

# HIP ARTHRITIS

## Nonoperative Physical Therapy Protocol · 6–12 Weeks

PATIENT

PHYSICIAN

Andrew L. Merritt, MD

DATE OF REFERRAL

PT START DATE

### For the patient

This is a **short, focused physical therapy program** for arthritis of the hip. It is also a good way to prepare for a **hip replacement**: the stronger you go into surgery, the stronger you come out. Most of the work happens in the **first 6 weeks, twice a week**, while you learn the exercises and build strength. After that you taper off and keep going on your own at home or in the gym. **Exercise is the most effective non-surgical treatment for arthritis.** Strong hip and buttock muscles take load off the joint and reduce limping. Some soreness is normal: follow the pain rules your therapist teaches you.

### PROTOCOL AT A GLANCE

|                  |                                                                                                                                                                     |
|------------------|---------------------------------------------------------------------------------------------------------------------------------------------------------------------|
| DIAGNOSIS · GOAL | Hip arthritis, or getting ready for a hip replacement. <b>Less pain, less limp, stronger hips, and a program you can keep doing on your own</b>                     |
| ACTIVITY         | Full activity as tolerated. Low-impact cardio most days: bike, pool, elliptical. <b>Cane in the opposite hand</b> on long days or if limping. No running or jumping |
| PHYSICAL THERAPY | <b>2× a week for 6 weeks</b> (about 12 visits), then <b>up to 4 more visits</b> over weeks 7–12 if needed                                                           |
| PAIN RULES       | Exercise pain <b>up to 5/10 is OK</b> if it settles by the next morning. If it doesn't, ease back the next session. <b>Don't stop exercising</b>                    |
| PROGRESSION      | Advance when the goals are met, not by the calendar. Discharge as soon as the home or gym program is solid                                                          |
| AFTER PT         | Keep strengthening <b>2–3× a week</b> and cardio <b>150 min a week</b> for life. Recheck with Dr. Merritt if not better by 6 weeks                                  |

## Recovery Timeline

| Phase | When       | PT visits                       | Focus                                                                                                       |
|-------|------------|---------------------------------|-------------------------------------------------------------------------------------------------------------|
| 1     | Weeks 0–2  | 2× a week                       | Evaluation, education, pain rules; gentle motion; start glute and abductor work; gait with a cane if needed |
| 2     | Weeks 2–6  | 2× a week                       | Progressive hip abductor and glute strength (the highest-yield work); less limp; balance; cardio build-up   |
| 3     | Weeks 6–12 | Every 1–2 weeks, up to 4 visits | Taper to independence: single-leg control, gym or home program, retest, discharge (or pre-surgery peak)     |

Questions about PT? Call our office or ask at your next visit. We are glad to coordinate with your therapist.

## For the Therapist

Check the surgeon notes first. They override anything else in this protocol. Questions or setbacks: call (425) 656-5060.

### Surgeon notes and special instructions

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### General principles

- **Scope.** Symptomatic hip OA without instability or fracture, in two groups: (1) **conservative care** to reduce pain, improve walking, and delay or avoid replacement; (2) **prehab before a planned hip replacement** (see the prehab page). Rule out the lumbar spine and greater trochanteric pain syndrome as the main pain source.
- **Short and front-loaded.** About **12 visits over 6 weeks** (2× a week), then up to 4 taper visits by week 12. This matches GLA:D, ESCAPE-pain, and the APTA hip OA guideline (2025): exercise plus manual therapy. **Discharge early** once the patient runs the program independently. Progression is criteria-based.
- **Abductors and glutes first.** Hip abductor weakness is nearly universal in hip OA and causes the Trendelenburg limp and trunk lean, which raise joint load and often start low back pain. Abductor and extensor strength is the highest-yield work.
- **Keep it moving.** Hip extension and rotation mobility (the front of the hip tightens from sitting), hamstring flexibility. Maintain, don't force: no aggressive stretching into groin pain.
- **Education is treatment.** Visits 1–2: what arthritis is, why exercise is safe and helps, the pain rules, pacing, low-impact swaps for running and jumping, movement breaks every 30–45 min, and weight (5–10% loss if overweight). Encourage a cane or trekking poles without stigma.
- **Pain rules.** Exercise pain up to **5/10** is fine if it is back to baseline by the next morning (within 24 hours) and not building week to week. If not, reduce load (about 30%) or range; don't stop (see the flare plan).
- **Strength and cardio dose:** progressive strength (build to 8–12 reps at a hard effort, 2–3 sets; add load when 2 more reps are possible), balance, and movement quality (level pelvis, knee over foot). Cardio toward **150 min a week**: a recumbent bike or a slightly higher seat avoids deep hip bending. **Aquatic exercise** when land exercise hurts.
- **Adjuncts:** hip joint mobilization (long-axis distraction, mobilization with movement) early, always paired with exercise; dry needling if offered (APTA 2025). **Heat before exercise** helps more than ice at the hip; ice (20 min on, 20 min off) mainly for the outside of the hip. **Not recommended:** ultrasound, stand-alone TENS, hip bracing.
- **Injections and medicines:** per Dr. Merritt. Topical gels do little for the hip joint. Hip cortisone injections are image-guided; after one, resume after a few days and use the relief to push strength. None in the 3 months before a hip replacement.

## PHASE

## 1

## Learn, Settle, and Protect the Joint

Weeks 0–2

**For the patient: what to expect**

Your first visits are about **learning**: why exercise helps and how much discomfort is OK. Pain up to **5 out of 10** during exercise is fine if it settles by the next morning. We work on gentle motion, waking up the hip muscles, and your walking. A **cane in the opposite hand** takes a lot of load off the hip. You will leave with a short home program.

|          |                                                                                                                                                                                                               |
|----------|---------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|
| VISITS   | 2× a week. Visit 1: evaluation, baseline tests, education; conservative care or prehab (note surgery date). Visit 2: education and first full session                                                         |
| ACTIVITY | Full weight bearing. Cane in the opposite hand if limping or painful to walk; teach placement. Daily walking in comfortable bouts. Bike (recumbent or seat a little high, light resistance) or pool 10–15 min |
| MOTION   | Gentle active and passive motion in all directions; avoid end ranges that reproduce groin or outer hip pain                                                                                                   |
| TESTS    | HOOS JR, pain 0–10, 30-sec chair stand, 40-m fast walk, stair climb, abductor and extensor strength. Repeat at week 6 and discharge                                                                           |

**Goals**

- Understands the pain rules and the 6–12 week plan
- Less pain with daily activities; less limp and trunk lean
- Better hip extension and rotation
- Home program started 2–3× a week, plus daily walking

**Move on when**

- ☐ Walking on level ground without a marked limp
- ☐ Home program done on their own
- ☐ Soreness settles by the next morning
- ☐ Cane use comfortable if needed

**Exercises**

| Exercise                                       | How                                                                                       |
|------------------------------------------------|-------------------------------------------------------------------------------------------|
| Heel slides, supine hip IR/ER, log rolls       | 3 × 10 each                                                                               |
| Supine or side-lying hip abduction, clamshells | 3 × 15; progress to a band                                                                |
| Prone hip extension · bridges                  | Isometric 3 × 10, 5-sec holds · bridges 2–3 × 10–15, slow lower                           |
| Standing hip abduction, with support           | 3 × 15                                                                                    |
| Sit-to-stand                                   | Raised seat if needed, arms crossed; 2–3 × 10                                             |
| Stretches                                      | Single knee-to-chest; hip flexor (seated, then lunge position); 3 × 30 sec                |
| Balance · Gait                                 | Single-leg stance at a counter 3 × 20–30 sec · gait training with a cane, weight shifting |

**Precautions**

- No running, jumping, or heavy lifting; no loaded deep squats or lunges if they flare symptoms
- No aggressive hip flexor stretching with groin pain; avoid long sits and low chairs

## PHASE

## 2

## Build Hip Strength

Weeks 2–6

**For the patient: what to expect**

As pain settles, we build hip and leg strength with bands, weights, and balance work. Stronger hip muscles reduce the load through your joint with every step. The pool is a great option if land exercise hurts. Keep your home program **2–3 times a week** and build walking, biking, or pool time toward **150 minutes a week**.

|             |                                                                                                                               |
|-------------|-------------------------------------------------------------------------------------------------------------------------------|
| VISITS      | 2× a week (about 12 visits total by week 6). Retest at week 6                                                                 |
| LOADING     | Progress resistance when 2 more reps are possible at the end of a set. Build to 8–12 reps at a hard effort, 2–3 sets          |
| WALKING AID | Wean the cane on level ground as the limp resolves; keep it for long community walks as needed                                |
| CARDIO      | Build to 150 min a week (about 30 min, 5 days): bike 20–30 min at moderate resistance, pool walking and exercises, elliptical |

**Goals**

- Hip abductor and extensor strength 4+/5
- Limp (Trendelenburg) gone or much reduced
- Single-leg stance ≥30 sec without trunk shift or pain
- Better chair stand, walk test, and HOOS JR; knows the flare plan

**Move on when**

- ☐ Walking 20+ min at a comfortable pace without significant pain
- ☐ Step-up × 15 without pain
- ☐ Program done correctly on their own

**Exercises**

| Exercise                                           | How                                                                                                             |
|----------------------------------------------------|-----------------------------------------------------------------------------------------------------------------|
| <b>Hip abduction and external rotation, banded</b> | Side-lying abduction, clamshells, standing abduction; 3 × 15                                                    |
| <b>Hip extension, loaded</b>                       | Standing band or cable extension, bridges (then single leg); 3 × 12–15                                          |
| <b>Mini-squats · sit-to-stand, progressed</b>      | 0–60° 3 × 15 · lower seat or add weight 3 × 8–12                                                                |
| <b>Leg press</b>                                   | Both legs, hip no deeper than 90°; 3 × 12, light to moderate                                                    |
| <b>Step-ups</b>                                    | 4–6 inch, forward and lateral; 3 × 10                                                                           |
| <b>Romanian deadlift (hip hinge)</b>               | Light; 3 × 12                                                                                                   |
| <b>Balance · Stretches</b>                         | Single-leg stance, firm to foam, 3 × 30–45 sec · hip flexor (lunge) and piriformis 3 × 45 sec; IT band if tight |
| <b>Pool (if available)</b>                         | Walking, hip abduction and extension, flutter kicks                                                             |

**Precautions**

- No deep squats or loaded hip bending past 90° if groin pain
- No leg extension machine (can provoke front-of-hip pain)
- No running or high-impact exercise

## PHASE

## 3

## Function, Independence, and Discharge

Weeks 6–12

**For the patient: what to expect**

You now do most of the program on your own. Visits drop to every 1–2 weeks to check progress and make the exercises harder. The goal is not to stop exercising but to have a routine you can keep for life.

**Many people finish at 6–8 weeks.** If a hip replacement is planned, this is where you reach your **best possible strength** before surgery.

|         |                                                                                                                                            |
|---------|--------------------------------------------------------------------------------------------------------------------------------------------|
| VISITS  | Every 1–2 weeks, up to 4 visits. Discharge as soon as the goals are met; many patients finish at 6–8 weeks                                 |
| PROGRAM | Home or gym program 2–3× a week, plus walking, biking, or swimming 30 min, 3–5 days a week. Written or app-based program with progressions |

**Goals**

- Hip strength within 15% of the other side
- Independent, progressive long-term program and flare plan
- Knows when to come back to PT or see Dr. Merritt
- Final retest: HOOS JR, pain, chair stand, walk and stair tests

**Move on when**

- ☐ Meets discharge criteria (see the discharge page)

**Exercises**

| Exercise                     | How                                                                                                                                                 |
|------------------------------|-----------------------------------------------------------------------------------------------------------------------------------------------------|
| Single-leg squat progression | 6–8 inch step-down, level pelvis; 3 × 10                                                                                                            |
| Lateral band walks           | 3 × 15 each direction                                                                                                                               |
| Hip hinge, single-leg bridge | Deadlift pattern and single-leg bridge; 3 × 8–12                                                                                                    |
| Core                         | Dead bug and plank series; 3 × 10                                                                                                                   |
| Long-term program            | Abductor, extensor, and core work 2–3× a week; Nordic walking or trekking poles; yoga or tai chi 1–2× a week; water aerobics 2× a week if available |

**Precautions**

- No running, tennis, racquet sports, or high-impact exercise as the main activity
- Not improving by 6 weeks, or worse: send a note to Dr. Merritt before continuing

## Flare Plan

*Flares are expected. Ease back; don't stop.*

|                            |                                                                                                                                                        |
|----------------------------|--------------------------------------------------------------------------------------------------------------------------------------------------------|
| <b>DURING A FLARE</b>      | Pain not settled by the next morning? Cut load by about 30% and reassess. Keep gentle motion, pool, and easy bike                                      |
| <b>HEAT, ICE, AND REST</b> | Heat before exercise; ice 20 min on, 20 min off for the outside of the hip or after a long day. Cane on long days. Temporarily less high-load activity |
| <b>CALL DR. MERRITT</b>    | Flare lasting more than 1 week, new rest or night pain, or a sudden change in walking. Injections can be coordinated to calm a flare during rehab      |

## Prehab Before Hip Replacement

*The stronger you go into surgery, the stronger you come out.*

Use the same phases, with the focus on hip and glute strength, motion, a normal walking pattern, and learning the home exercise program the patient will follow after surgery.

|                       |                                                                                                                                      |
|-----------------------|--------------------------------------------------------------------------------------------------------------------------------------|
| <b>BEFORE SURGERY</b> | Teach the post-op home program now. No cortisone injection in the 3 months before surgery. Keep the home program going until surgery |
| <b>AFTER SURGERY</b>  | A home exercise program first; formal PT only if Dr. Merritt orders it or after the PA visit                                         |

## Discharge and When to Call

*Finish PT as soon as the patient can run the program on their own. The targets below guide progress; the home program continues toward any not yet met.*

| Measure                 | Target                                                             |
|-------------------------|--------------------------------------------------------------------|
| <b>Hip strength</b>     | Abductors and extensors $\geq 4+/5$ ; within 15% of the other side |
| <b>Balance</b>          | Single-leg stance $\geq 30$ sec without a Trendelenburg sign       |
| <b>Pain</b>             | $\leq 3/10$ with target activities                                 |
| <b>Walking · Cardio</b> | Walking or swimming 30+ min, 3–5 days a week                       |
| <b>Home program</b>     | Independent, 2–3× a week or more, with a flare plan                |

|                              |                                                                                                                                             |
|------------------------------|---------------------------------------------------------------------------------------------------------------------------------------------|
| <b>DISCHARGE WHEN</b>        | Independent with the home or gym program; pain and HOOS JR better than baseline; knows the flare plan. Usually 6–8 weeks, no later than 12  |
| <b>REPORT TO DR. MERRITT</b> | Baseline and discharge scores (HOOS JR, pain 0–10, 30-sec chair stand, 40-m walk, stair test), number of visits, and the home program given |
| <b>SURGICAL CONSULTATION</b> | Function still limited despite 3 months of structured PT, pain at rest or at night, or declining activity despite a good program            |
| <b>CALL SOONER IF</b>        | No meaningful improvement by 6 weeks; sudden worsening; new locking or giving way; fever; calf pain or swelling                             |