



# Complementary and Integrative Medicine

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# Presenter Disclosure Statement

- ▶ I have no relevant financial interest or other relationship with the manufacturer(s) of any commercial product(s) and/or provider(s) of commercial services that are discussed in this activity to disclose.

# Objectives

- ▶ Define complementary, alternative and integrative medicine.
- ▶ Identify examples of physical, psychological, and nutritional complementary medicine approaches
- ▶ Describe complementary medicine use in older individuals
- ▶ Identify guiding principles for dietary supplement use
- ▶ Explore evidence based examples of complementary and integrative medicine use in older individuals

# Definitions

- ▶ **Conventional medicine**
- ▶ **Complementary and alternative medicine (CAM)**
  - ▶ **Alternative medicine**
    - ▶ Used as a replacement for conventional medicine
  - ▶ **Complementary medicine**
    - ▶ Used along with conventional medicine

<https://www.nccih.nih.gov/health/complementary-alternative-or-integrative-health-whats-in-a-name>

<https://www.medicalnewstoday.com/articles/difference-between-conventional-and-complementary-medicine#conventional>

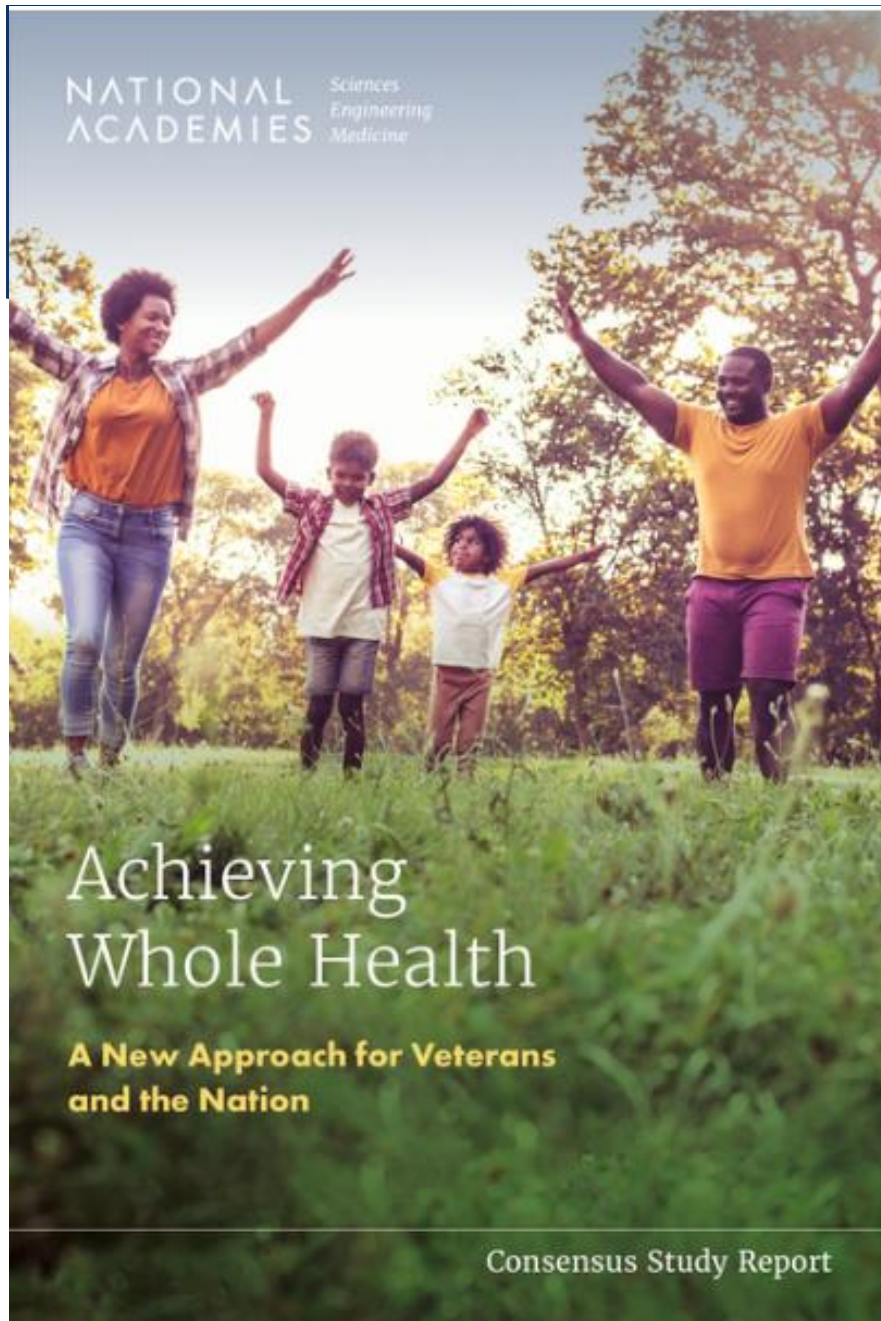
Conventional  
Medicine

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Integrative  
Medicine

Complementary  
Medicine



# National Academies publishes guide for Whole Health in 2023

- ▶ **“Whole health is physical, behavioral, spiritual, and socioeconomic well-being as defined by individuals, families, and communities. Whole health care is an interprofessional, team-based approach anchored in trusted relationships to promote well-being, prevent disease, and restore health. It aligns with a person's life mission, aspiration, and purpose. It shifts the focus from a reactive disease-oriented medical care system to one that prioritizes disease prevention, health, and well-being. It changes the health care conversation from "What's wrong with you?" to "What matters to you?"”**
- ▶ [Achieving Whole Health: A New Approach for Veterans and the Nation | The National Academies Press](#)

# AUDIENCE PARTICIPATION

WHEN I SAY  
COMPLEMENTARY  
MEDICINE, WHAT  
EXAMPLES DO  
YOU THINK OF?

TAKE A MINUTE TO WRITE AS MANY EXAMPLES OF COMPLEMENTARY MEDICINE AS YOU CAN THINK OF IN A CHAT RESPONSE, BUT DON'T HIT ENTER QUITE YET.

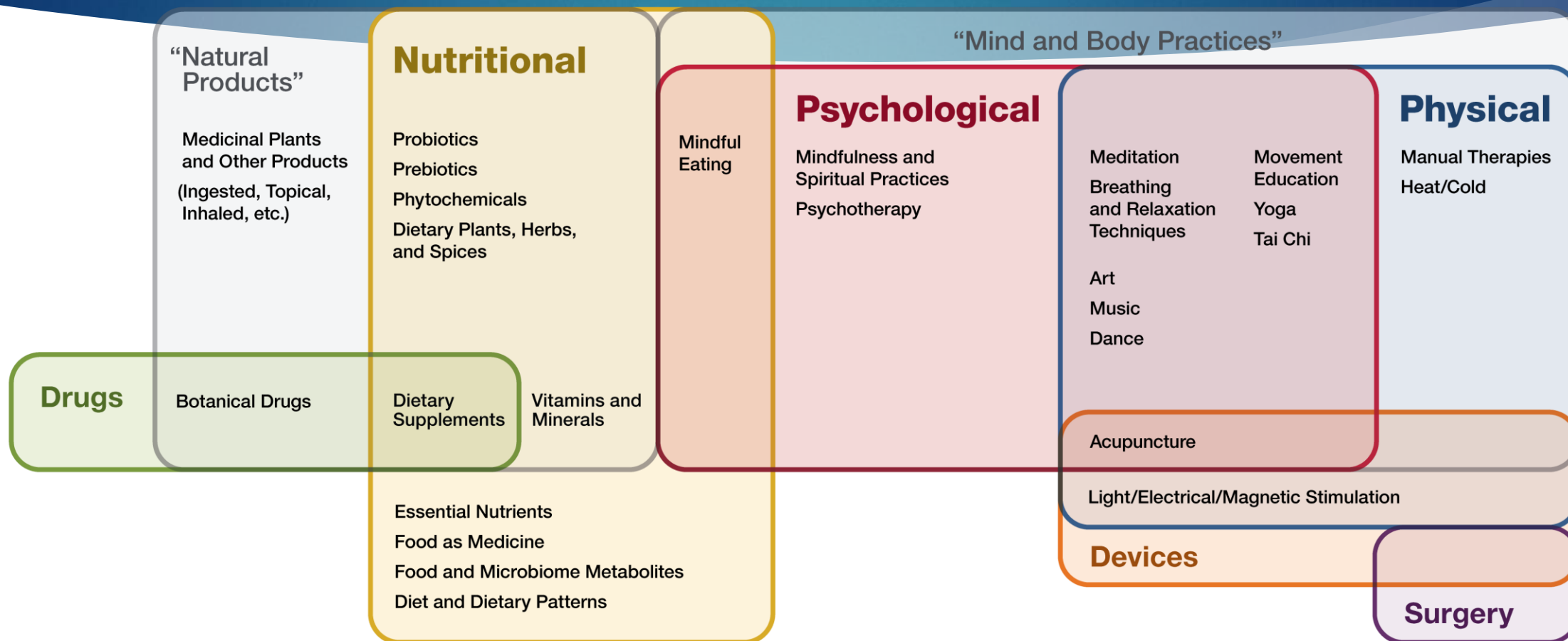
WHEN I SAY "SUBMIT" ENTER YOUR RESPONSE AND WATCH/READ THEM ALL CASCADE IN THROUGH THE CHAT.

# Complementary medicine

**Includes physical, psychological, nutritional approaches**



# Where does complementary medicine fit in?



# Use of complementary medicine in older individuals

- ▶ **The following articles provide insight into how older individuals are using and reporting complementary medication use.**
  - ▶ Fravel MA, Ernst ME, Gilmartin-Thomas J, et al. Dietary supplement and complementary and alternative medicine use among older adults in Australia and the United States. *J American Geriatrics Society*. 2023;71(7):2219-2228. doi:[10.1111/jgs.18305](https://doi.org/10.1111/jgs.18305)
  - ▶ Golden J, Kenyon-Pesce L, Robison J, Grady J, Guerrera MP. Disclosure of Complementary and Alternative Medicine Use Among Older Adults: A Cross-Sectional Study. *Gerontology and Geriatric Medicine*. 2023;9:233372142311798. doi:[10.1177/23337214231179839](https://doi.org/10.1177/23337214231179839)
  - ▶ Groden SR, Woodward AT, Chatters LM, Taylor RJ. Use of Complementary and Alternative Medicine among Older Adults: Differences between Baby Boomers and Pre-Boomers. *The American Journal of Geriatric Psychiatry*. 2017;25(12):1393-1401. doi:[10.1016/j.jagp.2017.08.001](https://doi.org/10.1016/j.jagp.2017.08.001)

# Dietary supplement and complementary and alternative medicine use among older adults in Australia and the United States

## ► **Methods**

- Cross-sectional analysis of 15,729 older adults from Australia and US enrolled in ASPREE study.
  - Mean age 79.6 years, 88.8% of respondents were from Australia
  - Participants were expected to live at least 5 years and did not have CVD, dementia or significant physical disability.
- Survey about supplements/CAM over the previous month was administered to participants during the last visit.

# Dietary supplement and complementary and alternative medicine use among older adults in Australia and the United States

## ► Results

- 66.2% of participants used 1 or more supplement/CAM
  - Vitamin D, fish oil, calcium, glucosamine and multivitamin were used in decreasing percentages from 33.8 % of participants to 12.9% of participants.
- “Female sex, US residency, higher education, polypharmacy (prescription medications), and frailty (in women) were significantly associated with higher use of supplements/CAMs.” (Fravel, *et al.* p. 2219)

# Dietary supplement and complementary and alternative medicine use among older adults in Australia and the United States

## ► Takeaways

- Older adults are using CAM; over 25% of respondents reported taking something “other” than a product listed in the survey itself.
- “Use of supplements and CAMs among older adults is associated with potential benefits and risks. Increased supplement use can signify enhanced interest in health and may be associated with improved overall prescription medication adherence.<sup>6</sup> Potential risks, however, include increased drug interactions,<sup>4,5</sup> medication burden, nonadherence with prescription medications,<sup>7</sup> and increased out-of-pocket expenses.<sup>8</sup> Older adults who routinely utilize non-prescription therapies, including supplements/CAMs, are at increased risk of serious drug interactions, a risk that increases with increasing age and use of certain concomitant therapies, including warfarin and aspirin.<sup>4,5</sup>” (Fravel, et. al, p. 2221)

# Disclosure of Complementary and Alternative Medicine Use Among Older Adults: A Cross-Sectional Study

## ► **Methods**

- Anonymous survey, 173 adults 65 years and older in Connecticut from November 2021 to September 2022 who were in the Recruitment and Community Engagement Core of the University of Connecticut Center on Aging research volunteer registry and/or affiliated with the university.
- 22 question survey included CAM use, factors associated with CAM disclosure to primary care provider (PCP), patient health, and patient trust of PCP.
  - The four categories of CAM that were asked about in the survey included:
    - Herbal products/dietary supplements, body work, mind-body practices, naturopathy/acupuncture/homeopathy.
  - If they answered yes to using one or more of these categories they were then asked if they disclosed this information to their PCP.

# Disclosure of Complementary and Alternative Medicine Use Among Older Adults: A Cross-Sectional Study

## ► Results

- 60.1% used at least 1 type of CAM in the previous year, 64.4% disclosed one or more forms of CAM to their PCP.
  - Most commonly used was herbal products/dietary supplements followed by mind-body practices.
- “Based on McNemar’s test, significantly more participants disclosed use of herbal products/dietary supplements compared to both mind-body practices and body work ( $p < .01$ ). There was no significant difference between disclosure status of herbal products/dietary supplements and naturopathy/acupuncture/homeopathy. The top two reasons for non-disclosure among participants in the non-discloser group were: (1) never thinking to tell one’s PCP (50%), and (2) the PCP never asked (42%).” (Golden et al, p. 3).

# Disclosure of Complementary and Alternative Medicine Use Among Older Adults: A Cross-Sectional Study

## ► Takeaways

- During patient care encounters, being more intentional to ask about CAM use is critical.
  - Establishing trust with providers helps to improve patient/provider communication.



# Use of Complementary and Alternative Medicine among Older Adults: Differences between Baby Boomers and Pre-Boomers

## ► **Methods**

- Secondary analysis of data from Collaborative Psychiatric Epidemiology Surveys to differentiate between those born in 1945 or earlier and those born between 1946-1964 (baby boomers)
  - In 2024, baby boomers are between 60-78 years old. Although published in 2017, the data was gathered from 2001-2003.
- 11,371 participants included adults born 1964 or earlier. More diverse inclusion than previous studies, although still not representative of the general population.
- Studied in the context of mental health/mental health disorders.
  - “Respondents were given a list of commonly used alternative therapies and were asked, “Did you use any of these therapies in the past 12 months for problems with your emotions or nerves or your use of alcohol or drugs?” The list of therapies included acupuncture, biofeedback, chiropractic, energy healing, exercise or movement, herbal therapy, high dose megavitamins, homeopath, hypnotism, guided imagery, massage, prayer or other spiritual practices, relaxation or meditation techniques, special diets, spiritual healing by others, and any other nontraditional remedy or therapy.” (Groden et al, p. 3-4)

# National Center for Health Statistics: Anxiety

- ▶ Percentage of regularly had feelings of worry, nervousness, or anxiety for adults aged 19 and over, United States 2019-2022

Year	18-44 years	45-64 years	65-74 years	75 years and over
2019	12.7	11.1	7.8	7.5
2020	13.0	11.6	7.0	6.3
2021	13.8	10.9	7.1	6.9
2022	16.0	11.2	8.0	8.2

National Center for Health Statistics. Percentage of regularly had feelings of worry, nervousness, or anxiety for adults aged 18 and over, United States, 2019—2022. National Health Interview Survey. Generated interactively: Apr 21 2024 from [https://wwwn.cdc.gov/NHISDataQueryTool/SHS\\_adult/index.html](https://wwwn.cdc.gov/NHISDataQueryTool/SHS_adult/index.html)

# Use of Complementary and Alternative Medicine among Older Adults: Differences between Baby Boomers and Pre-Boomers

## ► Results

- 23% of older adults used CAM for mental health, although not all were older adults.
  - 27.7% baby boomers (middle age at time of survey), 16.4% pre-boomers (older adults at time of the survey)

# Use of Complementary and Alternative Medicine among Older Adults: Differences between Baby Boomers and Pre-Boomers

- ▶ Takeaways

- ▶ Patterns of use of CAM may depend in part on generational differences.

# AUDIENCE PARTICIPATION

DOES IT SURPRISE  
YOU HOW MANY  
OLDER INDIVIDUALS  
MAY BE USING  
COMPLEMENTARY  
MEDICINE?

TAKE A MINUTE TO REFLECT  
ON WHAT YOU'VE LEARNED  
VERSUS WHAT YOU SEE IN  
YOUR PRACTICE.

Conventional  
Medicine

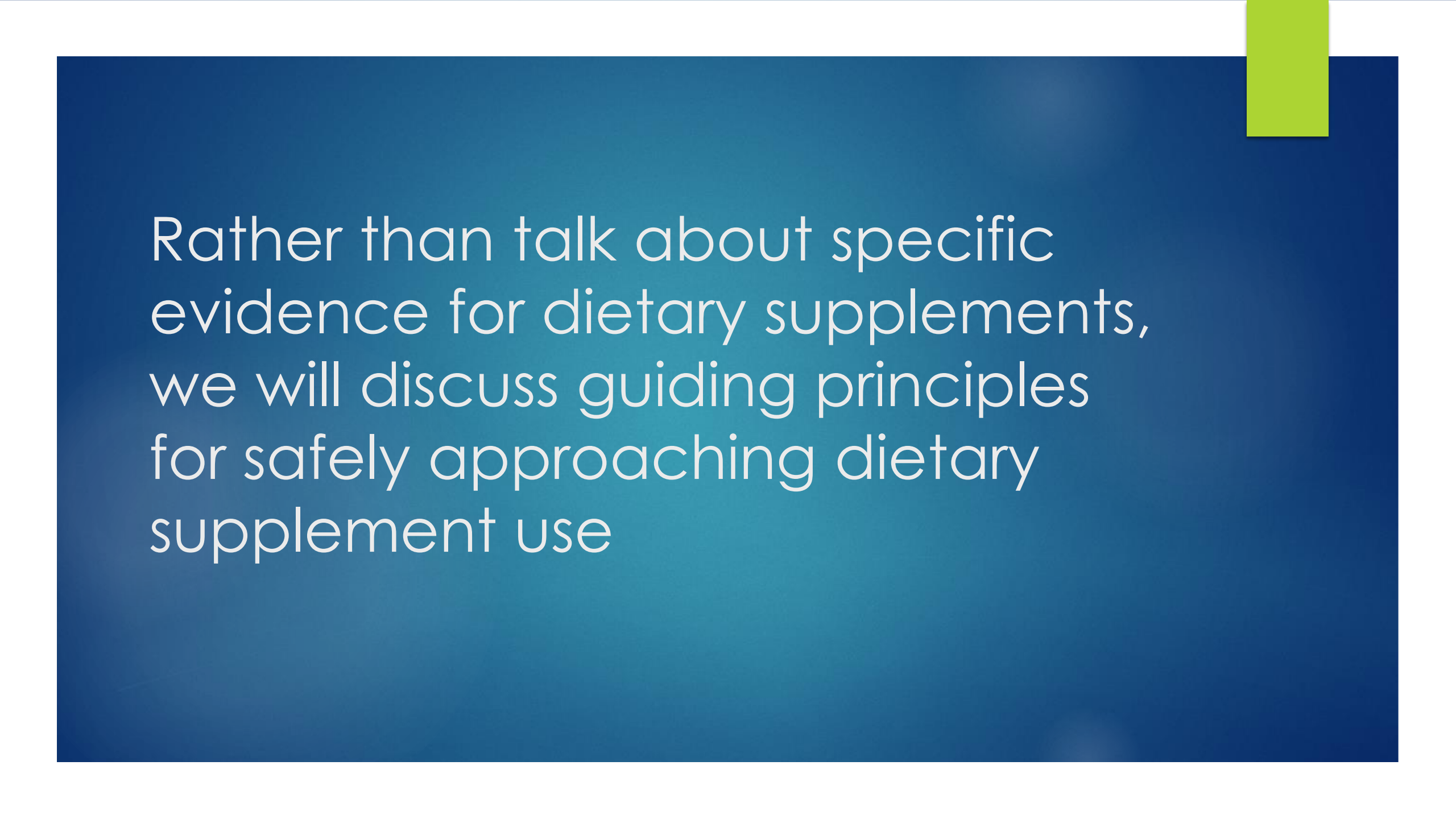
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Integrative  
Medicine

# Using Evidence Based Medicine to Guide Recommendations for Integrative Health

- ▶ Conventional medicine is guided by evidence based medicine.
- ▶ Complementary medicine often does not have the same level or extent of evidence.
  - ▶ Research in this area is increasing and some recommendations do have a substantial body of literature to draw from.
- ▶ There are general principles that can be applied, especially when evidence of safety, harm, or efficacy is not available or is limited.



Rather than talk about specific evidence for dietary supplements, we will discuss guiding principles for safely approaching dietary supplement use



# Dietary Supplements: Consumer Handout



## Understanding Dietary Supplements

Dietary supplements can be beneficial to your health, but they can also involve health risks. Before deciding whether to take a supplement, it is important to know the facts.

### What are Dietary Supplements?

**Dietary supplements are products that are ingested and are intended to add to or "supplement" the diet.** Supplements can come in a variety of forms, including tablets, capsules, softgels, gel caps, liquids, gummies, powders, and bars.

Common dietary supplements include:

- Vitamins (such as multivitamins or individual vitamins like vitamin D and biotin)
- Minerals (such as calcium, magnesium, and iron)
- Botanicals or herbs (such as echinacea and ginger)
- Botanical compounds (such as caffeine and curcumin)
- Amino acids (such as tryptophan and glutamine)
- Live microbials (commonly referred to as "probiotics")

### How are Dietary Supplements Regulated?

Under the Dietary Supplement Health and Education Act (DSHEA), companies are responsible for ensuring that the dietary supplements they sell are safe and properly labeled. Unlike drugs, **FDA does not have the authority to approve dietary supplements or their labeling before they are sold to the public.** In fact, companies can often introduce a dietary supplement to the market without notifying FDA. FDA's role in regulating dietary supplements primarily begins after products enter the marketplace. If a product is found to be unsafe or not otherwise in compliance with the law, FDA can work with the company to bring the product into compliance or possibly remove it from the market.

### How are Dietary Supplements Labeled?

Dietary Supplements are required to have a **Supplement Facts label** that lists the serving size, the number of servings per container, each dietary ingredient in the product, and the amount of certain ingredients per serving. They are also required to have a statement on the front of the product identifying it as a "dietary supplement" or similar term (for example, "vitamin supplement").

### What are the Benefits of Dietary Supplements?

Dietary supplements can help you **improve or maintain your overall health**, and some supplements can also help you **meet your daily requirements of essential nutrients.** For example, calcium and vitamin D can help build strong bones. Even though dietary supplements can be beneficial, they should not take the place of a variety of foods that are important for a healthy diet.

### Are There Any Risks in Taking Dietary Supplements?

Dietary supplements may contain ingredients that can have strong effects in the body, so always **be alert to the possibility of a bad reaction or side effect (also known as an adverse event).** Problems can occur especially if you:

- Take too much of some supplements
- Combine supplements
- Use supplements with medications (prescription or over-the-counter)
- Take supplements instead of medications

Adverse events can range from less serious to life-threatening and can include rash, fatigue, severe and persistent vomiting or diarrhea, difficulty urinating, severe joint and muscle pain, chest pain, or stroke. For more possible reactions, see [www.fda.gov/dietarysupplements](http://www.fda.gov/dietarysupplements).

### What Should You Do if You Experience an Adverse Event?

If you think that a dietary supplement may have caused you to experience an adverse event, you should:

- 1: **STOP** taking the supplement immediately
- 2: **SEEK** medical care
- 3: **REPORT** the adverse event to FDA

- Online via the **Safety Reporting Portal** at [www.safetyreporting.hhs.gov](http://www.safetyreporting.hhs.gov).
- Call an **FDA Consumer Complaint Coordinator**. Contact information for your local Consumer Complaint Coordinator can be found at [www.fda.gov/consumer-complaint-coordinators](http://www.fda.gov/consumer-complaint-coordinators) or by calling FDA's SAFEFood Information Line at 1-888-SAFEFood (1-888-723-3366).

**Any information you provide can help FDA identify unsafe products on the market and take action to protect the public.**

### How Can You Be an Informed Consumer?

Read product labels, be cautious, and **always talk to your healthcare professional—doctor, nurse, registered dietitian, or pharmacist—before purchasing or taking any dietary supplement.** They can help you decide which supplements, if any, might be right for you.



# Dietary Supplements: Guide for Patients Talking to Healthcare Professionals



## Talking to Healthcare Professionals About Dietary Supplements

Dietary supplements can help you improve or maintain your overall health, and some can help you meet your daily requirements of essential nutrients. While supplements can be beneficial to your health, they can also involve health risks—especially if you take them with or instead of medications. **Before deciding to take a supplement, do your research and always talk to your healthcare professional.**



### Be an Informed Consumer

When considering whether to take a dietary supplement, it's important to know the facts.

- **Be cautious of products marketed as dietary supplements that claim to diagnose, cure, mitigate, treat, or prevent diseases.** For example, a product that bears a claim such as "treats heart disease" or "cures cancer" is a drug and is subject to all requirements for drugs, even if it is marketed as a dietary supplement.
- **Be mindful of product claims**, such as "works better than [a prescription drug]," "totally safe," or has "no side effects." If a claim sounds too good to be true, it probably is.
- **Search for information on credible websites** (such as [www.fda.gov](http://www.fda.gov), [www.nih.gov](http://www.nih.gov), and [www.usda.gov](http://www.usda.gov)) and look for research studies published in peer reviewed journals.

### Speak with Your Healthcare Team

To help you figure out what information is reliable, the best resource is your healthcare team. This team might include your doctor, nurse, pharmacist, or registered dietitian. They have access to the most current medical research and are the most familiar with your health history. They can help you determine if a dietary supplement is right for you.

### Symptoms to Watch Out For

Sometimes dietary supplements can cause **side effects or bad reactions, also known as adverse events**, that can range from less serious to life-threatening. Some examples include itching, loss of appetite, severe or persistent abdominal pain, blood in the urine, shortness of breath, fainting, or cognitive changes. If you experience these or any other adverse events, **immediately stop taking the supplement and seek medical care or advice.**

### What to Ask Your Healthcare Professional


Come prepared to your medical appointments with your research and questions about dietary supplements. For example:

- Is taking a dietary supplement important for my overall health?
- Am I taking the right product?
- Am I taking the right amount?
- Is there an amount or "upper limit" I should not go above?
- How long should I take the supplement?
- Are there any known side effects?
- Are there any foods, medicines (prescription or over-the-counter), or other dietary supplements I should avoid while taking this product?
- If I am scheduled for surgery or lab work, are there any supplements I should avoid?

### Did You Know?

**Dietary supplements can interact with some medicines (prescription and over-the-counter) and may cause problems.** Some examples include:

- St. John's wort can reduce the effectiveness of some medications prescribed for heart disease, cancer, HIV, depression, seizures, and birth control.
- Antioxidant supplements, such as vitamins C and E, might reduce the effectiveness of some types of cancer chemotherapy.
- Vitamin K can reduce the ability of the blood thinner warfarin (Coumadin) to prevent blood from clotting.
- Warfarin (Coumadin), ginkgo biloba, aspirin, and high-dose vitamin E can each thin the blood. Taking any of these products together can increase the potential for internal bleeding or stroke.



# Examples of evidence based complimentary and integrative medicine use in older individuals

# The Mediterranean, Dietary Approaches to Stop Hypertension (DASH), and Mediterranean-DASH Intervention for Neurodegenerative Delay (MIND) Diets Are Associated with Less Cognitive Decline and a Lower Risk of Alzheimer's Disease—A Review



## **The Mediterranean, Dietary Approaches to Stop Hypertension (DASH), and Mediterranean-DASH Intervention for Neurodegenerative Delay (MIND) Diets Are Associated with Less Cognitive Decline and a Lower Risk of Alzheimer's Disease—A Review**

Annelien C van den Brink, Elske M Brouwer-Brolsma, Agnes AM Berendsen, and Ondine van de Rest  
*Division of Human Nutrition and Health, Wageningen University, Wageningen, Netherlands*



Image from CANVA Pro, April 2024

Van Den Brink AC, Brouwer-Brolsma EM, Berendsen AAM, Van De Rest O. The Mediterranean, Dietary Approaches to Stop Hypertension (DASH), and Mediterranean-DASH Intervention for Neurodegenerative Delay (MIND) Diets Are Associated with Less Cognitive Decline and a Lower Risk of Alzheimer's Disease—A Review. *Advances in Nutrition*. 2019;10(6):1040-1065. doi:[10.1093/advances/nmz054](https://doi.org/10.1093/advances/nmz054)

# Mind and Body Practices for Older Adults: What the Science Says

- ▶ National Center for Complementary and Integrative Health (NCCIH) Mind and Body Practices for Older Adults: What the Science Says, August 2019
  - ▶ Osteoarthritis
  - ▶ Menopausal Symptoms
  - ▶ Sleep Problems
  - ▶ Shingles
  - ▶ Balance Risk of Falls
  - ▶ Cognitive Decline

# A Randomized Controlled Trial of Tai Chi Chih or Health Education for Geriatric Depression



The American Journal of Geriatric Psychiatry

Volume 30, Issue 3, March 2022, Pages 392-403



Regular Research Article

## A Randomized Controlled Trial of Tai Chi Chih or Health Education for Geriatric Depression

[Helen Lavretsky M.D., M.S.](#), [Michaela M. Milillo B.S.](#), [Lisa Kilpatrick Ph.D.](#),  
[Adrienne Grzenda M.D., Ph.D.](#), [Pauline Wu D.O.](#), [Sarah A. Nguyen M.D.](#),  
[Linda M. Ercoli Ph.D.](#), [Prabha Siddarth Ph.D.](#)



Image created in CANVA Pro, April 2024

Lavretsky H, Milillo MM, Kilpatrick L, et al. A Randomized Controlled Trial of Tai Chi Chih or Health Education for Geriatric Depression. *The American Journal of Geriatric Psychiatry*. 2022;30(3):392-403. doi:[10.1016/j.jagp.2021.07.008](https://doi.org/10.1016/j.jagp.2021.07.008)

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