

Abuse of Vitamin & Mineral Supplements

~40% of US population takes supplements regularly. Most are self prescribed; only a few are physician recommended. ~\$4 Billion/year are spent on these supplements. ~20% take multivitamins, others take large doses of single nutrients, especially: vitamin C, Iron, & Calcium.

Why do people self prescribe:

- dietary “insurance” - just in case they’re not getting adequate amounts
- to “protect” against diseases

Why self dosing is a BAD idea:

1. Toxicity: many supplements are toxic at high levels

-often goes unrecognized, especially if chronic

eg. A woman took 1000 RE vitamin A/day for >10 years (75-750 RE is safe range). Was diagnosed with liver disease. Condition cleared up when she discontinued supplements

-iron containing supplements are especially toxic

-toxic overdoses in children are fairly common

eg. poison control center gets >30,000 calls/yr on children <6yrs old swallowing large doses of supplements. Often fruit flavored and shaped like cartoon characters

2. Supplements are often accompanied by life threatening misinformation

-some ill people erroneously believe high doses of a vitamin or mineral can be therapeutic

-false claims are exceedingly common

eg. member of Consumer Health Education Council called 41 Houston area health food stores, asked to speak to person who provided nutritional advice. caller said that they had brother sick with AIDS. All 41 offered products they said could “strengthen the immune system”. 30 said they sold products that would cure AIDS

eg. similar inquiries found people who said they could treat: headaches, dizziness, fatigue, kidney stones, glaucoma, sudden weight loss, stress, and cancer

eg. none recommended callers obtain medical advice

-people with health problems are more likely to take supplements than others. Yet, today’s health problems in US are more likely to be due to overnutrition and poor lifestyle choices than to nutritional deficiencies

-many falsely believe that the food supply contains inadequate nutrients; that supplements provide energy; supplements can enhance athletic performance; supplements can build lean body mass without work or faster than work alone

3. Self medicating may give a false sense of security

-may lull people into eating irresponsibly

-may tempt user to produce self diagnosis when symptoms of a disease come on

Valid reasons why a physician or a dietician might recommend supplements:

All vitamins and minerals are best taken as an integral part of a well balanced diet where they tend to be absorbed much more efficiently.

Vitamins taken as supplements should only be taken after a complete nutritional assessment. In such cases mineral supplements may be as important as vitamin supplements since people whose diet lacks certain vitamins probably also lack several minerals as well

1. To correct overt deficiencies as determined by a professional

eg. scurvy, pellagra, rare but still occur. May require therapeutic doses 2-10x's RDA's

2. To improve nutritional status in specific medical situations

-subclinical deficiencies are more difficult to see and are probably much more common;

eg. habitual dieters, vegetarians, the elderly. Few people get RDA for all nutrients every day but most receive average needs for all nutrients

3. To reduced disease risk under certain medical conditions

eg. a person may be susceptible to osteoporosis especially if lactose intolerant or allergic to milk

4. To support increased nutritional needs at specific life stages

eg. women of childbearing age → may need folate

eg pregnant or breast feeding women → many need Fe, Ca⁺⁺, folate

eg. newborns → may need vitamin K