






There has been renewed interest in herbal products. Two recent randomized trials have shown **Echinacea** has no effect in adults² or kids³ for the common cold. For **ginseng** in the form of **COLD-FX** a trial in 2003-4 reported a modest effect for prevention of colds but no significant effect for treatment (see below).^{4,5} In the Glucosamine/Chondroitin Arthritis Intervention Trial (**GAIT**),⁶ **glucosamine and chondroitin sulfate** alone or in combination was not more effective than placebo or celecoxib in reducing pain in patients with osteoarthritis of the knee after 24 weeks or after 2 years of treatment. A subgroup of patients with moderate-to-severe pain appeared to benefit at 24 weeks but this effect was lost at 2 years. In addition, glucosamine and chondroitin sulfate alone or in combination showed no benefit over placebo in slowing loss of cartilage in knee osteoarthritis after 2 years. Even despite no direct evidence, **LAKOTA'S** (which contains glucosamine plus 8 other ingredients) continued marketing efforts has generated much interest in herbal remedies.

GENERIC/TRADE	POSSIBLE USE/LIMITED EVIDENCE	CONTRAINDICATIONS CI/ADVERSE EVENTS AE/ DRUG INTERACTIONS DI	INITIAL, USUAL & MAXIMUM DOSE	Canada COST
<p>GINSENG ROOT EXTRACT/ COLD-FX^{4,5,8,9} ⓧ  200mg CVT-E002™ cap 200mg chewable tab COLD-FX EXTRA ⓧ  300mg CVT-E002™ Extra strength capsule (~95% Panax quinquefolium)</p> <p>FIRST SIGNS ⓧ 4:1 root extract, zinc, ginger, Vit C, Echinacea, Valerian CBC Marketplace Video: https://www.cbc.ca/marketplace/m_episodes/2012-episodes/what-fx</p> <p>IMMUNITY-FX Discontinued</p>	<p>Tx at onset of cold/flu sx or help prevent cold/flu sx.</p> <ul style="list-style-type: none"> •?? Activates macrophages/?? ↑ acquired immune response, only preliminary <u>not</u> conclusive evidence •Less people acquired at least 1 cold in the tx group, any difference did not reach significance •Differences were statistically significant in favour of treatment for those suffering recurring colds •Cold duration was ↓, however, cold or flu confirmation testing was not done.⁴ 	<p>CI pregnancy & lactation, kids<12, allergy to herb, MAOIs/neuroleptics</p> <p>AE Other ginseng product reports→ nervousness, excitation, diarrhea, insomnia, inability to concentrate, headache, HTN, epistaxis, allergies & skin eruptions.</p> <p>DI alcohol→may ↑ alcohol clearance from the body corticosteroids →herb may affect [steroid] estrogens/corticosteroids →herb may have additive effects reported furosemide →report of ↓ furosemide effect; heart & BP meds→herb has negative chronotropic & inotropic activity, & possible ↓BP; hypoglycemics→herb may add to ↓BG MAOIs/ neuroleptics→ may inhibit reuptake of neurotransmitters & ↑ tremor/ mania thus CI mood stabilizers→ herb may induce mania oral contraceptives→may interfere in effectiveness of sex hormone tx sedatives→ herb may potentiate/ antagonize sedative AE warfarin ↑↓ INR →may ↑ bleeds by itself or ↓ INR (Case reports¹⁰)</p>	<p>COLD-FX (200mg caps) Treatment: Day 1→3caps TID Day 2→2 caps TID Day 3→1 caps TID then 1 or 2 caps daily until feeling better (7d~25 caps)</p> <p>Prevention: 2 cap daily x 4 month (Canadian study⁴) 1 cap BID x 8-12wk (USA study²²)</p> <p>COLD-FX EXTRA (300mg caps) 1 cap BID x10 days at 1st sign of cold/flu</p>	<p>~\$25/ 60 caps</p> <p>\$55/ 150 caps</p> <p>\$25/ 45 caps</p>
<p>GLUCOSAMINE ⓧ  500mg tablet/capsule 500mg chewable tablet 750mg caplet 1500mg/15mL oral liquid</p>	<p>Adjunctive tx for symptomatic relief of osteoarthritis.</p> <ul style="list-style-type: none"> •May be efficacious in patients with moderate to severe pain^{6,11,12}; however not recommended. ACR •Consider stopping IF no relief of pain after 3 months. •Currently better evidence with the sulfate Guide 12, Cochrane 18, vs HCl salt. Gait, 18, 19 	<p>CI allergy (shellfish), lactation (Caution adulterants: pregnancy)</p> <p>AE may cause GI AE such as diarrhea.</p> <p>DI Hypoglycemics/insulin→does not significantly affect BG or ↑A1C¹³; may cause insulin resistance doxorubicin & etoposide ?↑resistance</p>	<p>Usual Dose: 500mg po TID Maximum Dose: 1500mg/day</p>	<p>\$22/ 360 tab</p>
<p>LAKOTA JOINT CARE FORMULA⁷ ⓧ  Capsule contains: (Glucosamine Sulfate 150mg & Glucosamine HCL 150mg, Boswellian extract, Collagen type 2, White Willow bark powder, Devil's Claw, Sarsparilla, Yucca root, Feverfew leaf & Bromelain)</p> <p>LAKOTA OSTEO ⓧ  contains only Collagen type 2 & L-proline</p>	<p>For arthritis pain & to ↓ cartilage breakdown</p> <ul style="list-style-type: none"> •?possibly effective; some evidence for glucosamine, but at higher doses; contains 8 other ingredients which lack outcome evidence. •Consider stopping IF not some relief of pain after 3 months therapy. 	<p>CI pregnancy & lactation, Reye's syndrome, kids <12 or if allergy (herbs, shellfish or ASA)</p> <p>AE Some GI irritation (caution if peptic ulcer)</p> <p>DI Antihypertensives→Devil's Claw may further ↓ BP & affect HR & contractility ASA/Warfarin→White Willow Bark contains salicin & therefore may have additive effect to ASA Feverfew→may inhibit platelet aggregation Bromelain →may add to anticoagulant/platelet effects (↑ bleeding risk) Digoxin→ Sarsparilla may ↑digoxin absorption Hypoglycemics/insulin→glucosamine may cause insulin resistance Iron→may precipitate because of high tannin content</p>	<p>Initial Dose: 4-6 capsules daily with food Usual Dose: 2-4 capsules daily to maintain benefit Maximum Dose: 8 capsules daily</p>	<p>\$27 /120 caps</p>

ⓧ=not Sask. formulary ⓧ=not NIHB A1C=glycated hemoglobin ACR=American College of Rheumatology AE=adverse effects ASA=aspirin BG=blood glucose BP=blood pressure CDN=Canadian CI=contraindication DI=drug interaction HIV=human immunodeficiency virus HR=heart rate HTN=hypertension hx=history INR=international Normalized Ratio MS=non significant pts=patients sx=symptoms TB=tuberculosis tx=treatment USA=United States of America

Summary of the COLD-FX trial for PREVENTING colds (American Ginseng: Panax quinquefolium)^{4,5}

BACKGROUND: **COLD-FX** was studied in 323 adults age 18-65 with a hx of 2 colds in the previous year; **COLD-FX** was given 400mg(2 caps)/day vs placebo for ~4mths from Sep 2003 to April 2004 in Edmonton, Alberta. (Trial funded by CV Technologies^{Afexa}; 4 of 6 authors have connection with company)

Jackson Score: sum of severity ratings (1=mild, 2=moderate, 3=severe) for 8 cold sx: sneezing, runny nose, nasal obstruction, sore throat, cough, headache, chilliness, & malaise.

EXCLUSION: vaccinated against influenza in the previous 6 months; if MS, TB, diabetes, cancer, lupus, HIV, heart/lung/renal/liver/neurological diseases; if on immunosuppressives, corticosteroids, warfarin, phenazine, pentobarbital, haloperidol or cyclosporine; & if pregnant, lactating or heavy smokers.

RESULTS: 55 vs 64% NS had 1 cold Jackson defined; 10 vs 22.8 % had ≥2 colds during the 4 months; & Duration of cold: 8.7 vs 11.1days (2.4 days less)

LIMITATIONS: ?active ingredient & mechanism; Jackson 2 vs 6 day score used thus only more severe illness were evaluated; not intention-to-treat analysis, symptom self-reporting & many excluded In adults, **COLD-FX** ↓d 0.25 colds/person in those who had ≥2 colds in the previous year. Further verification of this result is awaited.

BOTTOM LINE: ✓ Handwashing,¹⁴ possibly gargling,¹⁵ & the influenza vaccine¹⁶ are proven to prevent upper respiratory infections. (other interventions lack evidence)^{17,20}

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