

Foot and Toes

From skin and nail pressure to bone-stress warning signs

Kinesphere Lab Editorial Team

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What this guide helps you do. Use this guide to distinguish surface problems from joint, tendon, and bone patterns; decide when pointe, relevé, jumping, or ordinary walking should stop; and prepare useful information for an assessment.

Scope. Educational guidance for dancers, families, and teachers. It supports safer decisions and clearer communication; a clinician determines diagnosis and individualized restrictions.

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1 How to use this guide

This guide is designed for a dancer who has pain now, or who keeps developing the same problem. Its job is to help you describe the pattern, make a safe class decision, and communicate clearly with a parent, teacher, or clinician. It cannot determine the diagnosis from symptoms alone.

Key idea

Use four observations together: **exact location, how it began, which movement provokes it, and what happens later that day or the next morning.** One symptom by itself is rarely specific enough.

1.1 The four-question check

1. **Where?** Point with one finger. A one-fingertip spot on bone is more concerning than broad, symmetrical muscle soreness.
2. **When?** Sudden fall, twist, pop, collision, or landing; or gradual pain that built over several classes.
3. **What load?** Walking, stairs, plié, relevé, turnout, extension, jumps, pointe, floorwork, lifts, or repeated rehearsal.
4. **What response?** Better after warm-up, steadily worse with repetition, painful at rest, or worse the next morning.

MODIFY

Mild but recurring or movement-specific pain: remove the painful element and tell a teacher, parent, or guardian.

STOP

Pain changes technique, grows with repetition, causes limping, weakness, swelling, loss of motion, or instability.

SEEK CARE

Focal bone pain, deformity, inability to use or bear weight, locking, neurologic signs, rest/night pain, or a serious fall.

SEEK MEDICAL CARE

A dancer who is a minor should tell a parent or guardian about a significant injury. Urgent evaluation is appropriate for deformity, inability to use or bear weight on the part, rapidly increasing swelling, an open wound, a cold or pale limb, persistent numbness, progressive weakness, or serious head, neck, or spine symptoms.[1]

2 Know the region

The foot is both a flexible adapter and a rigid lever. In dance it must accept landing force, maintain turnout without rolling inward or outward, transfer force through relevé, and tolerate concentrated pressure in demi-pointe or pointe. The toes, metatarsals, sesamoids beneath the big-toe joint, midfoot, arch tissues, and skin can produce pain in nearby locations even though the injured structure differs. Foot and ankle injuries make up a large share of dance injuries, particularly in ballet.[2, 3]

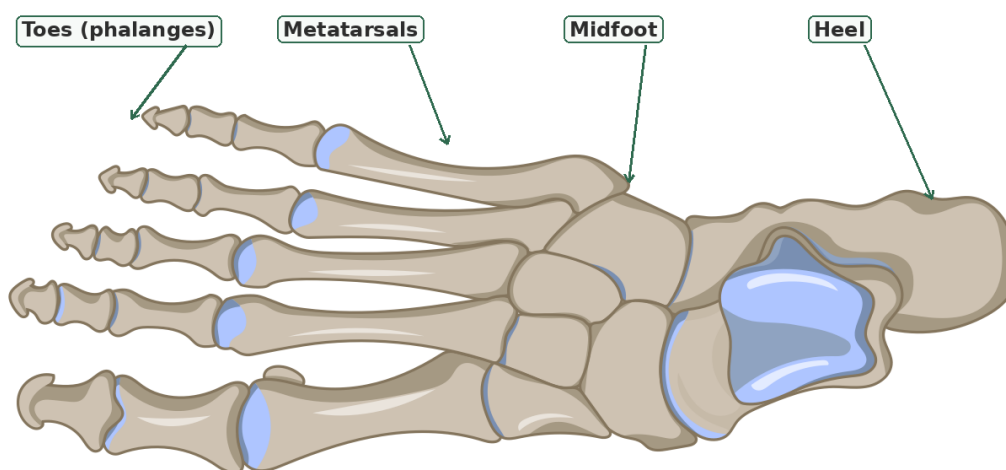


Figure 1. Bones of the right foot viewed from above. The long metatarsals connect the toes to the clustered midfoot and rearfoot bones. Source: DataBase Center for Life Science (DBCLS), CC BY 4.0, via the Wikimedia Commons source page; rotated, placed on white, cropped, and region labels added for this guide.

In dance

Pointe and demi-pointe place high demand on the first metatarsophalangeal joint, sesamoids, toe flexors, metatarsals, and shoe-contact areas. A dancer may compensate by sickling, gripping the toes, rolling inward, or shifting weight away from a painful area. The compensation itself is a reason to stop the provoking movement.

3 Find the symptom pattern

Location and behavior	Pattern it can resemble	Dance clues	First decision
Hot spot, blister, corn, cut, or nail pressure at a shoe-contact area	Skin or nail injury	Worse in one shoe, during pointe, sliding, or repeated friction; surface tenderness	Protect the skin, correct fit or friction, and stop if bleeding, infection signs, or altered technique
Pain under the big-toe joint, especially with push-off or relevé	Sesamoid or first-joint overload	Tender under one side of the joint; worse barefoot on hard floor or in demi-pointe	Remove pointe, jumps, and forceful push-off; focal bony pain deserves assessment
One small metatarsal spot that worsens with impact	Bone-stress injury	Gradual progression from class-only pain to walking or rest pain	Stop impact and arrange prompt assessment; early imaging can be normal
Sudden outer-foot pain after rolling the ankle or landing	Fifth-metatarsal or other fracture pattern	Swelling, bruising, painful weight bearing	Protect from weight bearing and seek evaluation

Pain along the arch or heel that is stiff after rest	Plantar tissue overload	Worse with prolonged standing, jumps, or repeated calf/foot loading	Modify load; seek care if persistent, focal, or associated with numbness
Pain at the big toe after forced bending	Toe-joint sprain or fracture	Swelling, bruising, reduced push-off, visible change in alignment	Stop pointe and jumping; deformity or major swelling needs urgent care
Posteromedial ankle-to-arch pain with big-toe motion	Flexor hallucis longus irritation	Triggered by repeated relevé, pointe, or toe flexion; may click	Reduce provoking load and obtain dance-informed assessment if persistent

Key idea

A broad ache across several metatarsals can still be important, but a one-fingertip spot on bone, increasing pain with hopping or walking, pain at rest, or pain that progresses from class to daily life raises concern for bone stress.[4, 5]

4 Common foot and toe injury patterns

Skin, blister, corn, and nail trauma

Usually feels like. Surface burning, a hot spot, pressure, a fluid-filled blister, a bruised nail, or pain exactly where shoe seams or toe-box pressure occur.

Do today. Clean and cover broken skin, keep dressings smooth, and change the friction source. Avoid cutting deep corns, draining a blister with unclean tools, or packing the shoe so tightly that circulation or toe alignment changes.

Seek care when. Redness spreads, drainage or fever develops, the nail is severely lifted, pain prevents normal walking, or diabetes/circulation problems are present.

Sesamoid and first big-toe joint pain

Usually feels like. Pain beneath the big-toe joint during push-off, relevé, or pointe. The dancer may avoid loading the first ray and roll toward the outer foot.

Why distinction matters. Sesamoid irritation, stress injury, joint sprain, and cartilage problems can overlap. Aggressive toe stretching or continued pointe can increase load on a painful structure.[6]

Do today. Remove pointe, jumping, and repeated end-range relevé. Use normal walking only if it remains comfortable and does not increase pain later.

Seek care when. Tenderness is sharply focal, swelling is present, walking hurts, or symptoms persist or recur.

Metatarsal bone-stress injury

Usually feels like. A gradually worsening focal ache over a metatarsal, often first noticeable with jumps or prolonged dancing and later with walking.

Why distinction matters. Bone-stress injuries exist on a continuum. Pain can improve before the bone is ready for repeated impact, and early radiographs may miss the injury.[4, 5]

Do today. Stop impact and pointe. Do not use hopping as a home test. Arrange sports-medicine assessment, especially for focal tenderness.

Dancer's fracture and acute toe or forefoot fracture

Usually feels like. Sudden pain after a twisted landing, inversion, direct impact, or forced toe position, often with bruising or swelling.

Do today. Stop dancing, protect the foot, and avoid forcing weight through it.

Urgent signs. Visible deformity, an open wound, numbness, a cold or pale toe, or inability to bear weight.[1, 7]

Arch and plantar tissue pain

Usually feels like. Aching or pulling along the arch or heel, sometimes most noticeable on first steps after rest or after a high-volume jumping day.

Do today. Reduce impact and prolonged standing; avoid forcing the arch with hard rolling or extreme stretching if the pain is sharp or focal.

Seek care when. Symptoms persist, worsen, include tingling or numbness, or are localized to bone.

Flexor hallucis longus tendon irritation

Usually feels like. Pain or catching behind the inner ankle, along the arch, or near the big toe during repeated pointe, relevé, and toe flexion.

Do today. Remove repetitive pointe and end-range toe loading. Do not repeatedly trigger the click to decide whether it remains present.

Assessment value. A dance-medicine clinician can distinguish tendon irritation from posterior ankle impingement and joint pathology.[8, 9]

5 What to do today

5.1 Protect the irritated area from repeated testing

- ✓ End the movement that reproduces sharp, focal, unstable, or escalating pain.
- ✓ Tell the teacher exactly which movements provoke symptoms. Replace those movements rather than silently reducing their quality.
- ✓ Keep ordinary movement that is comfortable and does not worsen symptoms later, unless a clinician has instructed complete rest or protection.
- ✓ Record location, onset, swelling, bruising, clicking, weakness, and the next-morning response.
- ▲ Avoid repeatedly hopping, forcing range, stretching hard, rolling directly over a focal bone spot, or “checking” the injury every few minutes.
- ▲ Do not use pain medicine, tape, or a warm-up as proof that the tissue is ready for full dancing. Symptom masking can hide worsening load intolerance.

Why this matters

A short period of protected cold may reduce discomfort after an acute injury if skin sensation is normal and the cold source is wrapped. It does not accelerate every type of healing and it is not

a readiness test. Swelling, function, location, and response to load matter more than whether the area feels temporarily numb.

5.2 Communication script

Practical script

“The pain is at [exact location]. It began [suddenly / gradually] during [movement]. It is [better / the same / worse] with walking and is [better / worse] the next morning. I also notice [swelling, bruising, weakness, clicking, locking, numbness, or none]. I need to remove [specific movement] until this is assessed or settles.”

6 Foot-specific class modifications

MODIFY AND REPORT

Depending on the pattern and medical advice, useful substitutions may include upper-body work, seated marking, floor barre without painful foot pressure, and centre combinations without relevé, pointe, jumps, or forceful push-off. A barefoot exercise is not automatically lower load: hard flooring and repeated metatarsal contact may increase symptoms.

STOP THE PROVOKING ACTIVITY

Stop the combination if you begin sickling, clawing the toes, rolling away from the first metatarsal, shortening the stance time, or landing asymmetrically. Those changes indicate that pain is altering mechanics.

SEEK MEDICAL CARE

Prompt assessment is appropriate for focal bone tenderness, increasing impact pain, pain with walking, pain at rest or night, new swelling or bruising, or recurrent pain at the same spot. Suspected fracture patterns should not be “worked out” in class.[4, 7]

7 Returning to dance

Return should be based on function and symptom response rather than the number of days since the pain began. Dance-medicine literature supports staged progression from basic movement to dance-specific demand rather than a direct jump into full class.[10]

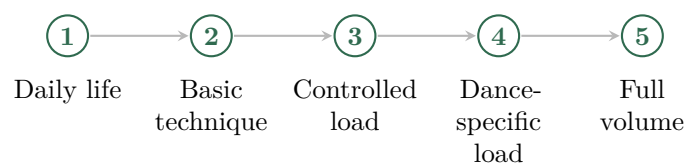


Figure 2. General return sequence. Advance only when the current step is controlled and does not create a meaningful symptom increase later that day or the next morning. Region-specific restrictions take priority.

Key idea

A stage is tolerated only when symptoms remain acceptable **during the activity, later that day, and the next morning**. New swelling, limping, altered alignment, loss of control, or a clear pain increase means the load exceeded current capacity.

7.1 Foot and toe progression

1. Comfortable walking and stairs in ordinary shoes.
2. Pain-free foot and toe motion needed for basic class positions.
3. Supported barre in flat, initially without repeated relevé.
4. Two-leg demi-pointe, then controlled single-leg relevé if permitted.
5. Centre work in flat without impact.
6. Two-leg small jumps, then one-leg landings and directional changes.
7. Pointe-specific preparation and pointe only after required strength, range, and symptom criteria are met.
8. Full rehearsal volume, large jumps, and repeated pointe sequences.

Common mistake

A dancer can feel comfortable in a rigid shoe or after taping because motion is restricted. That comfort does not prove a bone or joint injury has healed. Progression still depends on clinical restrictions and response after load.

8 Reducing recurrence

No single stretch, shoe, or screening test prevents every dance injury. The most useful prevention system combines load management, technique, physical capacity, recovery, and early communication.[2, 11]

1. **Track meaningful load changes.** New pointe work, more jumps, longer rehearsals, harder flooring, a role change, a growth spurt, and added cross-training can all increase tissue demand.
2. **Build capacity outside choreography.** Strength, balance, landing control, trunk control, and gradual exposure give tissues a larger margin before fatigue changes technique.
3. **Use available range rather than forcing an ideal.** Turnout, extension, pointe range, and back extension should come from the joints that possess that motion, with control.
4. **Recover enough to adapt.** Sleep, rest days, and regular meals and snacks support repair. Recurrent bone-stress injuries, persistent fatigue, declining performance, delayed or disrupted menstrual function, or other signs of under-fuelling deserve confidential medical and nutrition support.[12, 13]
5. **Report early.** A small, repeatable symptom is easier to modify than a pattern that has already changed walking, class technique, or sleep.

9 Bring this information to an assessment

Exact location	_____
Date and mechanism of onset	_____
Sudden or gradual	_____
Dance movements that provoke it	_____
Walking, stairs, sleep, or rest symptoms	_____
Swelling, bruising, clicking, locking, weakness, numbness	_____
Recent change in class, rehearsal, pointe, jumps, floorwork, lifts, or cross-training	_____
What improves it; what worsens it the next morning	_____
Prior injury to the same area	_____

Key idea

Bring shoes or equipment associated with the symptoms when useful, and bring a short video only if recording was safe and the movement did not require provoking a potentially serious injury again.

10 Evidence scope and limitations

This guide prioritizes dance-medicine reviews, pediatric and sports-medicine guidance, clinical practice guidelines, and authoritative professional resources. Research on dancers is uneven across genres and body regions; evidence from related weight-bearing or artistic sports is used only where the mechanical demand is clearly similar. Individual diagnosis, imaging, treatment, and return restrictions belong to a qualified clinician who can examine the dancer.

Key idea

Medical review date: July 2026. Suggested review cycle: every two years, or sooner when a major guideline changes. Kinesphere Lab should obtain review by a physician or physical therapist with dance-medicine experience before studio-wide clinical distribution.

Selected evidence and guidance

- [1] American Academy of Pediatrics. *After a Sports Injury: When to See the Doctor*. 2025. URL: <https://www.healthychildren.org/English/health-issues/injuries-emergencies/sports-injuries/pages/After-a-Sports-Injury-When-to-See-the-Doctor.aspx> (visited on 07/18/2026).

- [2] “Incidence and prevalence of musculoskeletal injury in ballet: a systematic review”. In: *Orthopaedic Journal of Sports Medicine* (2015). URL: <https://pmc.ncbi.nlm.nih.gov/articles/PMC4622328/> (visited on 07/18/2026).
- [3] “Lower extremity injury patterns in elite ballet dancers: imaging features and institutional overview”. In: *Skeletal Radiology* (2016). URL: <https://pmc.ncbi.nlm.nih.gov/articles/PMC4712185/> (visited on 07/18/2026).
- [4] American Academy of Orthopaedic Surgeons. *Stress Fractures of the Foot and Ankle*. 2025. URL: <https://orthoinfo.aaos.org/en/diseases--conditions/stress-fractures-of-the-foot-and-ankle/> (visited on 07/18/2026).
- [5] “Risk factors, diagnosis and management of bone stress injuries in adolescent athletes: a narrative review”. In: *Sports Medicine - Open* (2021). URL: <https://pmc.ncbi.nlm.nih.gov/articles/PMC8073721/> (visited on 07/18/2026).
- [6] “The painful sesamoid of the great toe”. In: *EFORT Open Reviews* (2020). URL: <https://pmc.ncbi.nlm.nih.gov/articles/PMC4017307/> (visited on 07/18/2026).
- [7] American Academy of Orthopaedic Surgeons. *Toe and Forefoot Fractures*. 2025. URL: <https://orthoinfo.aaos.org/en/diseases--conditions/toe-and-forefoot-fractures/> (visited on 07/18/2026).
- [8] G. J. Sammarco and P. S. Cooper. “Flexor hallucis longus tendon injury in dancers and nondancers”. In: *Foot & Ankle International* 19.6 (1998), pp. 356–362. DOI: 10.1177/107110079801900603. URL: <https://pubmed.ncbi.nlm.nih.gov/9677077/> (visited on 07/18/2026).
- [9] Youichi Yasui et al. “Posterior ankle impingement syndrome: A systematic four-stage approach”. In: *World Journal of Orthopedics* 7.10 (2016), pp. 657–663. DOI: 10.5312/wjo.v7.i10.657. URL: <https://pmc.ncbi.nlm.nih.gov/articles/PMC5065672/> (visited on 07/18/2026).
- [10] “Ballet rehabilitation: a novel return to sport protocol”. In: *Cureus* (2022). URL: <https://pmc.ncbi.nlm.nih.gov/articles/PMC9467490/> (visited on 07/18/2026).
- [11] “Preventing dance injuries: current perspectives”. In: *Open Access Journal of Sports Medicine* (2013). URL: <https://pmc.ncbi.nlm.nih.gov/articles/PMC3871955/> (visited on 07/18/2026).
- [12] International Association for Dance Medicine and Science. *Nutrition Resource Paper*. 2020. URL: <https://iadms.org/media/3589/iadms-resource-paper-nutrition-resource-paper.pdf> (visited on 07/18/2026).
- [13] International Association for Dance Medicine and Science. *The Challenge of the Adolescent Dancer*. 2021. URL: <https://iadms.org/media/5774/iadms-resource-paper-the-challenge-of-the-adolescent-dancer.pdf> (visited on 07/18/2026).
- [14] International Association for Dance Medicine and Science. *Technique Class Participation Options for Injured Dancers*. 2025. URL: <https://iadms.org/media/24lfewse/iadms-resource-paper-technique-class-participation-for-injured-dancers.pdf> (visited on 07/18/2026).