



Complete Summary

GUIDELINE TITLE

American Association of Clinical Endocrinologists medical guidelines for the clinical use of dietary supplements and nutraceuticals.

BIBLIOGRAPHIC SOURCE(S)

American Association of Clinical Endocrinologists medical guidelines for the clinical use of dietary supplements and nutraceuticals. Endocr Pract 2003 Sep-Oct;9(5):417-70. [550 references] [PubMed](#)

GUIDELINE STATUS

This is the current release of the guideline.

COMPLETE SUMMARY CONTENT

SCOPE
METHODOLOGY - including Rating Scheme and Cost Analysis
RECOMMENDATIONS
EVIDENCE SUPPORTING THE RECOMMENDATIONS
BENEFITS/HARMS OF IMPLEMENTING THE GUIDELINE RECOMMENDATIONS
QUALIFYING STATEMENTS
IMPLEMENTATION OF THE GUIDELINE
INSTITUTE OF MEDICINE (IOM) NATIONAL HEALTHCARE QUALITY REPORT
CATEGORIES
IDENTIFYING INFORMATION AND AVAILABILITY
DISCLAIMER

SCOPE

DISEASE/CONDITION(S)

Endocrine and metabolic disorders

GUIDELINE CATEGORY

Assessment of Therapeutic Effectiveness

CLINICAL SPECIALTY

Endocrinology
Internal Medicine
Nutrition

INTENDED USERS

Chiropractors
Dietitians
Emergency Medical Technicians/Paramedics
Nurses
Physician Assistants
Physicians

GUIDELINE OBJECTIVE(S)

- To provide a definition for dietary supplements and nutraceuticals (DS/N)
- To provide appropriate examples of dietary supplements and nutraceuticals that physicians may encounter
- To suggest strategies for physicians to discuss dietary supplements and nutraceuticals with their patients
- To identify resources for physicians to use to learn more about dietary supplements and nutraceuticals
- To discuss potential interactions between dietary supplements and nutraceuticals and drugs, nutrients, and other dietary supplements and nutraceuticals
- To outline the rational use of dietary supplements and nutraceuticals in adults, within the framework of traditional medicine, based on an established method of grading of the available literature

TARGET POPULATION

Patients with endocrine or metabolic disorders

INTERVENTIONS AND PRACTICES CONSIDERED

The following dietary supplements and nutraceuticals were considered; some were recommended (see the "Major Recommendations" field for context).

1. Androstenedione
2. Carnitine
3. Choline
4. Chondroitin
5. Coenzyme Q10
6. Creatine
7. Dehydroepiandrosterone Sulfate (DHEAS)
8. Glucosamine
9. Glutamine
10. Melatonin
11. Omega-3 fatty acids
12. Phytosterols
13. Probiotics
14. Saw palmetto
15. Flavonoids
16. Taurine
17. alpha-Lipoic acid
18. Chromium

19. gamma-Linolenic acid
20. *Momordica charantia*
21. Vanadium
22. Vitamin E

MAJOR OUTCOMES CONSIDERED

Not stated

METHODOLOGY

METHODS USED TO COLLECT/SELECT EVIDENCE

Hand-searches of Published Literature (Primary Sources)
Hand-searches of Published Literature (Secondary Sources)
Searches of Electronic Databases

DESCRIPTION OF METHODS USED TO COLLECT/SELECT THE EVIDENCE

Individual dietary supplements and nutraceuticals (DS/N) were selected by individual task force members on the basis of the relevance to endocrinologists and physician-nutrition specialists, after topic assignment by the task force chairman. Only a partial list of dietary supplements and nutraceuticals were included (see Table 1 in the original guideline document). Inclusion criteria for use of published material to grade recommendations were that such sources must clearly investigate one target agent and not a combination of agents, which could confound data, and must be classified within one of the four evidence categories described in Table 2 of the guideline document. Occasionally, reports that do not adhere to these criteria were incorporated in the discussion of the dietary supplements and nutraceuticals because they provide theory.

References were obtained through computerized searching of the literature, scanning of incoming journals in the medical library, and review of references in pertinent review articles, major textbooks, and syllabi from national meetings, on the subjects of clinical nutrition, natural medicine, alternative medicine, dietary supplements, nutraceuticals, and phytomedicine.

NUMBER OF SOURCE DOCUMENTS

Not stated

METHODS USED TO ASSESS THE QUALITY AND STRENGTH OF THE EVIDENCE

Weighting According to a Rating Scheme (Scheme Given)

RATING SCHEME FOR THE STRENGTH OF THE EVIDENCE

The evidence categories were adapted from The Evidence Report on Obesity by the National Institutes of Health and the American Diabetes Association evidence grading system for clinical practice recommendations.

Level 1

Prospective, randomized, controlled trials—large

- Data derived from a substantial number of trials, with adequate power, involving a substantial number of subjects and outcome data
- Large meta-analyses using raw or pooled data or incorporating quality ratings
- Well-controlled trial at one or more medical centers
- Consistent pattern of findings in the population for which the recommendation is made (generalizable data)
- Compelling nonexperimental, clinically obvious evidence (for example, use of insulin in diabetic ketoacidosis); "all-or-none" indication

Level 2

Prospective, randomized, controlled trials—limited body of outcome data

- Limited number of trials, small population sizes in trials
- Well-conducted single prospective cohort study
- Limited but well-conducted meta-analyses
- Inconsistent findings or results not representative for the target population
- Well-conducted case-controlled study

Level 3

Other experimental outcome data and nonexperimental data

- Nonrandomized, controlled trials
- Uncontrolled or poorly controlled trials
- Any randomized clinical trial with one or more major or three or more minor methodologic flaws
- Retrospective or observational data
- Case reports or case series
- Conflicting data with weight of evidence unable to support a final recommendation

Level 4

Expert opinion

- Inadequate data for inclusion in above categories; situation necessitates an expert panel's synthesis of the literature and a consensus
- Experience-based information
- Theory-driven conclusions

METHODS USED TO ANALYZE THE EVIDENCE

DESCRIPTION OF THE METHODS USED TO ANALYZE THE EVIDENCE

Not stated

METHODS USED TO FORMULATE THE RECOMMENDATIONS

Expert Consensus

DESCRIPTION OF METHODS USED TO FORMULATE THE RECOMMENDATIONS

Selected dietary supplements and nutraceuticals (DS/N) were reviewed and clinical evidence graded by the American Association of Clinical Endocrinologists (AACE) Nutrition Guidelines Task Force members. A separate panel composed of AACE and non-AACE physicians with expertise in nutritional medicine then reviewed the compiled report. Final recommendations for the dietary supplements and nutraceuticals examples represent a consensus among the task force members. Comments and recommendations regarding physician-patient communication are based on expert judgment of task force members.

RATING SCHEME FOR THE STRENGTH OF THE RECOMMENDATIONS

Grade A

≥1 conclusive level 1 publications demonstrating benefit >> risk

Recommended for indications reflected by the publications; can be used with other conventional therapy or as "first-line" therapy

Grade B

No conclusive level 1 publication

≥1 conclusive level 2 publications demonstrating benefit >> risk

Recommended for indications reflected by the publications if the patient refuses or fails to respond to conventional therapy; must monitor for adverse effects, if any; can be recommended as "second-line" therapy

Grade C

No conclusive level 1 or 2 publication

≥1 conclusive level 3 publications demonstrating benefit >> risk

OR

No risk at all and no benefit at all

Recommended for indications reflected by the publications if the patient refuses or fails to respond to conventional therapy, provided there are no significant adverse effects; "no objection" to recommending their use

OR

"no objection" to continuing their use

Grade D

No conclusive level 1, 2, or 3 publication demonstrating benefit >> risk

Conclusive level 1, 2, or 3 publications demonstrating risk >> benefit

Not recommended
Patient is advised to discontinue use

COST ANALYSIS

A formal cost analysis was not performed and published cost analyses were not reviewed.

METHOD OF GUIDELINE VALIDATION

Peer Review

DESCRIPTION OF METHOD OF GUIDELINE VALIDATION

Final recommendations for the dietary supplements and nutraceuticals were approved by reviewers, the American Association of Clinical Endocrinologists (AACE) Publications Committee, and the AACE Board of Directors.

RECOMMENDATIONS

MAJOR RECOMMENDATIONS

Recommendation grades (A-D) and levels of evidence (1-4) are defined at the end of the "Major Recommendations" field. The table below summarizes the conclusions that follow for specific dietary supplements and nutraceuticals (DS/N).

Coenzyme Q10

Coenzyme Q10 (CoQ10) has beneficial effects for mitochondrial disorders, congestive heart failure (CHF), and ischemia-reperfusion injury (**Grade C**). For these indications, physicians may recommend it in situations in which the patient has not gained sufficient improvement from conventional therapy, providing there is no reasonable anticipation of adverse effects. No persuasive data compel this task force to endorse the use of CoQ10 in a wide variety of other claimed benefits, including performance enhancement, retardation of the aging process, immune system enhancement, diabetes mellitus, hypertension, or cancer (**Grade D**).

Flavonoids, Isoflavones, and Ipriflavone

Researchers reviewed more than 1,000 articles on phytoestrogens for a 30-year period and found 74 relevant studies to examine in detail. They concluded that insufficient evidence was available to recommend phytoestrogens instead of traditional hormone replacement therapy or to endorse any specific recommendations about particular phytoestrogen products. The guideline developers agree with this conclusion (**Grade D**). Nevertheless, it would be prudent to recommend a diet high in legumes and cereals to women who are at risk for cardiovascular disease or estrogen-dependent malignant lesions or who are perimenopausal (**Grade A**). In particular, ample conclusive level 1 and 2 data support the beneficial effect of soy protein in patients at risk for cardiovascular disease (**Grade A**). There are also conclusive level 2 and 3 data concerning

isoflavones or ipriflavone and osteoporosis (**Grade B**). Overall, increasing the dietary consumption of fruit, vegetables, and certain beverages containing flavonoids (tea and red wine) seems prudent as part of a healthful diet. Currently, however, specific quantitative recommendations cannot be made for the general population.

Phytosterols

The use of phytosterols has been investigated in patients with hypercholesterolemia and found to reduce low-density lipoprotein (LDL) cholesterol levels. Conclusive level 1 data have accrued because of the numerous prospective, randomized, controlled trials (PRCTs) that have been conducted. The American Association of Clinical Endocrinologists (AACE), in agreement with the American Heart Association Nutrition Committee, recommends the use of phytosterols in patients with hypercholesterolemia and in patients requiring secondary prevention after an atherosclerotic event (**Grade A**). All treated patients must be monitored for sitosterolemia in case they are heterozygotes. Patients with normal cholesterol levels may also take phytosterols if they and their physicians are aware of the potential risks of sitosterolemia (**Grade C**). AACE does not recommend the use of phytosterols for the treatment or prevention of malignant disease, inasmuch as only inconclusive level 3 data exist for this indication (**Grade D**).

Saw Palmetto

Only two strong studies support the use of saw palmetto extract in patients with benign prostatic hypertrophy. Clinical toxicities related to the use of this product seem to be minimal. Therefore, with conclusive level 2 data available, saw palmetto extract may be recommended for patients with benign prostatic hypertrophy who refuse conventional therapy or in whom conventional therapy fails (**Grade B**). AACE does not support the proactive (first-line) recommendation of saw palmetto extract in any patient who has prostate cancer or prostate enlargement or who simply requests prevention of either of these two conditions by use of this approach rather than conventional therapy.

Glutamine

Glutamine is a nontoxic, physiologically important agent that is beneficial in critical illness (**Grade A**). Glutamine may protect the gastrointestinal mucosa in the setting of acute stress and surgical treatment (**Grade B**). This effect is most prominent in low-birth-weight neonates receiving parenteral nutrition support. Glutamine also seems to be effective in the treatment of oral mucositis and stomatitis associated with both localized radiation therapy and systemic chemotherapy (**Grade C**) and in the decrease of occurrence of peripheral neuropathy after paclitaxel therapy (**Grade C**). Other effects attributed to glutamine supplementation are not clearly defined. Data supporting enhancement of the immune system are weak and inconclusive at best (**Grade D**). Glutamine seems to have no benefit as an energy-providing performance-enhancing agent (**Grade D**). Use of glutamine in patients with liver disease and impaired ureagenesis is associated with hyperammonemia. Otherwise, published reports have provided no clear evidence of major toxic effects associated with either enteral or parenteral supplementation with glutamine.

Taurine

A derivative form of taurine, N-acetylhomotaurine, has demonstrated effectiveness in the treatment of alcohol abuse (**Grade B**). Emerging clinical data support the addition of taurine to parenteral nutrition when hepatopathy cannot be explained by any other mechanism (**Grade C**). No published data clearly support any other beneficial or therapeutic activity of supplemental taurine in healthy adults or pathologic states (**Grade D**). In neonates, taurine appears to be an essential amino acid during stress ("conditionally essential") (**Grade C**).

Carnitine

In the rare cases of primary carnitine deficiency, carnitine therapy is effective (**Grade A**). In secondary carnitine deficiency, carnitine therapy has limited proven value (**Grade C**). Level 2 and 3 data regarding carnitine as a performance-enhancing or ergogenic (energy-providing) agent are available, but not all studies show conclusive evidence of benefit (**Grade C**). Trials of carnitine used in the treatment of congestive heart failure are emerging and appear encouraging (**Grade C**). Similar results have been noted in the treatment of cardiac and peripheral vascular ischemic disease (**Grade C**), as well as for the use of carnitine in patients with anemia associated with chronic renal disease who are receiving hemodialysis (**Grade C**). Finally, carnitine therapy may be useful in patients treated with valproic acid for seizure disorders (**Grade C**). No clear evidence has shown appreciable toxic effects associated with use of carnitine.

Creatine

Contradictory level 1, 2, and 3 evidence of a proenergy effect, reflected by improved performance, exists for creatine for any type of exertion, although the weight of evidence favors a beneficial effect (**Grade C**). Claims for efficacy in the treatment of congestive heart failure are inconclusive (**Grade D**). Limited data indicate that careful dosing of creatine may diminish symptoms associated with McArdle's disease (glycogen storage disease type V) (**Grade C**).

Chondroitin

Chondroitin sulfate, administered for a long-term period, probably has some beneficial action in restoring cartilage damaged by osteoarthritis (**Grade B**). Additional data investigating the combination of chondroitin sulfate and glucosamine in the management of osteoarthritis are reviewed in the original guideline document and do not affect this recommendation.

Glucosamine

Glucosamine may be an effective treatment for osteoarthritis. Several large metareviews have demonstrated such benefit but have failed to meet level 1 criteria. In addition, several level 2 and 3 studies of glucosamine demonstrate benefit in the treatment of osteoarthritis (**Grade B**). Therefore, glucosamine may be recommended for those patients refusing, or not responding to, conventional therapy for acute osteoarthritis, administered alone or in combination with chondroitin sulfate.

Omega-3 Fatty Acids, Including Fish Oils

Polyunsaturated fatty acids (PUFAs) and monounsaturated fatty acids (MUFAs) appear to be useful in the treatment of hypertriglyceridemia and the prevention of cardiovascular events (**Grade A**). Efficacy in inflammatory bowel disease is supported by level 3 evidence (**Grade C**). Adverse effects may be noted at dosages larger than 3 g/day.

Probiotics

Probiotics may be used safely in patients with antibiotic-associated diarrhea and recurrent *Clostridium difficile* colitis. The level 1, 2, and 3 data are inconclusive, with the weight of evidence favoring demonstrable benefit (**Grade C**). Chronic pouchitis flare-ups apparently are prevented by a mixed-organism probiotic, as reported in recent, conclusive level 2 studies (**Grade B**).

Dehydroepiandrosterone Sulfate (DHEAS)

Although many level 3 scientific reports have focused on dehydroepiandrosterone sulfate (DHEAS), the data are insufficient to support the use of DHEAS in healthy adults in any circumstance at the current time (**Grade D**). In 1999, it was argued in an editorial that DHEAS may be used as part of replacement therapy in women with adrenal insufficiency; however, as intuitive as this application seems, confirmation of efficacy with level 1 data is necessary (**Grade D**).

Androstenedione

The available data do not support the use of androstenedione or androstenediol for performance-enhancing effects (**Grade D**). In fact, deleterious effects on the lipid profile are suggested by the data. The addition of other herbal compounds with unproven efficacy seems to be a marketing ploy to entice purchase of these dietary supplements and nutraceuticals. Any agent that directly or indirectly increases androgen levels should be avoided in men with prostate cancer until clinical trials demonstrate its safety.

Table. Summary of Evidence-based Indications for Dietary Supplements and Nutraceuticals Reviewed in these Guidelines

Androstenedione

- **Grade D:** performance; body composition

Carnitine

- **Grade A:** primary deficiency
- **Grade C:** secondary deficiency; performance; cardiac; renal; valproate use

Choline

- **Grade A:** pregnancy; breast feeding

- **Grade C:** hyperhomocysteinemia; total parenteral nutrition (TPN)-induced hepatopathy
- **Grade D:** memory

Chondroitin

- **Grade B:** osteoarthritis
- **Grade D:** cognition; cardiovascular; renal stones

Coenzyme Q10

- **Grade C:** mitochondrial disorder; congestive heart failure; ischemia-reperfusion injury
- **Grade D:** performance; antiaging; immunity; diabetes mellitus; hypertension; cancer

Creatine

- **Grade C:** ergogenic; McArdle's disease
- **Grade D:** congestive heart failure

Dehydroepiandrosterone sulfate (DHEAS)

- **Grade D:** androgen replacement; performance; antiaging; libido; immunity; body composition

Glucosamine

- **Grade B:** osteoarthritis

Glutamine

- **Grade A:** critical illness
- **Grade C:** stomatitis
- **Grade D:** Crohn's disease; immunity; cancer; performance

Melatonin

- **Grade C:** sleep/jet lag; menopause (mood)
- **Grade D:** cancer

Omega-3 fatty acids

- **Grade A:** cardiovascular
- **Grade B:** high triglycerides
- **Grade C:** inflammatory bowel disease (IBD)
- **Grade D:** immunity; human immunodeficiency virus (HIV); hypertension; behavior; asthma; rheumatoid arthritis; psoriasis; chronic fatigue syndrome

Phytosterols

- **Grade A:** high cholesterol; secondary prevention of atherosclerosis
- **Grade D:** normal cholesterol; cancer; chronic disease

Probiotics

- **Grade B:** chronic pouchitis
- **Grade C:** antibiotic-related diarrhea; *C. difficile* colitis

Saw palmetto

- **Grade B:** benign prostatic hyperplasia (BPH)

Flavonoids

- **Grade A:** coronary artery disease (CAD) risk reduction
- **Grade B:** osteoporosis
- **Grade D:** hormone replacement; hot flashes; cognitive therapy; antiaging

Taurine

- **Grade B:** chronic alcoholism
- **Grade C:** total parenteral nutrition-induced hepatopathy
- **Grade D:** congestive heart failure; diabetes mellitus; dyslipidemia

Antidiabetic indications

alpha-Lipoic acid

- **Grade B:** neuropathy

American ginseng

- **Grade D:** glycemic control

Chromium

- **Grade A:** chromium deficiency
- **Grade D:** glycemic control; dyslipidemia; obesity

gamma-Linolenic acid

- **Grade B:** neuropathy

Ginkgo biloba

- **Grade D:** peripheral neuropathy; erectile dysfunction; intermittent claudication

Momordica charantia

- **Grade D:** glycemic control

Vanadium

- **Grade D:** glycemic control

Vitamin E

- **Grade D:** cardiovascular risk

Definitions:

Recommendation Grades

Grade A

≥1 conclusive level 1 publications demonstrating benefit >> risk

Recommended for indications reflected by the publications; can be used with other conventional therapy or as "first-line" therapy

Grade B

No conclusive level 1 publication

≥1 conclusive level 2 publications demonstrating benefit >> risk

Recommended for indications reflected by the publications if the patient refuses or fails to respond to conventional therapy; must monitor for adverse effects, if any; can be recommended as "second-line" therapy

Grade C

No conclusive level 1 or 2 publication

≥1 conclusive level 3 publications demonstrating benefit >> risk

OR

No risk at all and no benefit at all

Recommended for indications reflected by the publications if the patient refuses or fails to respond to conventional therapy, provided there are no significant adverse effects; "no objection" to recommending their use

OR

"no objection" to continuing their use

Grade D

No conclusive level 1, 2, or 3 publication demonstrating benefit >> risk

Conclusive level 1, 2, or 3 publications demonstrating risk >> benefit

Not recommended

Patient is advised to discontinue use

Levels of Evidence

Level 1

Prospective, randomized, controlled trials—large

- Data derived from a substantial number of trials, with adequate power, involving a substantial number of subjects and outcome data

- Large meta-analyses using raw or pooled data or incorporating quality ratings
- Well-controlled trial at one or more medical centers
- Consistent pattern of findings in the population for which the recommendation is made (generalizable data)
- Compelling nonexperimental, clinically obvious evidence (for example, use of insulin in diabetic ketoacidosis); "all-or-none" indication

Level 2

Prospective, randomized, controlled trials—limited body of outcome data

- Limited number of trials, small population sizes in trials
- Well-conducted single prospective cohort study
- Limited but well-conducted meta-analyses
- Inconsistent findings or results not representative for the target population
- Well-conducted case-controlled study

Level 3

Other experimental outcome data and nonexperimental data

- Nonrandomized, controlled trials
- Uncontrolled or poorly controlled trials
- Any randomized clinical trial with one or more major or three or more minor methodologic flaws
- Retrospective or observational data
- Case reports or case series
- Conflicting data with weight of evidence unable to support a final recommendation

Level 4

Expert opinion

- Inadequate data for inclusion in above categories; situation necessitates an expert panel's synthesis of the literature and a consensus
- Experience-based information
- Theory-driven conclusions

CLINICAL ALGORITHM(S)

None provided

EVIDENCE SUPPORTING THE RECOMMENDATIONS

TYPE OF EVIDENCE SUPPORTING THE RECOMMENDATIONS

The type of supporting evidence is identified and graded for the recommendations (see "Major Recommendations").

BENEFITS/HARMS OF IMPLEMENTING THE GUIDELINE RECOMMENDATIONS

POTENTIAL BENEFITS

- This guideline discusses alternative care medicine, introduces dietary supplements and nutraceuticals (DS/N) and defines their nature, presents a strategy for discussing DS/N with patients, provides a list of resources to peruse for further education, and reviews specific DS/N in detail based on levels of scientific evidence.
- This guideline focuses on hormonal and metabolic agents and provides consensus recommendations formulated by practicing clinical endocrinologists.
- This guideline is intended to serve as a resource for endocrinologists and other physicians unfamiliar with the issues surrounding the use of DS/N.
- Refer to Appendix 1 of the original guideline document for a detailed discussion of the claimed benefits and controlled clinical trial data (where applicable) for select DS/N.

POTENTIAL HARMS

See Table 7 in the original guideline document for **potential interactions** between various dietary supplements and nutraceuticals (DS/N) and some commonly prescribed medications.

Adverse Effects of DS/N

- *Flavonoids, Isoflavones, and Ipriflavone*: Other than subclinical lymphopenia, no serious adverse effects have been associated with short-term or long-term use of soy proteins in humans.
- *Phytosterols*: Adverse effects are generally limited to patients homozygous for sitosterolemia, in whom sitosterol is hyperabsorbed and hypercholesterolemia and xanthomas may actually develop. Erythrocyte membrane fragility and hepatopathy may also be found in rare patients. Phytosterols may also have deleterious effects on the status of fat-soluble vitamins—alpha- and beta-carotene, alpha-tocopherol, and lycopene.
- *Creatine*: Anecdotal creatine-associated adverse events that have been reported to the United States Food and Drug Administration (FDA) include rash, dyspnea, vomiting, diarrhea, nervousness, anxiety, fatigue, migraine, myopathy, polymyositis, cramping, seizure, and atrial fibrillation.
- *Chondroitin*: Bleeding is a potential adverse effect.
- *Glucosamine*: Potential concerns with use of glucosamine are exacerbation of insulin resistance, through impairment of glucosamine-6-phosphate synthase activity and modulation of phosphatidylinositol 3-kinase activity, and allergic reactions in patients with shellfish allergy.
- *Omega-3 Fatty Acids, Including Fish Oils*: Use of omega-3 fatty acids is associated with three major adverse effects: increased low density lipoprotein (LDL) cholesterol levels (<5 to 10% or up to 30% in patients with hypertriglyceridemia), excessive bleeding, and deterioration of glycemic control in patients with type 2 diabetes mellitus. The FDA has concluded that omega-3 fatty acids are "generally recognized as safe" in dosages of less than 3 g/day, on the basis of metareview of more than 2,600 clinical studies.

QUALIFYING STATEMENTS

QUALIFYING STATEMENTS

- The American Association of Clinical Endocrinologists (AACE) Medical Guidelines for Clinical Practice are systematically developed statements to assist health-care professionals in medical decision making for specific clinical conditions. Most of the content herein is based on literature reviews. In areas of uncertainty, professional judgment was applied.
- This report is not intended to be encyclopedic and complete; rather, it is intended to serve as a resource for endocrinologists and other physicians unfamiliar with the issues surrounding the use of dietary supplements and nutraceuticals (DS/N).

IMPLEMENTATION OF THE GUIDELINE

DESCRIPTION OF IMPLEMENTATION STRATEGY

An implementation strategy was not provided.

INSTITUTE OF MEDICINE (IOM) NATIONAL HEALTHCARE QUALITY REPORT CATEGORIES

IOM CARE NEED

Getting Better
Living with Illness

IOM DOMAIN

Effectiveness

IDENTIFYING INFORMATION AND AVAILABILITY

BIBLIOGRAPHIC SOURCE(S)

American Association of Clinical Endocrinologists medical guidelines for the clinical use of dietary supplements and nutraceuticals. Endocr Pract 2003 Sep-Oct;9(5):417-70. [550 references] [PubMed](#)

ADAPTATION

Not applicable: The guideline was not adapted from another source.

DATE RELEASED

2003 Sep-Oct

GUIDELINE DEVELOPER(S)

American Association of Clinical Endocrinologists - Medical Specialty Society
American College of Endocrinology - Medical Specialty Society

SOURCE(S) OF FUNDING

American Association of Clinical Endocrinologists (AACE)

GUIDELINE COMMITTEE

AACE Nutrition Guidelines Task Force

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FINANCIAL DISCLOSURES/CONFLICTS OF INTEREST

Not stated

GUIDELINE STATUS

This is the current release of the guideline.

GUIDELINE AVAILABILITY

Electronic copies: Available in Portable Document Format (PDF) from the [American Association of Clinical Endocrinologists \(AACE\) Web site](#).

Print copies: Available from the American Association of Clinical Endocrinologists (AACE), 245 Riverside Avenue, Suite 200, Jacksonville, FL 32202.

AVAILABILITY OF COMPANION DOCUMENTS

The following is available:

- American Association of Clinical Endocrinologists protocol for standardized production of clinical practice guidelines. Endocrine Pract 2004 Jul/Aug; 10(4):353-61.

Electronic copies: Available in Portable Document Format (PDF) from the [American Association of Clinical Endocrinologists \(AACE\) Web site](#).

Print copies: Available from the American Association of Clinical Endocrinologists (AACE), 245 Riverside Avenue, Suite 200, Jacksonville, FL 32202.

PATIENT RESOURCES

None available

NGC STATUS

This summary was completed by ECRI on February 13, 2004. The information was verified by the guideline developer on March 8, 2004.

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