

TOP 10 SUPPLEMENTS: KNOW WHAT YOUR PATIENTS ARE TAKING

Hansie Wong, MD

June 13, 2015

Disclaimers

- I have nothing to disclose.
- I have no financial interest associated with this session.

Top 10 Supplements

- Omega-3 Fatty Acids
- Vitamin C
- Coenzyme Q10
- Glucosamine/Chondroitin
- Melatonin
- Probiotics
- Garcinia
- Olive Leaf
- 5-HTP
- Magnesium

Omega-3 Fatty Acids

- Essential FA needed for muscle activity, digestion, fertility, cell growth
- Uses: heart health, brain/mental health, joint health, cancer prevention
- Evidence
 - ▣ Effective for lowering TG
 - ▣ Possibly effective:
 - Prevent heart disease
 - Age-related macular degeneration
 - ADHD
 - Rheumatoid arthritis

Omega 3 Fatty Acids (cont'd)

□ Safety

- Likely safe, including pregnancy/breastfeeding at dose < 3gm/day
- Can increase bleeding time

□ Sources

- Lovaza (465mg EPA/375mg DHA)
- Fish oil vs krill oil vs cod liver oil
- Fatty fish (salmon, tuna, trout)
- Shellfish (crab, mussels, oysters)
- Algae or flaxseed oil (veggie sources)

Omega 3 Fatty Acids—Bottom Line

- Useful for many things with lots of positive research and potential
- Consider eating seafood on a regular basis

Vitamin C

- Water soluble vitamin and antioxidant needed for growth, development, and immune function
- Uses: wound healing, immune support
- Evidence
 - ▣ Possibly effective:
 - Common cold
 - Cancer
 - ▣ Insufficient evidence for wound healing

Vitamin C (cont'd)

- Safety/Precautions
 - ▣ Likely safe < 2000mg/day
 - ▣ Caution in those with h/o kidney stones
- Sources
 - ▣ Lypospheric, liposomal vitamin C
 - ▣ Raw fruits/vegetables: cruciferous veggies, leafy greens, kiwi fruit, citrus fruits

Vitamin C—Bottom Line

- Important useful vitamin with low risk of harm
- Encourage regular dietary intake from fruits and veggies
- Use lypospheric, liposomal vit C as needed

Coenzyme Q10

- Antioxidant found most in the heart, liver, kidneys, pancreas.
- Used for ATP production
- Uses: heart health, exercise performance, neuromuscular disorders
- Evidence
 - ▣ Likely effective for mitochondrial disorders
 - ▣ Possibly effective:
 - Heart conditions (CHF, HTN)
 - Migraines

Coenzyme Q10 (cont'd)

- Likely safe
- Sources
 - ▣ Fish and meat
 - ▣ Soybean, sesame, rapeseed oils
 - ▣ Whole grains
 - ▣ Commercially made from fermenting beets and sugarcane with special strains of yeast

Coenzyme Q10—Bottom Line

- Lots of research and potential due to its association with various conditions
- Consider for heart health
- Weight cost/benefits

Glucosamine/Chondroitin

- glucosamine is an amino sugar found in cartilage and connective tissue
- chondroitin is a complex carb that helps cartilage retain water
- Uses: osteoarthritis
- Evidence
 - ▣ Likely effective for reducing pain from mild-mod knee OA (as effective as NSAIDs)
 - ▣ May take 4-8 weeks to relieve symptoms

Glucosamine/Chondroitin (cont'd)

- Safety/Precautions
 - Likely safe
 - Glucosamine increases effect of warfarin
- Sources
 - Glucosamine sulfate vs HCl (from shellfish)
 - Chondroitin from cow cartilage
 - Combos with shark cartilage, MSM manganese

Glucosamine/Chondroitin—Bottom Line

- Low risk
- Listen to your patients and validate their experiences
- Weight cost/benefit and let your patients decide

Melatonin

- Hormone secreted by the pineal gland.
- Helps with sleep/wake cycle
- Uses: sleep problems
- Evidence
 - ▣ Likely effective:
 - Insomnia
 - Shift work
 - ▣ Possibly effective for jet lag

Melatonin (cont'd)

- Safety/Precautions
 - ▣ Likely safe (<2 yrs)
 - ▣ Decreases P450 (CYP1A2 and CYP2C19)
 - ▣ May increase bleeding time
- Sources
 - ▣ Rx only in NZ
 - ▣ NZ cherries from Central Otago
 - Tart Cherry Sleep (2caps = 0.25mg melatonin)

Melatonin—Bottom Line

- May be a better (safer?) alternative to benzos or other sedatives
- Consider cherries if symptoms are mild

Probiotics

- Live bacteria and yeast that helps move food through the gut



Probiotics (cont'd)

- Uses: GI issues, skin disorders, immune support
- Evidence
 - ▣ Likely effective for treating Rotavirus infection
 - ▣ Possibly effective in preventing:
 - Abx-induced diarrhea
 - Traveler's diarrhea,
 - Diarrhea in hospitalized adults
 - Chemo-induced diarrhea
 - ▣ Possibly effective for treating and preventing eczema d/t cow's milk allergy

Probiotics (cont'd)

- Likely safe, including children
- Sources
 - ▣ Fermented foods (yogurt, sauerkraut, kimchi)
 - ▣ Lactobacillus, bifidobacteria, saccharomyces, streptococcus
- Prebiotics: nondigestible carbs that serve as food for probiotics. Found in whole grains, bananas, onions, garlic, honey, artichokes.

Probiotics—Bottom Line

- Try to incorporate regularly in diet
- Use to treat rotavirus
- Consider supplement to prevent diarrhea if taking abx, traveling, hospitalized, or on chemo

Garcinia Cambogia

- Tropical fruit known as *Malabar tamarind*



Garcinia Cambogia (cont'd)

- Uses: weight loss
- Evidence
 - ▣ Small RCT show dose-related reduction in LDL, TG and increase in HDL
 - ▣ 2010 meta-analysis: small statistically signif weight loss short term (8-12wks)
 - ▣ Possibly ineffective for weight loss

Garcinia Cambogia (cont'd)

□ Safety

- No toxicity with max dose 1500mg/day
- Fatal liver toxicity w/ combo supps (Hydroxycut)
- Possible drug interactions

□ Sources

- Garcinia Cambogia fruit rind extract active ingredient: hydroxycitric acid (HCA)

Garcinia Cambogia—Bottom Line

- ❑ Not sustainable
- ❑ Encourage weight loss via healthy eating and regular exercise

Olive Leaf

- Natural antioxidant and anti-viral from the olive tree



Olive Leaf (cont'd)

- Uses: anti-microbial, anti-viral
- Evidence
 - ▣ Animal and in-vitro studies are promising for anti-viral activity but human trials are lacking
- Safety
 - ▣ Unknown due to lacking studies
- Sources
 - ▣ Olive Leaf Extract capsules standardized by oleuropein content

Olive Leaf—Bottom Line

- No human studies but with potential
- Low risk
- Validate your patient's experience
- Encourage the Mediterranean diet
(high in EVOO, veggies, whole grains)

5-HTP (5-hydroxytryptophan)

- Intermediate metabolite of tryptophan → ST
- Increases production of serotonin in CNS
- Uses: sleep, depression/anxiety
- Evidence
 - Possibly effective:
 - Depression
 - Fibromyalgia

5-HTP (cont'd)

□ Safety/Precautions

- ? eosinophilia myalgia syndrome
- Avoid use with SSRI and MAO-I
- Not for children, pregnant, or breast feeding

□ Sources

- No direct food sources
- tryptophan is found in turkey, chicken, milk, potatoes, pumpkin, sunflower seeds, turnip, collard greens, seaweed
- Commercially produced from seed extracts of African tree *Griffonia simplicifolia*

5-HTP—Bottom Line

- Consider for depression and FMG
- Be aware of drug interactions!

Magnesium

- Abundant mineral in the body used as a cofactor in 300 chemical reactions needed for body function
- About 25g magnesium in the body with 50-60% in the bones
- Uses: laxative, headaches, cramps, wounds
- Evidence
 - ▣ Effective for: constipation, dyspepsia
 - ▣ Possibly effective for headaches: cluster, migraine, pre-menstrual

Magnesium (cont'd)

□ Safety

- ▣ Overdose: irregular heartbeat, hypoTN, confusion, decreased respirations
- ▣ Drug interactions: antibiotics, biphosphonates, PPIs

□ Sources

- ▣ Mag hydroxide/citrate/sulfate
- ▣ Epsom salt
- ▣ dark green leafy veggies (spinach), nuts (almonds, cashews), legumes (beans)

Magnesium—Bottom Line

- Get in the diet with dark green leafy veggies, nuts, seeds, legumes
- Supplement for constipation or HA if needed

Take Home Points

- In order to know, you must first ask.
- Discuss evidence, risk, and benefits.
- Consider drug interactions.
- Encourage more naturally occurring sources (ie, food), if available.
- Let the patient decide.

References

- HealthyOnline: www.healthy.co.nz
- NIH (National Institutes of Health) www.nih.org
 - Medline Plus <http://www.nlm.nih.gov/medlineplus/>
 - Office of Dietary Supplements fact sheets <http://ods.od.nih.gov/factsheets/list-all/>
 - National Center for Complementary and Integrative Health <https://nccih.nih.gov/>
 - PubMed (for articles) <http://www.ncbi.nlm.nih.gov/pubmed/>
- Natural medicines Comprehensive Database (need subscription) <https://naturalmedicines.therapeuticresearch.com/>

