Willow Bark:

- **Major Interaction**
  Do not take this combination
  Medications that slow blood clotting (Anticoagulant / Antiplatelet drugs) interacts with WILLOW BARK
  Willow bark might slow blood clotting. Taking willow bark along with medications that also slow clotting might increase the chances of bruising and bleeding.

  Some medications that slow blood clotting include aspirin, clopidogrel (Plavix), diclofenac (Voltaren, Cataflam, others), ibuprofen (Advil, Motrin, others), naproxen (Anaprox, Naprosyn, others), dalteparin (Fragmin), enoxaparin (Lovenox), heparin, warfarin (Coumadin), and others.

- Moderate Interaction
  Be cautious with this combination
  Aspirin interacts with WILLOW BARK
  Willow bark contains chemicals similar to aspirin. Taking willow bark along with aspirin might increase the effects and side effects of aspirin.

- Choline Magnesium Trisalicylate (Trilisate) interacts with WILLOW BARK
  Willow bark contains chemicals that are similar to choline magnesium trisalicylate (Trilisate). Taking willow bark along with choline magnesium trisalicylate (Trilisate) might increase the effects and side effects of choline magnesium trisalicylate (Trilisate).

- Salsalate (Disalcid) interacts with WILLOW BARK
  Salsalate (Disalcid) is called a salicylate. It's similar to aspirin. Willow bark also contains a salicylate similar to aspirin. Taking salsalate (Disalcid) along with willow bark might increase the effects and side effects of salsalate (Disalcid).

References: https://www.webmd.com/vitamins/ai/ingredientmono-955/willow-bark
References: https://www.stlukes-stl.com/health-content/medicine/33/000936.htm

MSM:

Medications known to interact with Glucosamine & Chondroitin with MSM

(chondroitin / glucosamine / methylsulfonylmethane)

Note: Showing generic names only.
Include all brand names and combination drug names.

- anisindione
- dicumarol
- Warfarin

Reference:https://www.drugs.com/drug-interactions/chondroitin-glucosamine-methylsulfonylmethane,glucosamine-chondroitin-with-msm.html

Curcumin:

Possible Interactions with: Turmeric

Curcuma longa; Turmeric
If you are currently being treated with any of the following medications, you should not use turmeric or curcumin in medicinal forms without first talking to your health care provider.
Blood-thinning medications: Tumeric may make the effects of these drugs stronger, raising the risk of bleeding. Blood-thinners include warfarin (Coumadin), clopidogrel (Plavix), and aspirin, among others.
Drugs that reduce stomach acid: Turmeric may interfere with the action of these drugs, increasing the production of stomach acid:

- Cimetidine (Tagamet)
- Famotidine (Pepcid)
- Ranitidine (Zantac)
- Esomeprazole (Nexium)
- Omeprazole
- Lansoprazole (Prevacid)

Drugs for diabetes (that lower blood sugar): Turmeric may make the effects of these drugs stronger, increasing the risk of hypoglycemia (low blood sugar).

Reference: https://www.stlukes-stl.com/health-content/medicine/33/000932.htm

Boswellia:

No known interactions.

Hyaluronic Acid:

No known interactions for oral consumption.

Bioperine:

CARBAMAZEPINE

In 12 healthy subjects, a single dose of carbamazepine 200 mg was given before and after administration of piperine 20 mg/d for 10 days.1 Carbamazepine area under the curve (AUC) increased by 48% after administration of piperine. The study was not double-blind and did not use a randomized, crossover method, but the results are consistent with previous studies suggesting that piperine inhibits CYP3A4. For example, in one study, 10 patients receiving carbamazepine monotherapy for seizures were given a single 20-mg dose of piperine.2 Even with only 1 dose of piperine, a small increase in carbamazepine AUC was found. In another study, 20 healthy subjects were given oral midazolam 10 mg with and without pretreatment with piperine 15 mg/d for 3 days in a placebo-controlled crossover study.3 Piperine prolonged midazolam halflife and increased the degree and duration of midazolam-induced sedation.
Although these studies had limitations, taken together they suggest that piperine inhibits CYP3A4 and may increase serum concentrations of CYP3A4 substrates other than carbamazepine or midazolam.

DICLOFENAC
Twelve healthy subjects received a single 100-mg dose of diclofenac before and after administration of piperine 20 mg/d for 10 days.4 With piperine pretreatment, diclofenac AUC increased by 68%, and diclofenac half-life increased by 34%. The

study was not double-blind and did not use a randomized, crossover method, but it does suggest that piperine inhibits CYP2C9, the primary isozyme involved in the metabolism of diclofenac. Also, the results are consistent with previous studies looking at the effect of piperine on phenytoin pharmacokinetics. In healthy subjects and in patients with epilepsy, the administration of piperine modestly increased phenytoin plasma concentrations.5,6Both of the phenytoin studies had limitations; the healthy subjects study had just 5 subjects, and the patient study involved judy a single dose of piperine. Nonetheless, the data suggest that piperine at 20 mg/d can inhibit CYP2C9.

OTHER DRUGS

In another recent study, 12 healthy subjects took a single 120-mg dose of fexofenadine before and after administration of piperine 20 mg/d for 10 days.7 With piperine pretreatment, fexofenadine AUC increased by 68%, but the fexofenadine half-life was not significantly affected. As with some of the studies cited above, it was not double-blind and did not use a randomized, crossover method. The authors propose that piperine inhibits P-glycoprotein (PGP), thus increasing fexofenadine bioavailability. Previous evidence from in vitro and animal studies does suggest that piperine inhibits PGP, but more clinical evidence is needed to determine if piperine interacts with other PGP substrates with a greater risk of toxicity, such as digoxin. The possibility of PGP inhibition by piperine also raises the issue of piperine simultaneously inhibiting PGP and CYP3A4. Many drugs are substrates for PGP and CYP3A4, and drugs that inhibit both tend to have a greater effect on such substrates.

Reference: https://www.pharmacytimes.com/view/piperine-drug-interactions