Bodybuilding and Performance Enhancement Supplements

url: https://www.nccih.nih.gov/health/bodybuilding-and-performance-enhancement-supplements  
  
  
Bodybuilding and Performance Enhancement Supplements: What You Need To Know  
Why do some bodybuilders and athletes take dietary supplements?  
Some bodybuilders and athletes use dietary supplements to try to improve their strength, muscle mass, and energy. However, many of these types of products contain harmful ingredients. Also, for some substances, including glutamine, choline, methoxyisoflavone, quercetin, zinc/magnesium aspartate, nitric oxide, and L-arginine, there s no clear evidence that they improve athletic performance.  
  
What dietary supplements are banned by the NCAA?  
The National Collegiate Athletic Association (NCAA) maintains a list of banned substances and explains that some dietary supplements may contain banned substances not listed on the product labels. BMPEA (a phenethylamine) and DMAA (dimethylamylamine) are two examples of substances banned by the NCAA. More information on BMPEA and DMAA is given below.  
  
Are dietary supplements necessary?  
Most of us can meet all of our nutritional needs from food. Health care providers will recommend a supplement if needed for example, vitamin D if you don t get much sun and are low on vitamin D, or vitamin B12 if you have difficulty absorbing vitamin B12 from food (including many people over 50 and those with pernicious anemia or digestive disorders) or if you follow a vegan or vegetarian diet that does not include adequate levels of vitamin B12.  
  
What is creatine?  
Creatine is an amino acid produced by the body and a popular dietary supplement. It may somewhat enhance the effects of exercise on strength, muscle mass, and endurance. But creatine can have some short-term side effects, and its long-term effects haven t been well studied.  
  
Is creatine safe?  
There have been reports that creatine may impair liver and kidney function. Creatine has also been linked to an increased risk of compartment syndrome, a condition where pressure builds in a muscle compartment and prevents blood flow. People at risk of kidney problems should check with their health care providers before using creatine and be carefully monitored while using it.  
  
There are no data documenting the safety of creatine in children or adolescents. The American Academy of Pediatrics and the American College of Sports Medicine warn that teens should not use performance-enhancing supplements, including creatine, because of the possible health risks.  
  
Do performance-enhancing dietary supplements work?  
Studies have looked at a variety of supplements used for bodybuilding or to improve physical performance, including glutamine, choline, methoxyisoflavone, quercetin, zinc/magnesium aspartate, nitric oxide, and L-arginine. There s no clear evidence these supplements improve athletic performance.  
  
The results of studies on beta-alanine, an amino acid found in food and dietary supplements, are mixed but generally don t show that it improves athletic performance significantly.  
  
Are bodybuilding supplements safe?  
Dangerous hidden ingredients are an increasing problem in products promoted for bodybuilding, the U.S. Food and Drug Administration (FDA) warns. Consumers may unknowingly take products laced with prescription drug ingredients, controlled substances, and other ingredients.  
Bodybuilding supplements often are adulterated with anabolic steroids that are modified variants of male hormones designed to increase muscle mass.  
Liver injury from taking bodybuilding dietary supplements has increased in recent years. Bodybuilding products are the most common cause of liver injury linked to herbal and dietary supplement use.  
Products containing the stimulants BMPEA or DMAA can cause serious health problems.  
Supplements labeled as containing the herb Acacia rigidula often contain BMPEA, although BMPEA isn t in the herb and isn t a dietary ingredient.  
DMAA-containing products marketed as dietary supplements are illegal. In 2013, the FDA began taking action to remove these products from the market. However, DMAA is still found in some products marketed as supplements, including under different names, such as geranium oil.  
Some dietary supplements may interact with drugs or other supplements. Some vitamins and minerals are harmful at high doses. Talk with your health care provider before using a dietary supplement for bodybuilding or endurance.  
For More Information  
NCCIH Clearinghouse  
The NCCIH Clearinghouse provides information on NCCIH and complementary and integrative health approaches, including publications and searches of Federal databases of scientific and medical literature. The Clearinghouse does not provide medical advice, treatment recommendations, or referrals to practitioners.  
  
Toll-free in the U.S.: 1-888-644-6226  
  
Telecommunications relay service (TRS): 7-1-1  
  
Website: https://www.nccih.nih.gov  
  
Email: info@nccih.nih.gov(link sends email)  
  
Know the Science  
NCCIH and the National Institutes of Health (NIH) provide tools to help you understand the basics and terminology of scientific research so you can make well-informed decisions about your health. Know the Science features a variety of materials, including interactive modules, quizzes, and videos, as well as links to informative content from Federal resources designed to help consumers make sense of health information.  
  
Explaining How Research Works (NIH)  
  
Know the Science: How To Make Sense of a Scientific Journal Article  
  
Understanding Clinical Studies (NIH)  
  
PubMed   
A service of the National Library of Medicine, PubMed contains publication information and (in most cases) brief summaries of articles from scientific and medical journals. For guidance from NCCIH on using PubMed, see How To Find Information About Complementary Health Approaches on PubMed.  
  
Website: https://pubmed.ncbi.nlm.nih.gov/  
  
Office of Dietary Supplements (ODS), National Institutes of Health (NIH)  
ODS seeks to strengthen knowledge and understanding of dietary supplements by evaluating scientific information, supporting research, sharing research results, and educating the public. Its resources include publications (such as Dietary Supplements: What You Need To Know) and fact sheets on a variety of specific supplement ingredients and products (such as vitamin D and multivitamin/mineral supplements).  
  
Website: https://ods.od.nih.gov  
  
Email: ods@nih.gov(link sends email)  
  
U.S. Food and Drug Administration (FDA)  
The FDA oversees the safety of many products, such as foods, medicines, dietary supplements, medical devices, and cosmetics. See its webpage on Dietary Supplements.  
  
Toll-free in the U.S.: 1-888-463-6332  
  
Website: https://www.fda.gov/  
  
Center for Food Safety and Applied Nutrition (CFSAN)  
Part of the FDA, CFSAN oversees the safety and labeling of supplements, foods, and cosmetics. It provides information on dietary supplements. Online resources for consumers include Tips for Dietary Supplement Users: Making Informed Decisions and Evaluating Information.  
  
Toll-free in the U.S.: 1-888-723-3366  
  
Website: https://www.fda.gov/about-fda/fda-organization/center-food-safety-and-applied-nutrition-cfsan  
  
Federal Trade Commission (FTC)  
The FTC is the Federal agency charged with protecting the public against unfair and deceptive business practices. A key area of its work is the regulation of advertising (except for prescription drugs and medical devices).  
  
Toll-free in the U.S.: 1-877-382-4357  
  
Website: https://www.ftc.gov  
  
MedlinePlus  
To provide resources that help answer health questions, MedlinePlus (a service of the National Library of Medicine) brings together authoritative information from the National Institutes of Health as well as other Government agencies and health-related organizations.  
  
Website: https://www.medlineplus.gov  
  
Dietary Supplement Label Database  
The Dietary Supplement Label Database a project of the National Institutes of Health has all the information found on labels of many brands of dietary supplements marketed in the United States. Users can compare the amount of a nutrient listed on a label with the Government s recommended amounts.  
  
Website: https://dsld.od.nih.gov  
  
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