treatments, and most patients tolerate it better than H&N or pelvic radiation. However, **skin care** is critical — your breast skin **WILL** react, and prevention is far easier than treatment.

This guide contains evidence-based protocols to protect your skin, prevent arm complications, and optimize your long-term recovery. **Read it. Follow it. Ask questions.**

## The Treatment Timeline

Phase	Timeline	What to Expect
<b>Setup Phase</b>	1–2 weeks	Minimal symptoms. Start skin care NOW. Setup imaging.
<b>Ramp-Up Phase</b>	2–3 weeks	Breast skin turns pink. Mild fatigue begins.
<b>Peak Phase</b>	Last 1–2 weeks	Skin reaction strongest. May feel warm, tender.
<b>Recovery Phase</b>	2–4 weeks post	Skin begins healing. Fatigue improves. Firmness may persist.

## The Golden Rules

### 1. Skin Care is Everything

Your breast skin will react to radiation. **Moisturize early and often.** Prevention is far easier than treating skin breakdown. The inframammary fold (under the breast) is the most sensitive area — keep it dry and protected.

### 2. Wear the Right Bra

Soft, wireless, cotton bras only. No underwire. Consider sports bras or going braless at home. Tight bras trap moisture and friction against irritated skin. Let your breast breathe.

### 3. Keep Moving Your Arm

If you had axillary (armpit) surgery or nodes treated, do your arm exercises every day. This prevents frozen shoulder and lymphedema. **Use it or lose it.**

### 4. Ask About Your Heart

If treating the **left breast**, ask your oncology team how they protect your heart. Modern techniques (deep breath-hold, prone positioning, IMRT) minimize heart exposure, but it's worth discussing.

## Section 1 — Skin Care (The Key Section)

*Skin reaction is the **most common** side effect of breast radiation. Start prevention on Day 1. Waiting until skin breaks down is much harder to manage.*

## When Skin Reaction Occurs

Radiation dermatitis typically appears in **weeks 2–3** of treatment and peaks at the end of treatment or 1–2 weeks after. The inframammary fold (skin under the breast) and any skin folds are hit hardest due to moisture, friction, and heat.

## Daily Skin Maintenance Routine

1. **Wash gently:** Lukewarm water with mild, fragrance-free soap (Dove Sensitive, Cetaphil). Use hands only — no washcloths or exfoliants. Pat dry completely.
2. **Moisturize 2–3 times daily:** Aquaphor, Eucerin, CeraVe, or Calendula cream. Apply liberally. *The old rule of “nothing before RT” is outdated.* Apply even on treatment days.
3. **Inframammary fold protection:** After drying, apply a thin layer of cornstarch (NOT talcum powder) to reduce friction and absorb moisture. Or place a soft cotton cloth/pad between your breast and chest to keep the area dry.
4. **Air circulation:** Consider going braless at home when possible to let skin breathe.
5. **Avoid irritants:** No perfume, no tape, no bandages on treated skin. No hot water or vigorous rubbing. **Deodorant/antiperspirant:** Older guidelines banned all deodorant, but recent studies (including a randomized trial by Theberge et al.) show that non-metallic deodorants do not worsen skin reactions. Ask your team for their policy—many centers now allow non-aluminum, fragrance-free deodorants.

## Skin Fold Strategy

**The inframammary fold is ground zero.** Skin-on-skin contact, moisture, and friction combine to create a perfect storm for breakdown. Prioritize this area.

- **Keep it DRY:** Pat completely dry after bathing. Use cornstarch or absorbent pads.
- **Reduce friction:** Soft bras only. Consider a thin cotton cloth between breast and chest.
- **Moisturize the edges but not the fold itself:** If the fold is weepy, keep it dry; moisturize the surrounding skin.

***Important timing note:** Skin reactions typically continue to worsen for 10–14 days AFTER radiation ends before they begin to improve. This is normal—do not be alarmed. Continue your skin care routine throughout this period.*

## Moist Desquamation (Skin Breakdown)

If your skin becomes raw, blistered, or weepy (usually weeks 4–6): **Tell your nurse immediately.** This is common and manageable.

- **Silver sulfadiazine cream:** Antibiotic + moisturizer, applied daily.
- **Hydrogel dressings:** Cool, soothing, non-stick. Change daily or as directed.

- **Mepilex foam dressing:** Absorbs fluid, allows skin to breathe. Used for treatment of existing breakdown.

***Prophylactic Mepitel Film:** Some centers apply Mepitel Film (a thin silicone dressing) to the skin **before radiation begins** to reduce moist desquamation. The RAdriCC trial (Herst et al., 2014) found moist desquamation rates of 8% with Mepitel Film vs. 19.2% with standard care—a significant reduction, but not complete prevention. Ask your team if prophylactic Mepitel Film is used at your center.*

- **Xeroform gauze:** For weeping areas. Non-adherent and protects from friction.

***Important:** Do NOT pop blisters. Do NOT pick at skin. Let your team manage breakdown with prescribed topicals.*

## Topical Steroid Cream (Mometasone Furoate 0.1%)

Randomized trials in breast and other cancers show that applying mometasone furoate 0.1% cream once daily to the treatment area significantly reduces skin reaction severity, pain, and itch.

- Apply a thin layer to the treatment area **once daily**, starting on Day 1 of radiation.
- Continue until 2 weeks after treatment ends.
- Do NOT apply to open wounds or broken skin.

*Your radiation oncologist will prescribe this if appropriate. Not all patients need it — we assess individual risk.*

## Sunscreen & Long-Term Sun Protection

Your treated breast skin will remain **permanently sun-sensitive**. Use SPF 45+ sunscreen on the treated area for life, or cover with clothing (tank tops, rash guards). Avoid direct sun exposure during the hottest part of the day.

## Section 2 — Fatigue

Breast radiation fatigue is usually **mild to moderate** (milder than pelvic or H&N radiation). Fatigue often worsens toward the end of treatment, then improves over 2–4 weeks.

### What Helps

1. **Light exercise:** Walking 20–30 minutes daily reduces fatigue significantly.
2. **Pacing:** Alternate activity with rest. Don't push through exhaustion.
3. **Sleep hygiene:** Aim for 8 hours. Keep a regular schedule. Avoid screens before bed.
4. **Accept help:** Let family and friends assist with meals, errands, and chores.

## Section 3 — Arm & Shoulder Care (If You Had Axillary Surgery or Node Treatment)

If you had sentinel node biopsy or axillary node dissection, **start arm exercises within days of surgery** and continue throughout radiation. Proper exercises prevent frozen shoulder and lymphedema.

### Daily Range-of-Motion Exercises

1. **Wall Climbing:** Face a wall, place hands at chest height, walk fingers up as high as you can. Reach higher each day. Hold at the top for 10 seconds. Do 10 reps, 3 times daily.
2. **Pendulum Swings:** Lean forward at the waist, let your affected arm hang freely. Gently swing in slow circles (forward/back, side to side). 1 minute each direction, 3 times daily.
3. **Towel Stretch (Cross-Body):** Hold a towel behind your back with both hands. Use your good arm to gently pull the affected arm up and back. Hold 20–30 seconds, 10 reps, 3 times daily.

### Lymphedema Prevention

- **Blood draws, IVs, and blood pressure cuffs on the affected arm:** Traditional guidance is to avoid these entirely. The ACS and recent evidence suggest the risk is lower than previously thought for sentinel node biopsy-only patients, but avoidance remains standard practice for those who had full axillary dissection. Tell all healthcare providers about your surgery.
- **Compression sleeve for air travel:** Wear during flights (pressure changes can trigger swelling).
- **No heavy lifting** with the affected arm initially. Follow your surgeon's restrictions.
- **Report any new swelling, heaviness, tightness, or numbness immediately.**

### Cording (Axillary Web Syndrome)

Some patients develop tight, rope-like bands in the armpit extending down the inner arm (cording). This is temporary but uncomfortable. Physical therapy with myofascial release can help significantly.

## Section 4 — Breast & Chest Changes

### Swelling (Edema)

The treated breast may swell during radiation. Usually temporary and resolves over weeks to months. Wear a soft, supportive bra. Elevation helps (sleep on the other side).

### Firmness & Fibrosis

Breast tissue may feel firmer or thicker after RT due to fibrosis (scar tissue). This is normal. Improves gradually over months to years, but some firmness may be permanent.

### Size and Shape Changes

The treated breast may shrink or change shape over time. This is usually mild. Discuss reconstruction or cosmetic options with your plastic surgeon if desired.

## Skin Texture

Skin may feel thicker, look different, or show permanent changes in color (hyperpigmentation, especially in darker skin tones). Usually improves but may not return to baseline.

## Implant & Reconstruction Considerations

If you have a breast implant or reconstruction:

- Discuss with your plastic surgeon before radiation. Radiation increases capsular contracture risk (implant tightening).
- Tight implants may need revision surgery months/years after radiation.
- Plan reconstruction timing carefully with your surgical team.

## Phantom Sensations (After Mastectomy)

After mastectomy + radiation, some patients feel tingling, pain, or itching in the area where the breast was. This is normal nerve healing. Usually improves with time. Report persistent pain to your oncologist.

# Section 5 — Pain Management

## Breast & Chest Wall Pain

Mild to moderate pain (soreness, tenderness) is common. Usually managed with over-the-counter pain relief.

- **Tylenol (acetaminophen):** 500–1000 mg every 6 hours, as needed.
- **Ibuprofen:** 400–600 mg every 6–8 hours, as needed (do NOT use if aspirin-allergic).

## Nerve Pain (Neuropathy)

Some patients experience sharp, shooting, or burning pain (especially along ribs or collarbone). This responds to gabapentin or other nerve medications.

- **Gabapentin:** 300–900 mg at bedtime, titrated as needed. Takes 1–2 weeks to work.

*Tell your oncologist if pain is limiting daily activities. Stronger medications are available.*

## Costochondritis (Rib/Chest Wall Inflammation)

Rare but possible: inflammation where ribs attach to the breastbone. Responds to anti-inflammatories (ibuprofen, naproxen) and rest.

# Section 6 — Heart Protection (If Treating Left Breast)

*If you are receiving left-sided breast radiation, your heart is in a nearby anatomy. Modern techniques minimize this. Discuss with your team.*

## How We Protect Your Heart

- **Deep Inspiration Breath Hold (DIBH):** You take a deep breath and hold it during treatment. When your lungs are full, your heart moves further from the chest wall (about 2–3 cm), reducing the radiation dose your heart receives by up to 50–70%. This is the most effective and widely available heart-sparing technique. Treatment only fires while you hold your breath.
- **Prone Positioning:** You lie face-down so gravity pulls your breast away from your chest wall. Reduces heart and lung dose.
- **IMRT/VMAT:** Computer-optimized beam shapes that minimize dose to nearby organs.
- **Intensity-Modulated Proton Therapy (IMPT):** If available, protons deposit dose in the breast and stop, sparing the heart. Proton therapy for breast cancer is currently used in selected cases (e.g., unfavorable anatomy, need for regional nodal irradiation, or re-irradiation) and is not routinely needed when DIBH achieves adequate heart sparing. Insurance coverage varies. Ask your team if this applies to you.

## Practice Breath-Holding

If using DIBH, practice at home before simulation:

1. Take a deep breath in through your nose.
2. Hold for 20–30 seconds.
3. Exhale slowly through your mouth.
4. Repeat 5 times. Do this 2–3 times daily.

Breathing coach will assist during actual treatment.

## Long-Term Cardiac Monitoring

Discuss with your oncologist:

- Baseline EKG or echocardiogram before radiation (if left-sided).
- Follow-up imaging in 5–10 years to screen for cardiac changes.
- Risk is low with modern techniques, but important for long-term peace of mind.

# Section 7 — Nutrition & Weight

## Maintain Healthy Weight

Obesity increases breast cancer recurrence risk. Maintaining a healthy BMI is one of the most powerful things you can do for long-term survival.

## Anti-Inflammatory Diet

- **Fruits & vegetables:** 5+ servings daily. Colorful = more antioxidants.
- **Whole grains:** Brown rice, oats, whole wheat bread. Avoid refined carbs.
- **Lean protein:** Fish (especially fatty fish — salmon, mackerel), chicken, beans, legumes.

- **Healthy fats:** Olive oil, avocados, nuts, seeds. Omega-3 fatty acids reduce inflammation.
- **Limit processed foods:** Ultra-processed foods increase inflammation and cancer risk.

### Alcohol Limits

**Limit or avoid alcohol.** Even moderate alcohol (1 drink/day) increases breast cancer risk. Choose zero if possible.

### Calcium & Vitamin D

Especially important if on aromatase inhibitors (which increase bone loss risk).

- **Calcium:** 1,200 mg daily (dairy, leafy greens, fortified foods, supplements).
- **Vitamin D:** 1,000–2,000 IU daily (sunlight, fatty fish, supplements). Get levels checked — many patients are deficient.

## Section 8 — Hormonal Therapy Side Effects (If Applicable)

*Many breast cancer patients take hormonal therapy (Tamoxifen or aromatase inhibitors) for 5–10 years. These cause side effects that overlap with radiation.*

### Tamoxifen Side Effects

- **Hot flashes:** Night sweats, sudden heat. Dress in layers. Avoid triggers (caffeine, heat).
- **Joint pain:** May feel arthritic. Exercise and warm baths help.
- **Vaginal dryness:** Moisturizers (Replens) or lubricants help. Discuss vaginal estrogen safety.
- **Blood clots:** Rare but serious. Report calf swelling, redness, or leg pain immediately.
- **Mood changes:** Anxiety, depression. Talk to your oncologist or mental health provider.

### Aromatase Inhibitor (AI) Side Effects

**Very common:** Joint pain and stiffness, especially in hands, knees, hips.

- **Joint pain management:** Exercise (yoga, swimming), OTC NSAIDs, vitamin D, massage.
- **Bone loss:** AIs increase osteoporosis risk. Get DEXA scan. Take calcium + D. Weight-bearing exercise.
- **Hot flashes:** Similar to Tamoxifen.
- **Vaginal dryness:** Similar to Tamoxifen.

*If AI side effects are intolerable, discuss switching to a different agent. Different AIs cause different side effect profiles.*

## Section 9 — Emotional Support & Body Image

## Breast Cancer & Femininity

Breast cancer treatment profoundly affects femininity, body image, sexuality, and self-esteem. These feelings are **completely valid** and deserve attention.

## Scars, Skin Changes, Size Changes

Radiation scars, hyperpigmentation, firmness, and size/shape changes are emotionally significant. Some changes fade over time; others are permanent. Both reactions (grief and adaptation) are normal.

## Resources for Support

- **Support groups:** *Breastcancer.org*, *Living Beyond Breast Cancer*, *Young Survival Coalition* (if under 40).
- **Counseling:** Therapists specializing in cancer, body image, sexuality.
- **Prosthetics & reconstruction:** Discuss options with plastic surgery team if desired.
- **Partner communication:** Couples counseling can help with intimacy concerns.

## Sexuality & Intimacy

Physical intimacy is safe during and after radiation. Fatigue, pain, and emotional factors may affect desire. Open communication with your partner is essential. Sexual health counseling is available.

## You Are Not Radioactive

It is 100% safe to be close to family, partners, children, and pets throughout your treatment. No special precautions needed.

# Section 10 — Swimming, Exercise & Daily Life

## Swimming & Water Activities

Swimming in chlorinated pools is **OK** if you have no open skin wounds. Rinse immediately after. Swimming is excellent gentle exercise.

## Exercise During & After Radiation

- **Highly encouraged:** Walking, yoga, light weights, swimming, tai chi.
- **Avoid heavy lifting** with affected arm (follow surgeon's restrictions).
- **Listen to your body:** Fatigue is real. Rest when needed.

## Return to Work

Most breast cancer patients continue working during radiation. Discuss flexible hours or time off if needed. Fatigue and pain are valid reasons to adjust your schedule.

## Driving

Safe to drive unless pain medications impair you (drowsiness, dizziness). If taking opioids, arrange alternative transportation.

## Red Flags: When to Call Us

Call us immediately if you experience any of the following:

Symptom	Why It Matters
Fever over 100.4°F	May indicate infection or immune issue
Severe skin breakdown (large open areas)	Needs wound care evaluation
New arm/hand swelling	Possible lymphedema
Sudden shortness of breath	Multiple causes — URGENT
Chest pain or palpitations	Possible cardiac — call immediately
Red, hot, swollen breast	Possible infection or inflammatory process
New lump or mass in treated breast	Report to your team
Uncontrolled pain	Stronger medications available
Blood clot signs (leg swelling/warmth)	Possible DVT (especially on Tamoxifen)
Severe allergic reaction to skin products	Stop use, notify nurse

## Long-Term Follow-Up

*Treatment ending is not the end of your care. These are lifelong considerations.*

### Mammography Schedule

Mammograms usually start 6–12 months after radiation. Discuss schedule with your oncologist. Radiation makes breasts denser on imaging — tell your radiologist about your RT history.

### Skin Surveillance

Watch for new changes in the treated breast: discoloration, dimpling, texture changes, new lumps. Report any concerning changes to your oncologist.

### Lymphedema Monitoring

Lymphedema can develop months to years after treatment. Lifelong vigilance is needed. Report new swelling, heaviness, or tightness immediately. Early detection allows effective treatment.

### Cardiac Monitoring (Left-Sided Breast)

Discuss baseline and follow-up cardiac imaging with your oncologist, especially if you have risk factors (hypertension, family history, smoking). Modern radiation minimizes risk, but screening provides peace of mind.

### Bone Density (If on Aromatase Inhibitors)

DEXA (bone density) scan every 1–2 years. Continue calcium + vitamin D. Weight-bearing exercise. Discuss bone-protective medications (bisphosphonates) if needed.

### Hormonal Therapy Adherence

Take your Tamoxifen or aromatase inhibitor as prescribed for 5–10 years. Adherence significantly improves recurrence-free survival. Side effects are manageable — ask if they become intolerable.

### Second Cancer Screening

Avoid tobacco and alcohol permanently. Report any new lumps, non-healing sores, voice changes, or other concerning symptoms. Your risk of a second cancer is higher than the general population.

## Recommended Products

Below are commonly recommended products. These are suggestions, not endorsements — equivalent brands work fine. Prices are approximate.

Category	Product	Cost
<b>Skin Care</b>	Aquaphor Healing Ointment	~\$12
<b>Skin Care</b>	Eucerin Original (lighter)	~\$10
<b>Skin Care</b>	Calendula Cream	~\$12
<b>Skin Fold</b>	Cornstarch Baby Powder	~\$5
<b>Skin Fold</b>	ABD Pads (absorbent)	~\$8
<b>Bras</b>	Wireless Cotton Sports Bra	~\$20
<b>Bras</b>	Post-Surgical Soft Bra	~\$25
<b>Lymphedema</b>	Compression Sleeve	~\$40
<b>Lymphedema</b>	Kinesio Tape	~\$12
<b>Pain Relief</b>	Tylenol (acetaminophen)	~\$8
<b>Pain Relief</b>	Ibuprofen (generic)	~\$6
<b>Bone Health</b>	Calcium + Vitamin D3	~\$10

Category	Product	Cost
Joint Support	Yoga Mat	~\$20
Joint Support	Resistance Bands Set	~\$15
Sunscreen	SPF 45+ Sunscreen (broad spec)	~\$14

*Prescriptions (creams, pain meds, bone medications) will be sent to your pharmacy by your care team.*

## Important Contact Information

### Main Line Health — Radiation Oncology

100 East Lancaster Ave · Rosengarten Bldg, Basement · Wynnewood, PA 19096

1078 West Baltimore Pike · Health Center 1, Ground Floor · Media, PA 19063

### Phone

**Appointment Line: 1.866.CALL.MLH (1.866.225.5654)**

**If you are experiencing a life-threatening emergency, call 911.**

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# My Treatment Journal

A place to notice patterns, remember questions, and track what helps.

*You do not need to fill this out perfectly. Even a few notes can help you see patterns, remember what worked, and tell your care team what is actually happening at home.*

## This Week

Week of / goals / anything I especially want help with

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## Daily Check-In

Day / Date	Energy (0-10)	Pain (0-10)	Eating / Drinking	Sleep	Main note
Mon					
Tue					
Wed					
Thu					
Fri					
Sat					
Sun					

## Symptoms I Want to Watch

<input type="checkbox"/> Skin reaction	<input type="checkbox"/> Breast tenderness	<input type="checkbox"/> Swelling
<input type="checkbox"/> Arm / shoulder motion	<input type="checkbox"/> Fatigue	<input type="checkbox"/> Mood / body image
<input type="checkbox"/> Other: _____		

## What I Tried / What Helped

Use this page to test small changes and keep track of what helps, what does not, and what you want to ask about next.

Problem or symptom	What I tried	Did it help?	Next step / question

*Examples: taking pain medicine before meals, changing skin care timing, drinking earlier in the day, using a humidifier, adjusting fiber, walking after treatment, or asking for a refill.*

## Questions for My Care Team

Bring this page to visits. Small questions are worth writing down, especially when treatment days start to run together.

Symptoms or side effects I want to mention

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Medication, refill, or product questions

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Eating, drinking, bowel, bladder, skin, sleep, or activity questions

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Logistics: appointments, transportation, work, family, forms

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One thing I keep forgetting to ask

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