

# **The Pros and Cons of Dietary Supplements**

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# Integrative Medicine

## Definition:

- **Integrative medicine, as defined by NCCAM** (National Center for Complementary and Alternative Medicine), **combines mainstream medical therapies and CAM therapies for which there is some high-quality scientific evidence of safety and effectiveness.**

# NCCAM CAM Categories

- **Biologically-Based Therapies**
- **Alternative Systems of Healing**
- **Mind-Body Therapies**
- **Body-Based Therapies**
- **Energy-Based Therapies**

# HERBS and SUPPLEMENTS

- **Used by 80% of the World Population**
- **Used by >50% of American Adults**
  - 25% report regular use
- **Used by 5-10% of U.S. Children**
- **>\$15 Billion - 2003**
- **Fastest growing segment in CAM**

# REGULATION

- Food, Drug, and Cosmetic Act (FD&C Act)
  - 1938
  - required new drugs to be safe before marketing
- FDA's Federal Register
  - 1958
  - first list of substances generally recognized as safe (GRAS)

# REGULATION

- Nutrition Labeling and Education Act
  - 1990
  - required nutrition labeling and health claims for packaged foods
  - standardized serving sizes, ingredient information panel, and terms such as “low fat”, and “light”

# REGULATION

- Dietary Supplement Health and Education Act of 1994 (DSHEA)
  - supps no longer required pre-market documentation of safety
  - required ingredient and nutrition labeling
  - guidelines for literature displayed where supplements are sold-”no health claims”
  - requires Commission on Dietary Supp Labels and Office of Dietary Supps at NIH

# REGULATION

- Food and Drug Administration Modernization Act (FDAMA)
  - 1997
  - companies now able to use health claims in labeling if based on “published authoritative statements from certain federal scientific bodies”

# REGULATION

- Current Good Manufacturing Practices
  - “Final Rule”
    - Supplements must be processed in a consistent manner and meet quality standards
    - Testing will ensure that supplements are free from contamination and are accurately labeled
    - Became effective June, 2008.

# REGULATION

- FDA has the power to:
  - stop any company from selling toxic or unsanitary supplements
  - stop the sale of supps with false or unsubstantiated claims
  - require supplements to meet strict manufacturing requirements (Current Good Manufacturing Practices)

# Do we NEED supplements?

- **YES!**
  - **Standard American Diet**
  - **Farming practices**
    - **Soil**
    - **Geographic distribution**
      - **Labile vitamins**
      - **Picked prior to ripening**
  - **Animal husbandry practices**
    - **We are what we eat...and so are they!**

# Anti-inflammatory Diet

- Fish, nuts, seeds, beans
- 8-10 servings of fruits and vegetables
- Curry (turmeric), basil, rosemary, ginger
- Tea (white, green, black)
- Whole grains (highest fiber)
- High ORAC foods
  - See handout

# What do we NEED?

- **Multivitamin with minerals**
  - Preferably one made from whole foods
  - Decreases cancer in undernourished
- **Vitamin C 250-500mg/day**
  - Short-lived in food and our bodies
- **Fish oil 1,000-8,000mg/d**
  - Decreases stroke, CVD, a-fib, Alzheimer's...
- **Vitamin D 1,000-2,000 units/d**
  - Decreases depression, osteoporosis, cancer, pain...

# What MIGHT we ADD?

- **Special Circumstances:**
  - **Fatigue**
    - B-complex, CoQ10, magnesium (bedtime)
  - **HTN**
    - CoQ10, magnesium (bedtime)
  - **Cholesterol**
    - Red yeast rice, policosanol, cinnamon
  - **Diabetes**
    - Chromium picolinate, cinnamon

# What MIGHT we ADD?

- **Special Circumstances:**
  - PMS/perimenopausal symptoms
    - Chastetree berry (Vitex)
  - Liver issues (chemo, detox, hepatitis)
    - Milk thistle
  - Memory
    - phosphatidylserine (PS), phosphatidylcholine (PC), citicoline, piracetam, vinpocetine, acetyl-L-carnitine (ALC)

# What MIGHT we ADD?

- **Special Circumstances:**
  - Gut issues (IBS, food allergies, leaky gut)
    - probiotics

# Where do we turn?

- **Consumerlab.com**
- **Herbmed**
  - **Herbmed.org**
- **NIH Office of dietary supplements**
  - **dietary-supplements.info.nih.gov**
- **FDA Center for Safety and Applied Nutrition**
  - **cfsan.fda.gov**
- **MedlinePlus-vitamins and minerals**
  - **nlm.nih.gov/medlineplus/vitamins**