Complementary Medicine Interactions PART 2

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Complementary Medicine Interactions

PART 2

How do herbs, nutrients and food supplements interact with drugs for contraception and addiction, or for GU, immunological and musculoskeletal disorders? Lesley Braun and Prof Marc Cohen provide clinical guidance from their new publication

Assumptions made when collating the information for this chart

- The clinical significance of many interactions is still unknown as controlled trials are lacking in most cases. In these instances, interactions are based on evidence of pharmacological activity and case reports and are largely speculative.
- All information refers to oral dose forms unless otherwise specified.
- Information listed here is correct at time of writing, however new research in the area is constantly being published.
- The interaction chart is provided as a guide only and should not replace the use of professional judgment.
- Information listed here is limited to 100 monographs in *Herbs & Natural Supplements – An Evidence-Based Guide* (©Elsevier Australia, 2004).

Using this guide in practice

- Commonly used prescription and over the counter medications are organised by therapeutic class and subclass and are listed alphabetically. Herbal and natural medicines are also listed alphabetically.
- Common names have been used when referring to herbs.
- Refer back to original monograph in *Herbs & Natural Supplements – An Evidence-Based Guide* (©Elsevier Australia, 2004) for more information about a particular substance.

Avoid	there may be insufficient information available to be able to advise using the two substances together, so avoid until more is known. The drug may have a narrow therapeutic index (NTI) and there is sufficient evidence to suggest the interaction may be clinically significant. Consider an alternative treatment that is unlikely to produce undesirable interaction effects.
Avoid long-term use unless under medical supervision	harmful effects of potential interaction can be avoided if doses are altered appropriately under medical supervision. Some of these interactions can be manipulated to the advantage of the patient. Changes to dose and regimen may be required for safe combined use.
Caution	the possibility exists of an interaction that may change effects clinically; be aware and monitor. It is prudent to tell patients to be aware and seek advice if they are concerned.
Observe	interaction may not be clinically significant at the usual recommended doses, however the clinician should be alert to the possibility of an interaction.
Beneficial interaction possible	prescribing the interacting substance may improve clinical outcomes, e.g. reducing drug requirements, complementing drug effects, reducing drug side-effects, counteracting nutritional deficiencies caused by drugs, alleviating drug withdrawal symptoms, enhancing patient well-being.

DRUG	COMPLEMENTARY MEDICINE	POTENTIAL OUTCOME	RECOMMENDATION	EVIDENCE/COMMENTS
Contraceptive agents				
Combined oral contraceptive agents				
Oral contraceptive pill (OCP)	Chaste tree	Reduced herb effects	Observe	There has been speculation as to whether vitex is effective when OCPs are being taken. Several clinical studies have been conducted involving women taking OCPs that have confirmed the herb still reduces PMS symptoms
	Liquorice	Increased side-effects	Observe Caution with long-term use →2 weeks	Increased risk of side-effects, such as hypokalaemia, fluid retention and elevated BP, has been demonstrated in case reports
	Folate	Reduced folate levels	Beneficial interaction possible	Folate levels are reduced with long-term use. Increased intake may be required with long-term therapy

DRUG	COMPLEMENTARY MEDICINE	POTENTIAL OUTCOME	RECOMMENDATION	EVIDENCE/COMMENTS
Contraceptive agents (continued)				
Combined oral contraceptive agents (continued)				
Oral contraceptive pill (OCP)	St John's wort	Reduced drug effects	Caution	Breakthrough bleeding has been reported in 12 cases, which may indicate decreased effectiveness.
	Vitamin A	Increased vitamin A levels	Observe	OCP increases serum vitamin A levels
	Vitamin B2 (riboflavin)	Reduced vitamin B2 levels	Beneficial interaction possible	OCP may increase demand for vitamin B2. Increased intake may be required with long-term therapy
	Vitamin B3 (niacin)	Reduced vitamin B3 levels	Beneficial interaction possible	Increased intake may be required with long-term therapy
	Vitamin B5 (pantothenic acid)	Reduced vitamin B5 levels	Beneficial interaction possible	Increased intake may be required with long-term therapy
	Vitamin B6 (pyridoxine)	Reduced vitamin B6 levels	Beneficial interaction possible	OCP may induce pyridoxine deficiency. Increased intake may be required with long-term therapy
	Vitamin B12	Reduced vitamin B12 levels	Beneficial interaction possible	OCP users showed significantly lower concentrations of cobalamin than controls in a clinical study
Genitourinary System				
Bladder function disorders				
5–a-reductase inhibitors e.g. finasteride (e.g. Proscar)	Nettle root	Additive effects	Beneficial interaction possible	
	Saw palmetto	Additive effects	Beneficial interaction possible	Herb also inhibits 5–a-reductase activity in vitro
Immunology				
Immune modifiers				
cyclosporin	Peppermint	Additive effects	Avoid unless under medical supervision	Peppermint oil has been shown to increase the oral bioavailability of cyclosporin in animal studies
	St John's wort	Reduced drug effects	Avoid	Decreases plasma levels significantly within 3 days of concomitant use
interferon	Baical skullcap	Increased side-effects	Caution	There have been reports of acute pneumonitis due to a possible interaction between Sho-saiko-to preparation (containing baical skullcap) and interferon, which appears to be due to an allergic-immunological mechanism rather than direct toxicity
interferon-alfa	Carnitine	Side-effect reduction	Beneficial interaction possible	Clinical trials with patients being treated with interferon-alpha for hepatitis C found a reduction in fatigue associated with treatment when carnitine 2 g/day was co-administered
tacrolimus (e.g. Prograf)	St John's wort	Reduced drug effects	Avoid	Herb decreases drug serum levels

DRUG	COMPLEMENTARY MEDICINE	POTENTIAL OUTCOME	RECOMMENDATION	EVIDENCE/COMMENTS
Immunology (continued)				
Vaccines				
Influenza virus vaccine	Siberian ginseng	Side-effect reduction	Beneficial interaction possible	May reduce the risk of post-vaccine reactions
Musculoskeletal System				
Nonsteroidal anti-inflammatory agents				
NSAIDS	Chondroitin	Additive effects	Beneficial interaction possible	Drug dosage may require modification Chondroitin may enhance the anti-inflammatory effects of drug
	Glucosamine	Additive effects	Beneficial interaction possible	Drug dosage may require modification Glucosamine may enhance the anti-inflammatory effects of drug
	Fish oils	Additive effects	Beneficial interaction possible. Drug dosage may require modification	Fish oils may enhance the anti-inflammatory effects of drug
	Vitamin E	Additive effects	Beneficial interaction possible. Drug dosage may require modification	Vitamin E may enhance the pain modifying effects of drug
	Zinc	Reduced absorption	Caution?? Separate dose by at least 2 hours	
aspirin	Grape seed extract	Additive effects	Observe Beneficial interaction possible	Theoretically may enhance antiplatelet and anti-inflammatory activity of aspirin and may increase risk of bleeding.
	Meadowsweet	Increased bleeding	Observe Beneficial interaction possible	Theoretically may enhance anti-inflammatory and antiplatelet effects
	Policosanol	Increased bleeding	Observe	Doses →10mg daily may inhibit platelet aggregation.
	Vitamin C	Decreased vitamin C effects	Beneficial interaction	Aspirin may interfere with both absorption and cellular uptake mechanisms for vitamin C, thereby increasing vitamin C requirements as observed in animal and human studies. Increased vitamin C intake may be required with long-term therapy
	Willowbark	Increased bleeding	Observe Beneficial interaction possible. Caution with high dose over 240 mg salicin daily	Theoretically may enhance anti-inflammatory and antiplatelet effects. Although a clinical study found consumption of salicin 240 mg daily produced minimal effects on platelet aggregation, higher doses may have a significant effect
diclofenac sodium (topical)	Liquorice	Additive effects	NEED RECOMMENDATION	In-vitro studies have shown that the addition of glycyrrhizin enhanced the topical absorption of diclofenac sodium
sulfasalazine (e.g. Salazopyrin)	Folate	Reduced drug absorption	Separate dose by 2–3 hours	
	Iron	Reduced drug and iron effects	Separate does by at least 2 hours	

Complementary Medicine Interactions – PART 2 continued

DRUG	COMPLEMENTARY MEDICINE	POTENTIAL OUTCOME	RECOMMENDATION	EVIDENCE/COMMENTS
Nutrition				
Anorectics and weight-reducing agents				
orlistat (e.g. Xenical)	itamin A	Reduced vitamin absorption	Separate doses by at least 4 hours and monitor vitamin status	Increased vitamin intake may be required with long-term therapy
	Vitamin D	Reduced vitamin absorption	Separate doses by at least 4 hours and monitor vitamin status	Increased vitamin intake may be required with long-term therapy
	Vitamin E	Reduced vitamin absorption	Separate doses by at least 4 hours and monitor vitamin status	Increased vitamin intake may be required with long-term therapy
Poisoning, Toxicity and Drug Dependence				
Agents used in drug dependence				
methadone	St John's wort	Reduced drug effects	Avoid	Decreases serum levels
	Kava	Additive effects	Caution	Increased sedation theoretically possible
Detoxifying agents, antidotes				
penicillamine (e.g. D-Penamine)	Iron	Reduced drug and iron effect	Separate does by at least 2 hours — do not suddenly withdraw iron	Sudden withdrawal of iron during penicillamine use has been associated with penicillamine toxicity and kidney damage
	Vitamin B6 (pyridoxine)	Reduced B6 effect	Beneficial interaction possible	Drug may induce pyridoxine deficiency
Other				
Alcohol	Kava	Additive effects	Observe	Potentiation of CNS sedative effects have been reported in an animal study, however one double-blind, placebo-controlled study found no additive effects on CNS depression or safety related performance
Dopamine antagonists	Chaste tree	Reduced drug effects	Observe	Reduced drug effects theoretically possible
	SAMe	Side-effect reduction	Beneficial interaction possible	SAMe may reduce hepatic injury caused by such agents as paracetamol, alcohol, oestrogens
Hepatotoxic drugs	Andrographis	Side-effect reduction	Beneficial interaction possible	Andrographis may exert hepatoprotective activity against liver damage induced by drugs e.g. paracetamol, tricyclic antidepressants
	Garlic	Side-effect reduction	Beneficial interaction possible	Garlic may exert hepatoprotective activity against liver damage induced by drugs e.g. paracetamol
	SAMe	Side-effect reduction	Beneficial interaction possible	SAMe may exert hepatoprotective activity against liver damage induced by drugs e.g. paracetamol
	Schisandra	Side-effect reduction	Beneficial interaction possible	Schisandra may exert hepatoprotective activity against liver damage induced by drugs e.g. paracetamol

DRUG	COMPLEMENTARY MEDICINE	POTENTIAL OUTCOME	RECOMMENDATION	EVIDENCE/COMMENTS
Other (continued)				
Hepatotoxic drugs (continued)	Milk thistle	Side-effect reduction	Beneficial interaction possible	Milk thistle may exert hepatoprotective activity against liver damage induced by drugs e.g. paracetamol
Lipophilic drugs	Chitosan	Reduced drug absorption	Separate dose by at least 2 hours	Considering chitosan binds to dietary fats and reduces their absorption, it can also affect the absorption of lipophilic drugs
PUVA-therapy	Celery	Additive effects	Caution	While celery has been found to contain psoralens, celery extract does not seem to be photosensitising, even after ingestion in large amounts. However, it may increase the risk of phototoxicity with concurrent PUVA-therapy
	St John's wort	Additive effects	Caution	Hypericin may increase sensitivity to UV radiation ■ END