Taking unsaponifiable fractions of avocado and soybean oils (ASU) orally for several months appears to significantly reduce pain and overall disability in certain patients with osteoarthritis. Specifically, ASU seems to be effective for improving knee and hip osteoarthritis. Clinical research suggests that taking up to 600 mg/kg of ASU fractions daily for up to 3 months significantly improves osteoarthritis pain and possibly reduces analgesic use compared to placebo in patients with knee osteoarthritis. Clinical research suggests that taking unsaponifiable fractions of avocado and soybean oils (ASU) orally for several months appears to significantly reduce pain and overall disability in certain patients with osteoarthritis. Specifically, ASU seems to be effective for improving knee and hip osteoarthritis. Clinical research suggests that taking up to 600 mg/kg of ASU fractions daily for up to 3 months significantly improves osteoarthritis pain and possibly reduces analgesic use compared to placebo in patients with knee osteoarthritis.

Two preliminary clinical trials have evaluated arnica gel in patients with osteoarthritis of the hand or knee. One analysis of clinical research suggests that topical arnica gel is at least as effective as ibuprofen for reducing the intensity of pain and improvement in hand function (19112). Further clinical research suggests that arnica gel may be more effective than placebo or sham arnica gel, in reducing pain of knee and hip osteoarthritis (29618). Two analyses of clinical trials show that acupuncture (both electrical and manual) significantly reduces pain in patients with osteoarthritis of the knee compared to no treatment and sham treatment (16004, 29619). Another analysis of clinical research suggests that electroacupuncture given for 2-4 weeks reduces knee osteoarthritis pain (29618). Further clinical research shows that acupuncture may be more effective than control such as advice or sham acupuncture, in reducing pain of knee and hip OA (29620, 29621, 29622, 29625, 29627).

Two analyses of clinical trials show that acupuncture (both electrical and manual) significantly reduces pain in patients with osteoarthritis of the knee compared to no treatment and sham treatment (16004, 29619). Another analysis of clinical research suggests that electroacupuncture given for 2-4 weeks reduces knee osteoarthritis pain (29618). Further clinical research shows that acupuncture may be more effective than control such as advice or sham acupuncture, in reducing pain of knee and hip osteoarthritis (29620, 29621, 29622, 29625, 29627).

Most clinical research shows that taking glucosamine sulfate orally significantly improves symptoms of pain and functionality compared to placebo in patients with osteoarthritis of the knee in studies lasting up to 3 years (2533, 2600, 2602, 2603, 2604, 2606, 7026, 8942, 10310, 12461) (12465, 13576, 14305, 20084, 20086, 20087, 20089, 20092, 74160, 76551, 89721). Glucosamine sulfate seems to decrease pain scores by about 28% to 41% and improve functionality scores by 21% to 46% (13719, 14305). Glucosamine sulfate also seems to reduce the number of patients with joint effusion by 76.9% compared to placebo (89721). Also, when used in combination with turmeric root extract (Turmacin, Natural Remedies Pvt. Ltd.), glucosamine sulfate reduces the number of patients with cracking sounds in the knee joint by 37.9%, joint effusion by 92.3%, and terminal limitation of joint movement by 50% compared with placebo (89721).

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may not be effective for reducing pain or joint space narrowing when used long-term. In one clinical study, taking ASU fractions 300 mg/kg daily for 2 years did not significantly improve joint space narrowing, pain scores, analgesic use, or clinical severity scores compared to placebo in patients with hip osteoarthritis. However, when patients with more advanced osteoarthritis were assessed separately, there was a significant decrease in the progression of joint space narrowing, suggesting that taking ASU fractions may be more beneficial for patients with severe osteoarthritis (1069).

- **BALNEOTHERAPY** (Possibly Effective)  
  View ALL Products Containing: BALNEOTHERAPY

  **Osteoarthritis**

  Some clinical research shows that mineral baths can significantly reduce pain and improve quality of life in patients with osteoarthritis (16188,16187). A sulfur plus Dead Sea mineral bath also appears to reduce pain and improve function, short-term, for up to one month after treatment, but not after three months. However, a sulfur bath or Dead Sea mineral bath alone does not appear to significantly improve symptoms in patients with osteoarthritis (16186).

- **BIOCELL COLLAGEN** (Possibly Effective)  
  View ALL Products Containing: BIOCELL COLLAGEN

  **Osteoarthritis**

  Clinical research shows that taking BioCell Collagen 1 gram twice daily for up to 10 weeks reduces pain and the need for rescue pain medication and increases physical activity compared to placebo in patients with osteoarthritis of the knee, hip, or hand (28678,28680).

- **BOSWELLIA** (Possibly Effective)  
  View ALL Products Containing: BOSWELLIA

  **Osteoarthritis**

  Some clinical research shows that taking specific boswellia extracts can reduce symptoms of osteoarthritis. In two clinical trials, using a specific boswellia extract (5-Loxin) 100 mg or 250 mg daily significantly improved pain and functionality scores in patients with osteoarthritis after 90 days of treatment. Pain scores were reduced by about 32% to 65%. Patients began to have significant improvement within 7 days of treatment. The extract used in this study was standardized and enriched to contain 30% of the boswellic acid AKBA (17946,17945).

- **BOVINE CARTILAGE** (Possibly Effective)  
  View ALL Products Containing: BOVINE CARTILAGE

  **Osteoarthritis**

  Administering bovine cartilage subcutaneously seems to help reduce symptoms of osteoarthritis (2009). However, intramuscular administration does not seem to be beneficial (8242).

- **CAMPHOR** (Possibly Effective)  
  View ALL Products Containing: CAMPHOR

  **Osteoarthritis**

  A topical cream containing camphor, glucosamine sulfate, and chondroitin sulfate seems to reduce the severity of symptoms of osteoarthritis by about half. Symptom relief is most likely due to the counterirritant effect of camphor and not the other ingredients (10327).

- **CAT'S CLAW** (Possibly Effective)  
  View ALL Products Containing: CAT'S CLAW

  **Osteoarthritis**

  Some clinical evidence suggests that taking a specific freeze-dried cat's claw extract (Uncaria guianensis) orally appears to relieve knee pain related to physical activity within one week of treatment, but it does not decrease pain at rest or decrease knee swelling (7317). Other clinical evidence suggests that taking a specific combination supplement (Reparagen) 1800 mg twice daily for 8 weeks can reduce pain and stiffness, improve function, and reduce the need to use rescue medication similarly to glucosamine sulfate in patients with osteoarthritis. This specific combination supplement contains cat's claw (Vincaria) 300 mg and maca (RNI 249) 1500 mg per dose (33614).

- **CETYLATED FATTY ACIDS** (Possibly Effective)  
  View ALL Products Containing: CETYLATED FATTY ACIDS

  **Osteoarthritis**

  Taking a specific blend of cetlylated fatty acids (Celadrin, Proprietary Nutritional, Inc.) 350 mg combined with 50 mg soy lecithin and 75 mg fish oil seems to decrease pain and improve knee range of motion and function in patients with knee osteoarthritis; however, it does not appear to improve morning stiffness (8924). Applying the same specific blend of cetlated fatty acids typically either alone or in combination with menthol also seems to decrease pain and improve functionality in patients with knee osteoarthritis (12076,13104,13105).

- **CHONDROITIN SULFATE** (Possibly Effective)  
  View ALL Products Containing: CHONDROITIN SULFATE

  **Osteoarthritis**

  Clinical research regarding the effectiveness of chondroitin sulfate for osteoarthritis is inconsistent. Most early research from the 1980s until 2001 shows that taking chondroitin sulfate alone or along with conventional analgesics or nonsteroidal anti-inflammatory drugs (NSAIDs) for several months significantly reduces pain and improves functionality in patients with hip or knee osteoarthritis (323,323,324,1970,1971,1972,7256,10150,22184,42329)(42397,42333,42396,42454,42527,42538,42539,42541). However, some of these early trials were of moderate to poor quality (2533,15380).

- **COMFREY** (Possibly Effective)  
  View ALL Products Containing: COMFREY

  **Osteoarthritis**

  Some clinical research suggests that topically applying a specific brand of comfrey extract (Kyutta-Salbe f) three times daily for 3 weeks decreases pain and improves function compared to placebo in patients with severe osteoarthritis (1972).
knee osteoarthritis (44904). Other clinical research suggests that topically applying a specific brand of cream containing comfrey extract, as well as tannic acid, Aloe vera gel, eucalyptus oil, and frankincense oil (4Jointz) three times daily for 12 weeks can decrease pain associated with knee osteoarthritis when compared with placebo (44191).

- **DEVIL’S CLAW** *(Possibly Effective)* View ALL Products Containing: DEVIL’S CLAW

**Osteoarthritis**

Taking devil's claw orally alone or in conjunction with nonsteroidal anti-inflammatory drugs (NSAIDs) seems to help decrease osteoarthritis-related pain (6472,8608,12477,14332,47144,47145,47146,47149,47163). Some evidence suggests that devil's claw is comparable to diclofenac (a slow-acting drug for osteoarthritis; not available in the US) for improving osteoarthritis pain in the hip and knee after 16 weeks of treatment. Patients taking devil's claw also seem to be able to decrease use of NSAIDs for pain relief (6472,47114). These studies used a specific powdered devil's claw root product (Harpadol, Arkopharma) containing 2% of the constituent harpagoside (9.5 mg/capsule) and 3% total iridoid glycosides (14.5 mg per capsule) (6472,47114). Another specific devil's claw extract (Dolotefin, Ardeypharma) 2400 mg/day providing 60 mg/day of the harpagoside constituent has also been used (8608,14332).

- **GINGER** *(Possibly Effective)* View ALL Products Containing: GINGER

**Osteoarthritis**

Clinical research shows that taking ginger extracts can modestly improve pain in some patients with osteoarthritis (17928,17929). In one clinical trial, taking a specific ginger extract (Zintona EC, Dalidar Pharma, Beer Sheva, Israel) 250 mg four times daily significantly reduced pain after 3 months of treatment compared to placebo in patients with osteoarthritis of the knee (12472). However, ginger did not significantly reduce pain during the first 3 months of treatment, suggesting that several weeks of treatment might be necessary for significant pain relief. Another study using a different extract (Eurovita Extract 77; EV ext-77), which combines a ginger extract with an alpinia (Alpinia galanga) extract, 255 mg twice daily for 6 weeks shows that this extract significantly reduced pain upon standing, pain after walking, and stiffness compared to placebo. However, it did not significantly improve measures of functionality or quality of life (7094).

- **HIRUDOTHERAPY** *(Possibly Effective)* View ALL Products Containing: HIRUDOTHERAPY

**Osteoarthritis**

Some clinical research suggests that medicinal leech therapy of 4-6 leeches applied to the knee may improve function, stiffness and pain patients with osteoarthritis of the knee for 28 days, and may be better than topical diclofenac for stiffness and function of the knee (28996).

- **HYALURONIC ACID** *(Possibly Effective)* View ALL Products Containing: HYALURONIC ACID

**Osteoarthritis**

Despite being approved by the FDA for treatment of osteoarthritis by intra-articular injection, hyaluronic acid seems to be variably effective (7887,7888,7890,7891,55729,55730). Subjective symptoms of stiffness and joint pain appear to decrease modestly with hyaluronic acid treatment, but the effect of treatment is often not clinically significant (7887,7888,55730). Additionally, the duration of symptom control is generally only approximately 6 months (55729). Whether hyaluronic acid might delay or lessen progressive joint damage with long-term use is unknown (7886). Taking oral hyaluronic acid (Hyal-Joint) 80 mg daily for 8 weeks does not improve osteoarthritis symptoms compared to placebo (95742).

- **HYDROTHERAPY** *(Possibly Effective)* View ALL Products Containing: HYDROTHERAPY

**Osteoarthritis**

Clinical research shows that attending hydrotherapy for 30 minute to 1 hour long sessions twice weekly for up to 12 weeks decreases pain in patients with osteoarthritis of the hip or knee (27766,88914). Other clinical research suggests that performing exercise in water for 30 minutes three times weekly for 6 weeks improves strength and function in patients with osteoarthritis (27768). However, one clinical study suggests that adding hydrotherapy twice weekly to home exercises for 6 weeks does not improve pain, strength or function in patients with hip osteoarthritis (27768). Additionally, preliminary clinical research suggest that receiving a 20-minute spa bath, 15 minutes of transcutaneous electric nerve stimulation (TENS), 15 minutes of hot pack application, and 30 minutes of lower kinetic chain stretching and strengthening daily for 21 days improves quality of living in people with knee osteoarthritis (27769).

- **METHYLSULFONYLMETHANE** *(Possibly Effective)* View ALL Products Containing: METHYLSULFONYLMETHANE

**Osteoarthritis**

Clinical research shows that taking MSM 1.5 to 6 grams orally in two to three divided doses daily, either alone or in combination with glucosamine, can modestly reduce some symptoms of osteoarthritis such as pain and swelling, and improve joint function or physical function (12469,14335,17127,19312). However, MSM might not significantly reduce stiffness or the aggregate of total symptoms (14335). Also, some patients may not consider the modest benefit to be clinically significant (17127). Other clinical research has evaluated MSM in combination with other ingredients. One clinical study shows that taking MSM (Lignisul, Laborest Italia S.p.A., Italy) 5 grams daily, in combination with boswellic acid (Triterpenol, Laborest Italia S.p.A., Italy) 7.2 mg, daily for 60 days might reduce the need for anti-inflammatory drugs but does not reduce pain (19313). Also, preliminary clinical evidence suggests that taking a combination of collagen type II with MSM, cetyl myristoleate, lipase, vitamin C, turmeric, and bromelain (AR7 Joint Complex, Robinson Pharma, Orange County, CA) orally for 12 weeks improves rating scores for joint pain and tenderness in people with osteoarthritis, but does not improve X-rays of affected joints (19314).
**MOXIBUSTION** (Possibly Effective)  
**Osteoarthritis**

Some clinical research suggests that moxibustion improves symptoms of osteoarthritis compared to placebo (29869), diclofenac (29853,29869,29870), ibuprofen (29870), magnesium sulfate (29853), infrared therapy (29871), Xianling Gubao herbal capsules (29880), and general drug therapy (29872) in patients with osteoarthritis. However, other research suggests that moxibustion is less effective compared to ultrastructural acupotomy, or acupuncture combined with surgical techniques (29872) and high-frequency electric sparkle and point-injection therapy (29873). Some preliminary clinical research suggests that moxibustion is as effective as acupuncture for improving symptoms of osteoarthritis (29874) while other research suggests that moxibustion with or without acupuncture is superior to acupuncture alone (29875,29876,29877). Finally, some evidence suggests that heat sensitive moxibustion is more effective than traditional moxibustion for improving symptoms in patients with osteoarthritis (29878).

**NIACINAMIDE** (Possibly Effective)  
**Osteoarthritis**

Taking niacinamide orally, 3 grams daily in divided doses, seems to improve joint flexibility and reduce inflammation, and might allow for a reduction in standard anti-inflammatory drug doses (4883).

**ROSE HIP** (Possibly Effective)  
**Osteoarthritis**

Overall, there is evidence that rose hip has beneficial effects when used to treat osteoarthritis. Most clinical research shows that taking a specific rose hip powder product (Hyben Vital) 2.5 grams twice daily for 3-4 months reduces pain and stiffness, improves function and mobility, and decreases use of rescue medication in patients with osteoarthritis compared to placebo (71646,71658,71660,71661). However, one crossover study showed mixed results regarding the effects of this product. Rose hip treatment was shown to be effective for osteoarthritis only when administered after, but not before, placebo treatment (71641). This inconsistency might be due to a carryover effect of rose hip or delayed activity of the supplement.

**RUTIN** (Possibly Effective)  
**Osteoarthritis**

Taking rutin orally in combination with trypsin and bromelain seems to be effective for treating osteoarthritis (6252). In a double-blind trial, 73 patients with painful osteoarthritis of the knee were randomly assigned the combination enzyme product (Phlogenzym) or diclofenac (Voltaren) 50 mg three times daily during the first week and then twice daily during the second and third weeks. The enzyme product was similar to diclofenac in relieving pain and improving knee function (6252).

**SOYBEAN OIL** (Possibly Effective)  
**Osteoarthritis**

Taking unsaponifiable fractions of soybean and avocado oils orally appears to significantly improve pain and overall disability. It seems to be more effective for osteoarthritis of the hip than the knee (10693).

**STINGING NETTLE** (Possibly Effective)  
**Osteoarthritis**

There is evidence that oral or topical use of stinging nettle leaf extract might improve symptoms of pain in patients with osteoarthritis (1,6500,76414,76455). Some clinicians use stinging nettle leaf extract in combination with conventional nonsteroidal anti-inflammatory drugs (NSAIDs) or other analgesics. Evidence suggests that adding stinging nettle might allow for using lower analgesic doses in some patients (6500,76455). Topically, stinging nettle leaf seems to improve pain and disability in patients with osteoarthritis of the thumb, according to preliminary research (12490). However, topical use of stinging nettle does not seem to be more effective than a related nettle, stingless nettle (76412).

**SUPEROXIDE DISMUTASE** (Possibly Effective)  
**Osteoarthritis**

Giving superoxide dismutase as an injection seems to be effective for treating osteoarthritis (2228,2229).

**TAI CHI** (Possibly Effective)  
**Osteoarthritis**

Some clinical research suggests that practicing tai chi for 40 minutes 1-3 times a week for 12-24 weeks improves physical function, and stiffness and sometimes pain in patients with knee and hip osteoarthritis (88913,88914,88915,88918,88917). Additional preliminary clinical research suggests that practicing tai chi for 1 hour 2 times per week for 6-12 weeks improves pain, stiffness, and physical function in patients with osteoarthritis (88918,88919,88920).

**TRYPsin** (Possibly Effective)  
**Osteoarthritis**

In a double-blind trial, 73 patients with painful osteoarthritis of the knee were randomly assigned the combination enzyme product (Phlogenzym) or diclofenac (Voltaren) 50 mg three times daily during the first week and then twice daily in weeks 2 and 3. The enzyme product was similar to diclofenac in relieving pain and improving knee function (6252).

**TURMERIC** (Possibly Effective)  
**Osteoarthritis**
Some clinical research shows that some turmeric extracts can improve symptoms of osteoarthritis. Taking a specific turmeric extract (Meriva, Indena) 500 mg twice daily seems to reduce pain and improve functionality in patients with osteoarthritis of the knee after 2-3 months of treatment compared to pretreatment. Patients taking this extract also showed significantly reduced usage of analgesics and NSAIDs. This particular extract was standardized to contain 20% curcuminoids (providing 75% curcumin) complexed with phosphatidylcholine (17953,80988). Also, preliminary clinical research suggests taking a specific turmeric extract (Turmacin, Natural Remedies Pvt. Ltd, Bangalore, India) 1000 mg/day in two divided doses for 6 weeks reduces pain and improves function and other symptoms compared to placebo in patients with osteoarthritis of the knee (89721).

- **VITAMIN C (ASCORBIC ACID)** (Possibly Effective) View ALL Products Containing: VITAMIN C (ASCORBIC ACID)

Osteoarthritis

Consuming vitamin C from dietary sources seems to reduce the risk of cartilage loss and disease progression in people with osteoarthritis (5881). Clinical research suggests that taking calcium ascorbate for 2 weeks also significantly reduces pain and severity of osteoarthritis compared to placebo, although the effects are less than that observed with non-steroidal anti-inflammatory drugs (NSAIDs) (83236).

**Possibly Ineffective:**

- **APITHERAPY** (Possibly Ineffective) View ALL Products Containing: APITHERAPY

Osteoarthritis

Some early reports seemed to indicate a possible benefit of injected bee venom in the treatment of arthritis; however, results are conflicting and most clinical studies do not show a benefit (6045).

- **BEE VENOM** (Possibly Ineffective) View ALL Products Containing: BEE VENOM

Osteoarthritis

Some early reports seemed to indicate a possible benefit of injected bee venom in the treatment of arthritis; however, results are conflicting and most clinical studies do not show a benefit (6045).

- **COD LIVER OIL** (Possibly Ineffective) View ALL Products Containing: COD LIVER OIL

Osteoarthritis

Taking cod liver oil orally, in combination with nonsteroidal anti-inflammatory drugs (NSAIDs), does not seem to decrease pain or inflammation when compared to NSAID treatment alone (3398).

- **FISH OIL** (Possibly Ineffective) View ALL Products Containing: FISH OIL

Osteoarthritis

Clinical evidence suggests that taking fish oil 444 mg in combination with a glucosamine sulfate supplement does not significantly decrease osteoarthritis symptoms such as morning stiffness or pain in the hips and knees compared to treatment with the glucosamine supplement alone (65998).

- **VITAMIN A** (Possibly Ineffective) View ALL Products Containing: VITAMIN A

Osteoarthritis

Taking a specific product containing vitamin A in combination with selenium, vitamin C, and vitamin E (Selenium ACE), does not appear to alleviate osteoarthritis (74449). Also, taking vitamin A does not seem to reduce pain in patients with spondylosis who have adequate vitamin A levels prior to treatment (82313).

- **VITAMIN E** (Possibly Ineffective) View ALL Products Containing: VITAMIN E

Osteoarthritis

Taking vitamin E 500 IU/day for 6 months does not seem to decrease symptoms of pain or stiffness in patients with osteoarthritis (5264,5881). Vitamin E 500 IU/day for up to 2 years also does not seem to slow cartilage loss (13066). Taking vitamin E also does not seem to reduce the risk of developing osteoarthritis (5881).

**Insufficient Evidence:**

- **AROMATHERAPY** (Insufficient Evidence) View ALL Products Containing: AROMATHERAPY

Osteoarthritis

Clinical research suggests that receiving massage with an essential oil mixture containing 1% ginger and 0.5% orange essential oil twice weekly for 3 weeks is more effective in reducing knee pain compared to massage with olive oil in elderly adults with possible osteoarthritis (20341).

- **ASHWAGANDHA** (Insufficient Evidence) View ALL Products Containing: ASHWAGANDHA

Osteoarthritis

In a preliminary study, patients with joint deformity, pain, stiffness, and swelling were given a specific combination supplement, containing ashwagandha 450 mg, Ayurvedic zinc complex 50 mg, guggul 100 mg, and turmeric 50 mg (Articulin-F) two capsules three times daily for 3 months. Although symptoms were reduced, there were no radiological improvements after treatment (19276). The effects of ashwagandha alone in osteoarthritis are unknown.

- **BAIKAL SKULLCAP** (Insufficient Evidence) View ALL Products Containing: BAIKAL SKULLCAP

Osteoarthritis

Two preliminary clinical trials show that taking a specific Baikal skullcap extract, in combination with a specific catechu flavonoid extract known as flavocoxid (Limbrel, Primus Pharmaceuticals), 500 mg twice
daily, significantly reduces symptoms of osteoarthritis of the knee compared to baseline. These studies found no significant difference between flavocoxid and naproxen 500 mg twice daily for reducing symptoms (17030,18012). However, these findings might not be reliable due to poor study design and reporting.

- **BETA-CAROTENE** (Insufficient Evidence) View ALL Products Containing: BETA-CAROTENE
  Osteoarthritis
  Observational research suggests that higher dietary intake of beta-carotene is not associated with a reduced risk of developing osteoarthritis. However, highest intake of beta-carotene is associated with reduced rate of knee osteoarthritis progression compared to lowest intake (5881).

- **BLACK COHOSH** (Insufficient Evidence) View ALL Products Containing: BLACK COHOSH
  Osteoarthritis
  Preliminary clinical evidence suggests that taking a specific black cohosh-containing combination product (Reumalex) taken twice daily for 2 months improves pain compared to placebo in patients with osteoarthritis. However, no improvement in joint function was found (35946).

- **BORON** (Insufficient Evidence) View ALL Products Containing: BORON
  Osteoarthritis
  Preliminary evidence suggests that boron might be useful for decreasing symptoms of osteoarthritis (841,36870,36871).

- **BROMELAIN** (Insufficient Evidence) View ALL Products Containing: BROMELAIN
  Osteoarthritis
  Some clinical research shows that taking bromelain 800 mg daily for 12 weeks as an adjunctive treatment for moderate to severe knee osteoarthritis is no more effective than placebo for improving symptom scores (18274). However, taking bromelain orally for 6 weeks as a specific combination with trypsin and rutin (Phlogenzym) seems to reduce pain and improve knee function in patients with osteoarthritis. This bromelain combination product seems to be comparable to diclofenac (Voltaren) 50 mg three times daily for one week, then twice daily (6252).

- **CATECHU** (Insufficient Evidence) View ALL Products Containing: CATECHU
  Osteoarthritis
  Two preliminary clinical trials show that taking a specific catechu extract, in combination with a specific Baikal skullcap flavonoid extract known as flavocoxid (Limbrel, Primus Pharmaceuticals), 500 mg twice daily, significantly reduces symptoms of osteoarthritis of the knee compared to baseline. These studies found no significant difference between flavocoxid and naproxen 500 mg twice daily for reducing symptoms (17030,18012). However, these findings might not be reliable due to poor study design and reporting. More evidence is needed to rate catechu for this use.

- **CHIROPRACTIC** (Insufficient Evidence) View ALL Products Containing: CHIROPRACTIC
  Osteoarthritis
  Preliminary clinical research suggests that chiropractic manipulative treatment in addition to exercise for 4 weeks may improve function, pain and stiffness in patients with osteoarthritis (89163).

- **COLLAGEN TYPE II** (Insufficient Evidence) View ALL Products Containing: COLLAGEN TYPE II
  Osteoarthritis
  Preliminary clinical evidence suggests that taking a combination of collagen type II with methylsulfonylmethane (MSM), cetyl myristoleate, lipase, vitamin C, turmeric, and bromelain (AR7 Joint Complex, Robinson Pharma, Orange County, CA) orally for 12 weeks improves rating scores for joint pain and tenderness in people with osteoarthritis, but does not improve X-rays of affected joints (19314).

- **CREATINE** (Insufficient Evidence) View ALL Products Containing: CREATINE
  Osteoarthritis
  Preliminary clinical research suggests that taking creatine 20 grams orally daily for one week, followed by 5 grams daily for 11 weeks, in combination with strengthening exercises, improves physical functioning and stiffness compared with exercise alone in postmenopausal women with osteoarthritis of the knee (46753).

- **CUPPING** (Insufficient Evidence) View ALL Products Containing: CUPPING
  Osteoarthritis
  Preliminary clinical research suggests that combination treatment with traditional Chinese medicine (cupping, ear acupuncture, body acupuncture with moxibustion, massage, and J uanbi decoction) and western medicine (glucosamine sulfate, oral non-steroidal anti-inflammatory drugs, and ultrasound) is more effective than traditional Chinese medicine or western medicine alone for improving pain, stiffness, and walking distance in patients with osteoarthritis of the knee (27938). The effect of cupping alone on osteoarthritis is unknown.

- **DMSO** (DIMETHYLSULFOXIDE) (Insufficient Evidence) View ALL Products Containing: DMSO
  Osteoarthritis
  There is contradictory evidence about the effectiveness of DMSO for osteoarthritis. Some preliminary clinical research suggests that applying DMSO topically might modestly reduce symptoms associated
with osteoarthritis (17127,17526). Some patients might not think the modest benefits are clinically significant (17127). Other research has found no significant benefit of topical DMSO compared to placebo (17527,17528). These studies used 25% DMSO gel, applied 3 times a day for 21 days, or 45.5% DMSO solution applied 4 times a day for 28 days. There is speculation that higher concentrations such as 60% to 90% DMSO, and longer periods of treatment, might be more effective (17127).

- **ELECTROMAGNETIC RADIATION** (Insufficient Evidence) View ALL Products Containing: ELECTROMAGNETIC RADIATION

### Osteoarthritis

Some clinical research shows that electromagnetic therapy did not have an effect on pain related to knee osteoarthritis. More evidence is needed to rate electromagnetic radiation for these uses.

- **GELATIN** (Insufficient Evidence) View ALL Products Containing: GELATIN

### Osteoarthritis

There is some clinical evidence that gelatin might relieve pain and improve joint function in patients with osteoarthritis (7704). More evidence is needed to rate gelatin for this use.

- **GLUCOSAMINE HYDROCHLORIDE** (Insufficient Evidence) View ALL Products Containing: GLUCOSAMINE HYDROCHLORIDE

### Osteoarthritis

There is conflicting evidence about the effectiveness of glucosamine hydrochloride for osteoarthritis. Evidence supporting glucosamine hydrochloride primarily involves a specific combination product that contains glucosamine hydrochloride, chondroitin sulfate, and manganese ascorbate (Cosamin DS, Nutramax Laboratories). Some evidence suggests that this combination can improve both objective and subjective measures of pain in patients with osteoarthritis of the knee (4237,7169). This combination might be more effective in patients with mild-to-moderate osteoarthritis compared to patients with severe knee osteoarthritis (7169). A different combination product (Guruksamin & Kondoroichin, Suntory Wellness Ltd., Tokyo, Japan) containing glucosamine hydrochloride 1200 mg, chondroitin sulfate 60 mg, and quercetin glycosides 45 mg, taken daily for 16 weeks, also seems to improve symptoms of knee osteoarthritis (42514).

- **GUGGUL** (Insufficient Evidence) View ALL Products Containing: GUGGUL

### Osteoarthritis

Preliminary clinical evidence suggests that taking guggul (containing 3.5% guggulsterones) 500 mg three times daily might improve osteoarthritis pain (8150,8151,54453).

- **GUIDED IMAGERY** (Insufficient Evidence) View ALL Products Containing: GUIDED IMAGERY

### Osteoarthritis

Preliminary clinical research shows that guided imagery in combination with relaxation training improves some measures of mobility and health-related quality of life measures in women with osteoarthritis (16241).

- **HOMEOPATHY** (Insufficient Evidence) View ALL Products Containing: HOMEOPATHY

### Osteoarthritis

Some preliminary clinical research suggests that homeopathic treatments may not be better than conventional treatments such as acetaminophen and piroxicam for reducing pain in osteoarthritis (89244,89245). Poor study design significantly limits the reliability of this research.

- **HYPERIMMUNE EGG** (Insufficient Evidence) View ALL Products Containing: HYPERIMMUNE EGG

### Osteoarthritis

Preliminary research suggests that some patients with osteoarthritis might have reduced subjective measures of joint pain or swelling after taking a specific "immune egg" powder formulation (Immune26, Legacy for Life) for 2 months (13207).

- **INDIAN GOOSEBERRY** (Insufficient Evidence) View ALL Products Containing: INDIAN GOOSEBERRY

### Osteoarthritis

Clinical evidence shows that taking two capsules of an Ayurvedic formula containing Indian gooseberry, ginger, and Tinospora cordifolia or Indian gooseberry, ginger, Tinospora cordifolia, and Indian frankincense, three times daily for 24 weeks is equivalent to glucosamine sulfate 2 grams daily or celecoxib 200 mg daily for reducing pain in patients with knee osteoarthritis. All four treatments reduced active pain by about 28% to 38%, functional pain by 19% to 29%, and functional difficulty by 18% to 25%, with no significant between-group differences in the observed improvements. Each capsule of the Ayurvedic formula contained ginger 33.33 mg, Tinospora cordifolia 73.33 mg, and Indian gooseberry 166.66 mg, and Indian frankincense 100 mg (89557).

- **KRILL OIL** (Insufficient Evidence) View ALL Products Containing: KRILL OIL

### Osteoarthritis

Preliminary clinical research shows that among patients with cardiovascular disease, rheumatoid arthritis, and/or osteoarthritis, taking a specific krill oil product (Neptune Krill Oil, Neptune Technologies & Bioresources, Inc) 300 mg daily for 30 days reduces pain by 38.3% and stiffness by 39.1%. It improves functionality by 36% from baseline. The improvement was significantly greater than with placebo (15760).
Condition Search: Natural Medicines Comprehensive Database

- **MAGNET THERAPY** (Insufficient Evidence) View ALL Products Containing: MAGNET THERAPY
  
  **Osteoarthritis**
  
  Evidence on the use of magnet therapy for improving symptoms of osteoarthritis is mixed. Some clinical research shows that wearing a static magnetic bracelet with a field strength of 170-200 mTesla for 12 weeks significantly improves pain related to osteoarthritis of the knee or hip compared to a placebo (15767). Preliminary research also suggests that a static magnet in a knee sleeve significantly reduces osteoarthritis-related knee pain in some patients (15768,88422). Other research also shows that exposure to a low-amplitude and low-frequency magnetic field for 48 minutes per treatment, with 8 treatments over 2 weeks, reduces knee pain significantly more than placebo (15776). Additional clinical research shows that 18 thirty-minute sessions of pulsed electromagnetic therapy over one month improves osteoarthritis symptoms compared to control in patients with knee osteoarthritis (88421,88423). Pulsed electromagnetic therapy may also improve osteotomy healing in hip osteoarthritis patients with osteotomy (88419). However, not all clinical research supports the use of magnet therapy for osteoarthritis. Some clinical studies comparing pulsed electromagnetic therapy to control show no change in pain, range of motion, activities of daily living, and other symptoms of arthritis in patients with knee and spine osteoarthritis and periarticular pain in the shoulder (88420,88422,88424).

- **MANGANESE** (Insufficient Evidence) View ALL Products Containing: MANGANESE
  
  **Osteoarthritis**
  
  Taking a specific combination product (Cosamin DS, Nutramax Laboratories) containing manganese 228-304 mg/day, glucosamine hydrochloride 1500-2000 mg/day, and chondroitin sulfate 1200-1600 mg/day orally for 4 months improves pain and ability to do activities of daily living for patients with osteoarthritis of the knee and the lower back (4237,7169). However, since numerous studies show the efficacy of glucosamine with chondroitin for osteoarthritis, it is not yet possible to draw conclusions about the effects of manganese alone.

- **MASSAGE** (Insufficient Evidence) View ALL Products Containing: MASSAGE
  
  **Osteoarthritis**
  
  Preliminary clinical research suggests that massage therapy, once or twice weekly for 8 weeks, improves pain, stiffness, range of motion, and walking speed in patients with osteoarthritis of the knee (29518).

- **MUSIC THERAPY** (Insufficient Evidence) View ALL Products Containing: MUSIC THERAPY
  
  **Osteoarthritis**
  
  One preliminary clinical trial suggests that listening to 20 minutes of relaxation music daily for 14 days may decrease pain in patients with osteoarthritis compared to sitting quietly for 20 minutes (28862).

- **NEW ZEALAND GREEN-LIPPED MUSSEL** (Insufficient Evidence) View ALL Products Containing: NEW ZEALAND GREEN-LIPPED MUSSEL
  
  **Osteoarthritis**
  
  There is contradictory evidence about the effectiveness of New Zealand green-lipped mussel for osteoarthritis. Preliminary evidence suggests that some extracts might reduce symptoms of osteoarthritis, including pain and stiffness (15022,15009,15096,54188). However, other evidence suggests little or no benefit (15022,54190). Most studies have used a specific extract of New Zealand green-lipped mussel (Seatone, MacFarland Laboratories). However, another brand of extract New Zealand green-lipped mussel (Lyrinor, Pharmalnik) has also been used.

- **NONI** (Insufficient Evidence) View ALL Products Containing: NONI
  
  **Osteoarthritis**
  
  Preliminary clinical research suggests that drinking 3 ounces of a specific noni juice (Tahitian Noni Juice) daily for 90 days can reduce the need for pain relieving medications and improve quality of life parameters, including mobility, joint function, the ability to work and do household tasks, social activity, tension level, and mood, in patients with knee or hip osteoarthritis (65206). However, due to the open-label design of this study, it is not clear if the improvements were due to a placebo effect.

- **OLIVE** (Insufficient Evidence) View ALL Products Containing: OLIVE
  
  **Osteoarthritis**
  
  Preliminary clinical research shows that taking a freeze dried aqueous extract of olive fruit decreases pain and increases mobility in people with osteoarthritis (14844).

- **PANTOTHENIC ACID (VITAMIN B5)** (Insufficient Evidence) View ALL Products Containing: PANTOTHENIC ACID (VITAMIN B5)
  
  **Osteoarthritis**
  
  Preliminary clinical research suggests pantothenic acid (given as calcium pantothenate) does not significantly reduce the symptoms of arthritis in patients with osteoarthritis or other forms of arthritis (10433).

- **PHYSICAL THERAPY** (Insufficient Evidence) View ALL Products Containing: PHYSICAL THERAPY
  
  **Osteoarthritis**
  
  Some research suggests that physical therapy for osteoarthritis of the knee may provide short-term benefits, but long-term benefits do not appear better than standard treatments. Physical therapy, either as an individually delivered treatment or in a small group format, appears effective. Some research compared physical therapy to a sham group (subtherapeutic ultrasound) and found that a combination of manual physical therapy and supervised exercise was beneficial for patients with osteoarthritis of the knee.
Some physical therapy techniques used in the studies include: infrared, short-wave diathermy-pulsed patterns, interferential therapy, and sling suspension system. Some research suggests that manual physical therapy may also help with osteoarthritis of the hand and hip.

- **PROLOTHERAPY (Insufficient Evidence)**
  View ALL Products Containing: PROLOTHERAPY
  Osteoarthritis
  The results of two double-blind human trials suggest that prolotherapy may effectively treat osteoarthritis.

- **PYCNOGENOL (Insufficient Evidence)**
  View ALL Products Containing: PYCNOGENOL
  Osteoarthritis
  There is mixed evidence about the effectiveness of pycnogenol for osteoarthritis. Although available clinical research suggests that taking pycnogenol 100-150 mg daily for 3 months reduces overall osteoarthritis symptoms, the effects of pycnogenol on pain, ability to perform daily activities, and use of medication are inconsistent (50903,50905).

- **QI GONG (Insufficient Evidence)**
  View ALL Products Containing: Qi GONG
  Osteoarthritis
  Preliminary research suggests that external Qi gong therapy performed by a trained Qi gong practitioner can reduce pain and improve mood in patients with osteoarthritis (15856).

- **RELAXATION THERAPY (Insufficient Evidence)**
  View ALL Products Containing: RELAXATION THERAPY
  Osteoarthritis
  Preliminary clinical research suggests that eight sessions of Jacobson's relaxation treatment reduces pain and analgesic medication use compared to control in patients with hip or knee osteoarthritis (89629).

- **SELENIUM (Insufficient Evidence)**
  View ALL Products Containing: SELENIUM
  Osteoarthritis
  Epidemiological research associates low selenium levels with increased risk of developing osteoarthritis (13580). However, some clinical research suggests that using a specific selenium-containing combination supplement (Selenium-ACE) does not improve most osteoarthritis clinical parameters compared to placebo (74449).

- **SHARK CARTILAGE (Insufficient Evidence)**
  View ALL Products Containing: SHARK CARTILAGE
  Osteoarthritis
  A topical preparation of shark cartilage, in combination with chondroitin sulfate, glucosamine sulfate, and camphor, reportedly reduces arthritis symptoms. However, any symptom relief is most likely due to the counterirritant effect of camphor and not the other ingredients (10327). There is no research showing that shark cartilage is absorbed topically. Do not recommend topical shark cartilage products.

- **SIBERIAN GINSENG (Insufficient Evidence)**
  View ALL Products Containing: SIBERIAN GINSENG
  Osteoarthritis
  Clinical evidence suggests that taking two capsules each containing 400 mg of a combination of Panax pseudoginseng, Siberian ginseng, and rehmannia daily for 6 weeks improves physical function in individuals with knee osteoarthritis compared to placebo. However, the combination does not seem to reduce pain or stiffness compared to placebo (74950).

- **SOY (Insufficient Evidence)**
  View ALL Products Containing: SOY
  Osteoarthritis
  Preliminary clinical evidence shows that taking soy protein 40 grams daily for three months improves range of motion, pain, and quality of life in osteoarthritis patients, particularly men, compared to baseline. However, these beneficial effects seem to also be observed following supplementation with milk-based protein, indicating that the benefits may have resulted from placebo effects (75266).

- **STRONTIUM (Insufficient Evidence)**
  View ALL Products Containing: STRONTIUM
  Osteoarthritis
  Taking strontium ranelate orally for 3 years appears to improve back pain and reduce the risk of spinal osteoarthritis progression by 42% in postmenopausal women with a history of vertebral fracture (76558). More evidence is needed to rate strontium for this use.

- **THERAPEUTIC TOUCH (Insufficient Evidence)**
  View ALL Products Containing: THERAPEUTIC TOUCH
  Osteoarthritis
  Preliminary clinical research shows that therapeutic touch can reduce pain and improve functionality compared to sham treatment in patients with osteoarthritis of the knee (15940,89283). Another preliminary study suggests that therapeutic touch given as 15-20 minute treatments weekly for 6 weeks may decrease pain in patients with osteoarthritis (89288).
Some clinical research suggests that using TENS in patients with osteoarthritis of the knee may result in improvements in knee stiffness and pain.

- **WILLOW BARK** (Insufficient Evidence)  
  View ALL Products Containing: WILLOW BARK  
  **Osteoarthritis**  
  Clinical research on willow bark extract for osteoarthritis is conflicting. Some preliminary clinical research shows that taking willow bark extract standardized to contain 240 mg of salicin daily for 2 weeks produces moderate analgesic activity compared to placebo in patients with osteoarthritis (12474,86490). Other research shows that taking a specific willow bark extract (Optovit actiFLEX, Hermes Arzneimittel GmbH, Munich, Germany) standardized to contain salicin 120-240 mg daily for 6 weeks improves swelling, tenderness, and physical function in osteoarthritis patients similarly to conventional therapies such as coxibe, ibuprofen, oxicame, and diclofenac (91406). However, other research shows that taking willow bark standardized to 240 mg of salicin daily for 6 weeks does not improve pain, stiffness, or physical function compared to placebo in osteoarthritis patients (12475).

- **YOGA** (Insufficient Evidence)  
  View ALL Products Containing: YOGA  
  **Osteoarthritis**  
  Preliminary clinical research suggests that yoga can improve functionality and decrease pain compared to baseline or no treatment in patients with osteoarthritis of the knee and hand (16288,16503).

- **YUCCA** (Insufficient Evidence)  
  View ALL Products Containing: YUCCA  
  **Osteoarthritis**  
  There is preliminary evidence that a yucca extract might reduce symptoms of osteoarthritis such as pain, swelling, and stiffness (4,8).