

# A Pharmacist's Guide for Collection of Complementary Alternative Medication (CAM) and Dietary Supplement Information from Patients

## A. APPROACHING PATIENTS TO ASCERTAIN CAM/SUPPLEMENT USE *(50% of patients do not share info on CAM use with health care professionals)*

1. At time of filling/refilling of prescriptions
2. During other routine pharmacy visits
3. During purchase of CAM products by patient

## B. DOCUMENTING CAM USE *(ask below questions, document CAM use )*

### 1. VITAMINS/MINERALS/DIETARY SUPPLEMENTS

**“During the past month, have you used any VITAMINS or MINERALS or other DIETARY SUPPLEMENTS for your own health or treatment? This could be in the form of a pill or capsule, or liquid. This would NOT include any natural herbs that you might be taking.”**

*(if yes.... ) “Which did you use?” (Document or mark each supplement mentioned from the list below)*

|   |                       |                              |                   |                            |                  |
|---|-----------------------|------------------------------|-------------------|----------------------------|------------------|
| -Vitamin A (retinol, carotenes) (7)   | -Vitamin E            | -Chondroitin (14)            | -Fluorine         | -L-Lysine                  | -Potassium       |
| -Vitamin B (any; includes thiamine, riboflavin, niacin, pyridoxine, pantothenic acid, folic acid, cyanobalamin) | -Vitamin H/Biotin     | -Chromium (16)               | -Glucosamine (14) | -Magnesium                 | -Selenium        |
| -Vitamin C/Ascorbic Acid—high dose (7)  | -Vitamin K (Warfarin) | -Cobalt                      | -Glutathione      | -Manganese                 | -Shark Cartilage |
| -Vitamin D  | -Alpha linolenic acid | -Coenzyme Q10/CoQ10 (17, 24) | -Iodine           | -Melatonin (12, 13, 17)    | -Zinc            |
|   | -Antioxidant          | -Copper                      | -Iron             | -Multivitamin              |                  |
|   | -Calcium              | -Fish Oil (12, 13 17)        | -Lecithin         | -N-acetylcysteine/cysteine |                  |
|   | -Cesium               |                              | -Linoleic acid    |                            |                  |

*(for each product ask) “How often did you take this during the last month?”*

### 2. HERBAL PRODUCTS

**“People use natural herbs for a variety of health reasons. Some people drink an herbal tea to remedy a flu or cold. Others take a daily herb pill to help with a health condition or just to stay healthy.**

**During the past month, have you used any NATURAL HERBS or other natural products for your own health or treatment?”**

*(if yes.... ) “Which did you use?” (Document or mark each supplement mentioned from the list below)*

|                     |                                   |                     |                      |                                    |
|---------------------|-----------------------------------|---------------------|----------------------|------------------------------------|
| -Alfalfa (23)       | -Cod liver oil (12, 13, 17)       | -Glucosamine (14)   | -Mistletoe           | -Soy supplements (8)               |
| -Algae              | -Cranberry                        | -Goldenseal         | -Mother wort         | -St John's Wort (3, 9, 10, 11, 19) |
| -Aloe (5, 12, 12)   | -Comfrey                          | -Grapefruit juice   | -Mushroom            | -Thea sinensis                     |
| -Bee pollen         | -DHEA                             | -Grape seed (12)    | -Pau d'arco (12, 13) | -Valerian                          |
| -Bilberry (12)      | -Dong quai/don gui tong kuei      | -Green tea/extract  | -Papaya (12)         | -Wild yam root                     |
| -Bioflavonoids      | -Echinacea                        | -Guarana            | -Peppermint          | -Wormwood                          |
| -Bittersweet        | -Elderberry                       | -Guava juice        | -Poke root           | -Yohimbe                           |
| -Black cohosh       | -Essiac                           | -Hawthorn           | -Proanthocyanidin    |                                    |
| -Bladder wrack/kelp | -Evening primrose (12)            | -Herbal teas        | -Progesterone cream  |                                    |
| -Brewer's yeast     | -False unicorn                    | -Kava               | -Psyllium            |                                    |
| -Capsaicin (12)     | -Feverfew                         | -Kelp (6, 12)       | -Pycnogenol (12)     |                                    |
| -Cascara sagrada    | -Flaxseed/flaxseed oil (12)       | -Licorice (26)      | -Ragweed/chamomile   |                                    |
| -Cayenne (12, 13)   | -Garlic (1, 4, 9, 13, 15, 18, 25) | -Lutein             | -Royal jelly         |                                    |
| -Chaparral          | -Ginger (12)                      | -Lycopene           | -SAM-e               |                                    |
| -Chasteberry/vitex  | -Gingko (1, 13, 16, 20, 22)       | -Ma huang (ephedra) | -Saw palmetto        |                                    |
| -Chlorophyll        | -Ginseng (2, 12, 16, 21, 22)      | -Mexican yam cream  | -Senna               |                                    |
| -Cloves             |                                   | -Milk thistle       | -Sepia               |                                    |

### C. SCREENING FOR CAM DRUG INTERACTIONS

1. Review list of CAM products generated from (B) above
2. Consult screening table (below) for known significant and potential drug interactions/ADRs (numbers listed after CAM products in product table correspond to numbered interactions in screening table)
3. Estimate event risk using all available information, and establish recommendation for patient or patient's physician. PLEASE NOTE that this is not a comprehensive list of interactions, only some that appear to be somewhat common. CHECK FOR OTHER INTERACTIONS AND HERB DISEASE INTERACTIONS.
4. Further information on dietary supplements, adverse effects, and drug interactions can be found on Medline Plus. <http://www.nlm.nih.gov/medlineplus/druginformation.html>.
5. Serious adverse events potentially related to dietary supplement use can be reported to the FDA's Medwatch system. <http://www.fda.gov/safety/MedWatch/>

| CAM/ Supplement   | Interacting Drug(s)  | Event  | Event Risk  | Mechanism*                | Recommendation                     |
|---|--|--|-------------|---------------------------|------------------------------------|
| 1. Garlic, Ginkgo   | Aspirin, warfarin, antiplatelet adhesion drugs   | Bleeding   | Significant | Additive                  | Discourage                         |
| 2. Ginseng  | Warfarin   | Bleeding   | Significant | Induction                 | Discourage                         |
| 3. St. John's wort  | Digoxin, felodipine  | Decreased drug benefit   | Significant | Induction                 | Discourage/ monitor digoxin levels |
| 4. Garlic   | Tamoxifen  | Decreased drug benefit   | Significant | Induction                 | Discourage                         |
| 5. Aloe   | Furosemide   | Hypokalemia  | Significant | PD Interaction            | Monitor/ Discourage                |
| 6. Kelp   | Thyroid  | Hyperthyroidism  | Significant | PD Interaction            | Monitor/ Discourage                |
| 7. Vit A (high dose, retinol); Vit C (high dose)  | Chemotherapeutic agents  | Reduced drug effect  | Significant | PD Interaction            | Discourage                         |
| 8. Soy  | Chemo/breast cancer  | Cancer progression   | Possible    | Estrogenic                | Discourage                         |
| 9. St. John's Wort, garlic  | Chemotherapeutic agents  | Reduced drug effect  | Significant | Induction                 | Discourage                         |
| 10. St. John's Wort   | SSRIs, serotonergic drugs  | Increased effect, serotonin syndrome                                   | Significant | Synergy                   | Discourage                         |
| 11. St. John's Wort   | Oral Contraceptives  | Decreased drug effect  | Significant | Induction                 | Discourage                         |
| 12. Aloe, bilberry, capsaicin, cayenne, cod liver oil, fish oil, flaxseed oil, ginger, ginseng, grape seed, kelp, melatonin, papaya, Pau d'arco, evening primrose oil, pycnogenol | Aspirin  | Bleeding   | Possible    |                           | Monitor                            |
| 13. Aloe, cayenne, cod liver oil, fish oil, garlic, ginkgo, melatonin, Pau d'arco   | NSAIDs   | Bleeding   | Possible    |                           | Monitor                            |
| 14. Glucosamine, Chondroitin  | Warfarin   | Bleeding   | Possible    |                           | Monitor                            |
| 15. Garlic  | Gemfibrozil  | Bleeding   | Possible    |                           | Monitor                            |
| 16. Chromium, ginkgo, ginseng   | Oral hypoglycemics   | Hypoglycemia   | Possible    | PD Interaction            | Monitor                            |
| 17. Cod liver oil, CoQ10, fish oil, melatonin   | Antihypertensives  | Hypotension  | Possible    | PD Interaction            | Monitor                            |
| 18. Garlic  | (CYP3A4 substrates only)<br>Antihypertensives, statins, diazepam, erythromycin, carbamazepine, alprazolam, quinine | Decreased drug benefit   | Possible    | Induction                 | Monitor                            |
| 19. St John's Wort  | Antihypertensives  | Decreased drug benefit   | Possible    | Induction                 | Monitor                            |
| 20. Ginkgo  | Omeprazole, amitriptyline, propranolol, diazepam   | Decreased drug benefit   | Possible    | Induction                 | Monitor                            |
| 21. Ginseng   | Furosemide, opioids  | Decreased drug benefit   | Possible    | Unknown                   | Monitor                            |
| 22. Ginkgo, ginseng   | Nifedipine   | Increased drug effect  | Possible    | Induction                 | Monitor                            |
| 23. Alfalfa   | Conjugated estrogens   | Estrogen overload  | Possible    |                           | Monitor                            |
| 24. CoQ10   | Digoxin  | Digoxin toxicity   | Possible    | P-glycoprotein inhibition | Monitor                            |
| 25. Garlic  | Methotrexate   | Unclear, some evidence that garlic protects from methotrexate toxicity | Possible    |                           | Monitor                            |
| 26. Licorice  | Furosemide   | Hypokalemia  | Possible    |                           | Monitor                            |

\*PD = Pharmacodynamic, Induction = Enzyme Induction, Inhibition = Enzyme Inhibition, Additive = Additive Effects

#### References:

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