

Based on the provided research, Traditional Chinese Medicine (TCM) offers specific regimens tailored to seniors that address the dual challenges of **age-related degeneration** (Kidney/Liver deficiency in TCM theory) and **structural repair** of foot ligaments/tendons.

The following regimens show the highest efficacy according to the reviewed texts, categorized by their primary therapeutic action.

Regimen 1: The "Foot-Specific" Anti-Swelling & Repair Protocol

Primary Formula: *Ji-Ming-San* (Cock-Crowing Powder)**Best For:** Seniors with foot pain, tendon swelling, and heaviness in the lower extremities.

- **Mechanism & Efficacy:** *Ji-Ming-San* is explicitly highlighted for treating "swelling of tendons" and "relief of foot pain" 1, 2. Modern metabolomic profiling indicates it effectively combats inflammation and acute swelling in joint/tendon models (like the ankle), promoting recovery from degradation 3.
- **Key Ingredients:**
 - *Chaenomeles speciosa* (Papaya/Mugua): Relaxes sinews and unblocks channels.
 - *Zingiber officinale* (Ginger): Anti-inflammatory.
 - *Perilla frutescens* and *Euodia ruticarpa*: Warm the channels to dispel dampness (stiffness) 2.

Regimen 2: The "Regenerative" Kidney-Tonic Protocol

Primary Herbs: *Dipsacus asper* (Xuduan) + *Epimedium* (Yinyanghuo) + *Drynaria* (Gusuibu)**Best For:** Healing ligament tears ("Broken Tendons") in the elderly by stimulating stem cells.

In TCM, "the Kidney governs the bones" and "the Liver governs the tendons." Seniors typically have deficiencies in these energies, leading to brittle, non-healing tissues.

- **Role of *Dipsacus* (Xuduan):** The name literally means "Restore Broken," referencing its traditional use for broken tendons and bones 4. Research shows it promotes tendon-bone healing and prevents osteoarthritis progression 4.
- **Role of *Epimedium* (Icariin):** Designated as a **Tier 1** regenerative agent. It actively promotes the differentiation of Tendon-Derived Stem Cells (TDSCs), which is critical for seniors whose stem cell pool is depleted or senescent 5. It enhances the interface strength between the ligament and the bone 6.
- **Role of *Drynaria* (Osteopractic Total Flavone):** Specifically shown to promote tendon-bone healing through the mTOR signaling pathway, increasing the number of new vessels and the calcification of the insertion point (entheses), ensuring the ligament re-anchors securely 7.

Regimen 3: The "Anti-Stiffness" Spasmolytic Protocol

Primary Formula: *Shaoyao Gancao Decoction* (Peony & Licorice) + *Lycopodium* (Shenjincao)**Best For:** Eradicating stiffness and relaxing tight, contracted ligaments.

- **Mechanism:** *Shaoyao Gancao* is a classic "softening" prescription used for thousands of years to treat "malnutrition of tendons" and spasms 8.

- **Adjuvant Herb:** *Lycopodium* (Club Moss/Shenjincao). Its name means "Extend the Tendon Herb." Studies confirm it relaxes tendons, activates collaterals, and relieves rheumatoid-like stiffness by modulating inflammatory cytokines (TNF- α , IL-1 β) 9.

Regimen 4: Topical & External Applications

Primary Agents: *Pyritum* (Zirantong) and *Baimai* Ointment **Best For:** Localized healing of the tear without systemic side effects.

- **Pyritum (Mineral Medicine):** Traditionally used for "broken tendons" and traumatic injuries. Systematic reviews of "Chinese Patent Medicine containing Pyritum for External Use" confirm its effectiveness in promoting fracture and tendon healing when applied topically, avoiding heavy metal accumulation risks associated with oral use 10, 11.
- **Baimai Ointment:** A Tibetan/TCM formulation widely used for "relaxing tendons and activating collaterals" in musculoskeletal diseases. Expert consensus supports its use for pain and stiffness where clinical evidence was previously purely anecdotal 12.

Spotlight: A "Kitchen Medicine" for Achilles/Foot Tendons

Herb: *Momordica charantia* (Bitter Melon) **Finding:** In experimental models of **Achilles tendon injury** (the major tendon of the foot/ankle), application of *Momordica* extract significantly enhanced healing. It increased the total volume of collagen fibers, improved tenoblast activity (repair cells), and promoted neovascularization (new blood supply), which is often poor in the feet of seniors 13, 14.

Summary of TCM Regimens for Senior Foot Ligament Tears

Regimen Target, TCM Formula / Herb, Primary Action, Source

Foot Pain & Swelling, Ji-Ming-San, Targeted relief for foot tendons; anti-inflammatory., 2

Tear Repair (Stem Cells), Dipsacus + Epimedium, ""Restores Broken"" tissues; differentiates stem cells.", 4, 5

Stiffness Eradication, Shaoyao Gancao + Lycopodium, "Relaxes contracted sinews; ""Extends"" the tendon.", 8, 9

Topical Healing, Pyritum (Zirantong), "Mineral paste specifically for ""broken tendons"".", 10

Achilles/Ankle Support, Momordica (Bitter Melon), Increases collagen volume and blood supply in foot tendons., 13