



Body Fitness – Power  
of Dietary  
Supplements and Food

Bonnie Seitzinger

# Power of Dietary Supplements and Food

## AGENDA

- Definitions and Terminology
- Healthy Nutrition – vitamins and minerals
- Special Needs & cautions
- Herbal Remedies
- Food as Best Nutrition
- Summary
- Sources of More Information

## Definitions - Nutrition Related Terms

- Dietary supplements add to or take the place of food nutrients
- Nutrients build energy and sustain life
- Macronutrients – protein, fat, carbohydrates & water
- Clean drinking water
- Micronutrients – vitamins and minerals
- Vitamins - organic substance, plants and animals
- Minerals – inorganic, plants and animal foods

## Terminology – To Understand Nutrition Basics

- DRI – Daily Recommended Intake
- RDA – Recommended Dietary Allowance
- AI – Adequate Intake
- UL – Upper Limit
- DV – Daily Value used by FDA on Nutrition Facts labels
- Proven to be unsafe concept

# Healthy Nutrition Requirements

- The Macro requirements depend on gender and age and vary depending on a person's goal and PhD/physician
- The Health Eating Plate (Harvard T.H. Chan School) included in the references slide provides a visual for best healthy portions of macronutrients – (See Handout)
- The Micronutrient RDA requirements are a good choice for specific amounts of daily vitamins and minerals
- On line applications can be used to determine your macro and micro nutrient intake on a daily basis

# Healthy Nutrition, Specific Vitamins

VITAMIN	WHAT IT DOES	WHERE IS IT FOUND	DAILY VALUE*
<b>Biotin</b>	<ul style="list-style-type: none"> <li>• Energy storage</li> <li>• Protein, carbohydrate, and fat metabolism</li> </ul>	<ul style="list-style-type: none"> <li>• Avocados, • Cauliflower</li> <li>• Eggs, • Fruits (e.g., raspberries) • Liver</li> <li>Pork • Salmon</li> <li>• Whole grains</li> </ul>	300 mcg
<b>Folate/Folic Acid</b> <i>Important for pregnant women and women capable of becoming pregnant</i>	<ul style="list-style-type: none"> <li>• Prevention of birth defects</li> <li>• Protein metabolism</li> <li>• Red blood cell formation</li> </ul>	<ul style="list-style-type: none"> <li>• Asparagus, • Avocado, • Beans and peas</li> <li>• Enriched grain products (e.g., bread, cereal, pasta, rice)</li> <li>• Green leafy vegetables (e.g., spinach)</li> <li>• Orange juice</li> </ul>	400 mcg
<b>Niacin</b>	<ul style="list-style-type: none"> <li>• Cholesterol production</li> <li>• Conversion of food into energy</li> <li>• Digestion</li> <li>• Nervous system function</li> </ul>	<ul style="list-style-type: none"> <li>• Beans, • Beef, • Enriched grain products (e.g., bread, cereal, pasta, rice)</li> <li>• Nuts, • Pork, • Poultry, • Seafood, • Whole grains</li> </ul>	20 mg
<b>Pantothenic Acid</b>	<ul style="list-style-type: none"> <li>• Conversion of food into energy</li> <li>• Fat metabolism</li> <li>• Hormone production</li> <li>• Nervous system function</li> <li>• Red blood cell formation</li> </ul>	<ul style="list-style-type: none"> <li>• Avocados, • Beans and peas, • Broccoli</li> <li>• Eggs, • Milk, • Mushrooms, • Poultry, • Seafood</li> <li>• Sweet potatoes, • Whole grains, • Yogurt</li> </ul>	10 mg
<b>Riboflavin</b>	<ul style="list-style-type: none"> <li>• Conversion of food into energy</li> <li>• Growth and development</li> <li>• Red blood cell formation</li> </ul>	<ul style="list-style-type: none"> <li>• Eggs, • Enriched grain products (e.g., bread, cereal, pasta, rice)</li> <li>• Meats, • Milk, • Mushrooms, • Poultry</li> <li>• Seafood (e.g., oysters), • Spinach</li> </ul>	1.7 mg
<b>Thiamin</b>	<ul style="list-style-type: none"> <li>• Conversion of food into energy</li> <li>• Nervous system function</li> </ul>	<ul style="list-style-type: none"> <li>• Beans and peas</li> <li>• Enriched grain products (e.g., bread, cereal, pasta, rice)</li> <li>• Nuts, • Pork, • Sunflower seeds, • Whole grains</li> </ul>	1.5 mg

# Healthy Nutrition Specific Vitamins continued

<b>Vitamin A</b>	<ul style="list-style-type: none"> <li>• Growth and development</li> <li>• Immune function</li> <li>• Reproduction</li> <li>• Red blood cell formation</li> <li>• Skin and bone formation, • Vision</li> </ul>	<ul style="list-style-type: none"> <li>• Cantaloupe, • Carrots, • Dairy products</li> <li>• Eggs, • Fortified cereals</li> <li>• Green leafy vegetables (e.g., spinach and broccoli), • Pumpkin, • Red peppers, • Sweet potatoes</li> </ul>	5,000 IU
<b>Vitamin B<sub>6</sub></b>	<ul style="list-style-type: none"> <li>• Immune function</li> <li>• Nervous system function</li> <li>• Protein, carbohydrate, &amp; fat metabolism, Red blood cell form</li> </ul>	<ul style="list-style-type: none"> <li>• Chickpeas, • Fruits (other than citrus)</li> <li>• Potatoes, • Salmon, • Tuna</li> </ul>	2 mg
<b>Vitamin B<sub>12</sub></b>	<ul style="list-style-type: none"> <li>• Conversion of food into energy</li> <li>• Nervous system function</li> <li>• Red blood cell formation</li> </ul>	<ul style="list-style-type: none"> <li>• Dairy products, • Eggs, • Fortified cereals</li> <li>• Meats, • Poultry, • Seafood (e.g., clams, trout, salmon, haddock, tuna)</li> </ul>	6 mcg
<b>Vitamin C</b>	<ul style="list-style-type: none"> <li>• Antioxidant</li> <li>• Collagen and connective tissue formation</li> <li>• Immune function</li> <li>• Wound healing</li> </ul>	<ul style="list-style-type: none"> <li>• Broccoli, • Brussels sprouts</li> <li>• Cantaloupe, • Citrus fruits and juices (e.g., oranges and grapefruit)</li> <li>• Kiwifruit, • Peppers, • Strawberries, • Tomatoes and tomato juice</li> </ul>	60 mg
<b>Vitamin D</b> <i>Nutrient of concern for most Americans</i>	<ul style="list-style-type: none"> <li>• Blood pressure regulation</li> <li>• Bone growth, • Calcium balance</li> <li>• Hormone production</li> <li>• Immune function</li> <li>• Nervous system function</li> </ul>	<ul style="list-style-type: none"> <li>• Eggs, • Fish (e.g., herring, mackerel, salmon, trout, and tuna), • Fish liver oil</li> <li>• Fortified cereals, • Fortified dairy products, • Fortified margarine</li> <li>• Fortified orange juice, • Fortified soy beverages (soymilk)</li> </ul>	400 IU
<b>Vitamin E</b>	<ul style="list-style-type: none"> <li>• Antioxidant</li> <li>• Formation of blood vessels</li> <li>• Immune function</li> </ul>	<ul style="list-style-type: none"> <li>• Fortified cereals and juices</li> <li>• Green vegetables (e.g., spinach and broccoli), • Nuts and seeds</li> <li>• Peanuts &amp; peanut butter, Vegetable oils.</li> </ul>	30 IU
<b>Vitamin K</b>	<ul style="list-style-type: none"> <li>• Blood clotting</li> <li>• Strong bones</li> </ul>	<ul style="list-style-type: none"> <li>• Green vegetables (e.g., broccoli, kale, spinach, turnip greens, collards, Swiss chard, mustard greens)</li> </ul>	80 mcg

# Healthy Nutrition Specific Minerals

MINERAL	WHAT IT DOES	WHERE IS IT FOUND	DAILY VALUE*
<b>Calcium</b> <i>Nutrient of concern for most Americans</i>	<ul style="list-style-type: none"> <li>• Blood clotting</li> <li>• Bone and teeth formation</li> <li>• Constriction and relaxation of blood vessels</li> <li>• Hormone secretion, • Muscle contraction</li> <li>• Nervous system function,</li> </ul>	<ul style="list-style-type: none"> <li>• Almond, rice, coconut, and hemp milks</li> <li>• Canned seafood with bones (e.g., salmon and sardines), • Dairy products</li> <li>• Fortified cereals and juices, • Fortified soy beverages (soymilk)</li> <li>• Green vegetables (e.g., spinach, kale, broccoli, turnip greens)</li> <li>• Tofu (made with calcium sulfate)</li> </ul>	1,000 mg
<b>Chloride</b>	<ul style="list-style-type: none"> <li>• Acid-base balance</li> <li>• Conversion of food into energy</li> <li>• Digestion</li> <li>• Fluid balance</li> <li>• Nervous system function</li> </ul>	<ul style="list-style-type: none"> <li>• Celery, • Lettuce. • Olives, • Rye, • Salt substitutes</li> <li>• Seaweeds (e.g., dulse and kelp), • Table salt and sea salt</li> <li>• Tomatoes,</li> </ul>	3,400 mg
<b>Chromium</b>	<ul style="list-style-type: none"> <li>• Insulin function</li> <li>• Protein, carbohydrate, and fat metabolism</li> </ul>	<ul style="list-style-type: none"> <li>• Broccoli, • Fruits (e.g., apple and banana)</li> <li>• Grape and orange juice, • Meats, • Spices (e.g., garlic and basil)</li> <li>• Turkey, • Whole grains</li> </ul>	120 mcg
<b>Copper</b>	<ul style="list-style-type: none"> <li>• Antioxidant, • Bone formation, • Collagen and connective tissue formation, • Energy production, • Iron metabolism, • Nervous system function</li> </ul>	<ul style="list-style-type: none"> <li>• Chocolate and cocoa. • Crustaceans and shellfish, • Lentils</li> <li>• Nuts and seeds, • Organ meats (e.g., liver),</li> <li>• Whole grains</li> </ul>	2 mg
<b>Iodine</b>	<ul style="list-style-type: none"> <li>• Growth and development, • Metabolism, • Reproduction</li> <li>• Thyroid hormone production</li> </ul>	<ul style="list-style-type: none"> <li>• Breads and cereals, • Dairy products, • Iodized salt. • Potatoes, • Seafood, • Seaweed, • Turkey</li> </ul>	150 mcg
<b>Iron - Nutrient of concern for young children, pregnant women, and women capable of becoming pregnant</b>	<ul style="list-style-type: none"> <li>• Energy production, • Growth and development, • Immune function, • Red blood cell formation</li> <li>• Reproduction, • Wound healing,</li> </ul>	<ul style="list-style-type: none"> <li>• Beans and peas, • Dark green vegetables, • Meats, • Poultry, • Prunes and prune juice, • Raisins</li> <li>• Seafood, • Whole grain, enriched, and fortified cereals and breads</li> </ul>	18 mg



## Special Needs

- The recommended Dietary Guidelines are for “average” healthy population.
- Chronic diseases affect the vitamin and minerals requirements and potentially the DV as well
- Lifestyle impact – Smokers
- Aging population needs
- The other pillars of health and wellness

# Herbal and Other Remedies

- Omega -3 fatty acids – brain power
- Rosemary – memory and focus
- Turmeric
- Ginger
- Boswellia
- Hemp Cannabinoids

# Food as Best Nutrition Resource

- Follow the macro and micro recommendations
- We would not be able to survive if we only supplemented
- Follow the nutrition supplement guidelines & eat healthy.
- Avoiding processed foods, added sugars and soda and other high fructose drinks
- Daily Multi Supplementation and based on special needs.
- Herbal supplementation or plants for health brain and joint pain

## Summary – Supplement Wisely

- Learn how to eat for your health
- Bring good nutrition principles to your family, friends and schools
- Be aware and knowledgeable if you have special needs
- The special needs require changes to a healthy diet and may require additional supplementation
- Over 50 and 60 years of age may change the DR
- Chronic disease and lifestyle

# Nutrition and Supplement References

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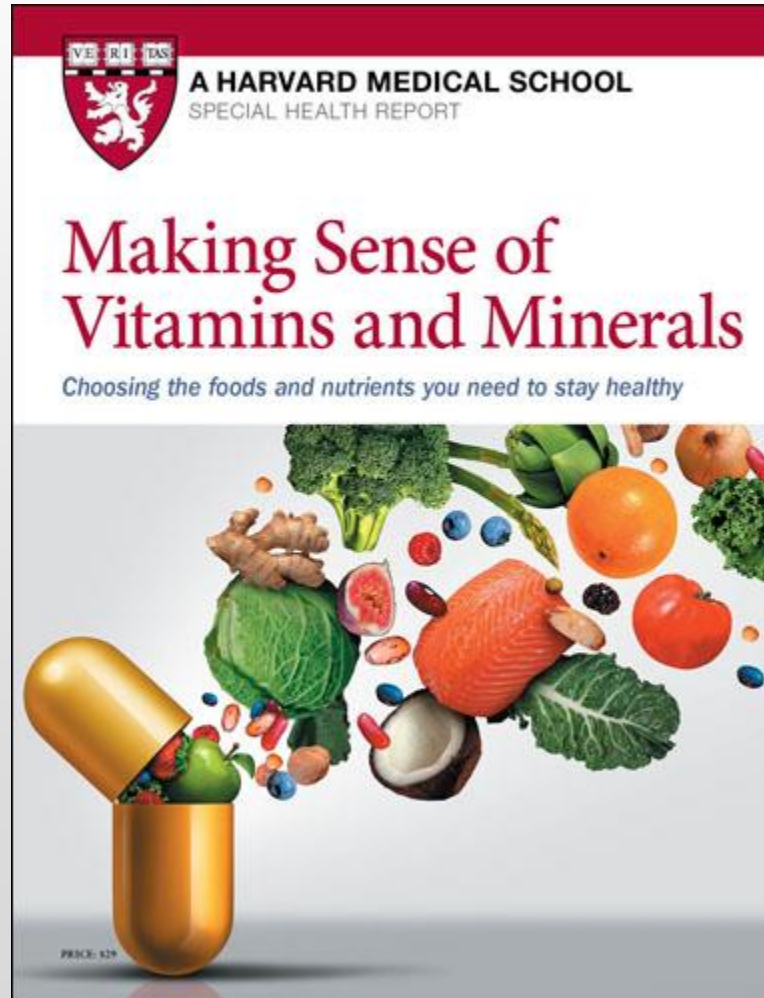
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# Nutrition and Supplement References

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# Nutrition References - Healthy Eating Plate

## HEALTHY EATING PLATE

**HEALTHY OILS**

Use healthy oils (like olive and canola oil) for cooking, on salad, and at the table. Limit butter. Avoid trans fat.

**WATER**

Drink water, tea, or coffee (with little or no sugar). Limit milk/dairy (1-2 servings/day) and juice (1 small glass/day). Avoid sugary drinks.

**VEGETABLES**

The more veggies – and the greater the variety – the better. Potatoes and French fries don't count.

**WHOLE GRAINS**

Eat a variety of whole grains (like whole-wheat bread, whole-grain pasta, and brown rice). Limit refined grains (like white rice and white bread).

**FRUITS**

Eat plenty of fruits of all colors.

**HEALTHY PROTEIN**

Choose fish, poultry, beans, and nuts; limit red meat and cheese; avoid bacon, cold cuts, and other processed meats.

**STAY ACTIVE!**

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