Based on the provided sources, seniors can potentially make tendons more supple, elastic, and healthy through specific pharmacological interventions, the management of cellular senescence, and the maintenance of mechanical loading. The sources highlight the following approaches:
Targeting Cellular Senescence (Senolytics) Aging tendons accumulate senescent cells, which are associated with age-related diseases and lower rates of healing 1. Addressing this accumulation is a key strategy:

- **Quercetin and Dasatinib:** Quercetin (QC) is a bioflavonoid found in fruits and vegetables that possesses robust antioxidant properties 2. It protects tendons against oxidative stress, inflammation, and matrix degradation, helping to maintain structural integrity 3. Research indicates that incubating tendon specimens with a combination of Dasatinib and Quercetin significantly decreases the number of senescent cells, suggesting these drugs may slow biological aging in tendons 4.
- **Rapamycin:** Long-term administration of rapamycin has been shown to alter molecular pathways responsible for the aging of the tendon extracellular matrix 5. In animal models, tendons from old mice were found to be twofold stiffer than those from adults; however, treatment with rapamycin maintained tendon stiffness at levels comparable to younger adult mice, effectively attenuating age-associated changes in viscoelastic properties 6, 7.
- **Metformin:** This drug has been observed to mitigate the senescence of tendon stem/progenitor cells (TSPCs) 8. By regulating the AMPK/mTOR axis, metformin can restore senescence-related functions such as proliferation and migration, thereby postponing tendon aging 8, 9.

Mechanical Loading and Activity Physical activity plays a critical role in maintaining tendon health in the elderly:

- **Maintenance of Collagen Synthesis:** In elderly humans, mechanical loading is essential for maintaining tendon collagen turnover 10.
- **avoiding Immobilization:** A study of elderly men showed that just two weeks of immobilization (inactivity) caused a significant decrease in tendon collagen protein synthesis 10, 11. While short-term unloading may only marginally reduce stiffness initially, continuous mechanical loading is required to sustain the internal structures essential for mechanical properties in elderly tendons 10, 12.

Managing Oxidative Stress Oxidative stress is a key modulator of physiological behavior in bone and tendon cells and influences the pathophysiology of mineralized tissues 2.

- **Antioxidants:** Manipulating the redox balance (oxidative stress status) using antioxidants like Quercetin can be crucial for addressing age-related musculoskeletal disorders and promoting tissue regeneration 2, 13.
- **Dietary Factors:** While direct protocols for seniors are still being explored, nutritional factors that influence collagen metabolism and oxidative stress are relevant to assessing and preventing tendinopathy 14.

Hormonal Considerations Postmenopausal estrogen deficiency may downregulate tendon collagen turnover and decrease tendon elasticity 15. In animal models, treatment with a raloxifene analogue (a selective estrogen receptor modulator) helped restore collagen and matrix metalloproteinase expression to premenopausal levels, suggesting a potential pathway for maintaining tendon elasticity 15.