

The Nutrition Game Plan

Moderation in diet is a most difficult concept for Americans to grasp. Our greatest nutrition problems are caused by excesses. It would be easier to play by the rules of good nutrition if there were lists of "forbidden" foods and "permitted" foods to follow. No such lists exist; moderation is the key.

There is no justification for omitting an entire category of food from the diet. It is a common misperception that complex carbohydrates are a better energy source than simple sugars. In fact, both are broken down into glucose upon digestion, and provide equal energy value. Athletes often need additional carbohydrates in their diets, which can be supplied by eating more bread, cereal, rice and pasta at meal-

time, or some raisins, candy or cookies as a convenient snack.

Most Valuable Players

Experts have reached a consensus about the composition of the American diet which holds true for everyone, from the most physically active to the most sedentary people. It is based on first determining the level of caloric intake at which an individual can maintain his or her ideal body weight.

Once this is established, 55% - 70% of the calories should be supplied by **carbohydrates**, as found in the breads, cereals, pasta, rice, fruits, and vegetables (See Table 2). Between 12% and 15% of the calories should be contributed by **lean protein** available from low-fat milk, yogurt, cheese, meat, poultry, fish, dry beans and peas, eggs, nuts and

seeds. The remaining 18% - 30% should be derived from **dietary fat**, including oils, spreads and dressings.

Once vitamin, mineral and protein requirements are met from the basic foods in the plan, a number of other foods, including confectionery, can be used to provide additional calories and carbohydrates.

The flexibility offered in these caloric ranges can satisfy the precise nutritional and performance needs of any individual. All types of foods can contribute to a diet that emphasizes balance among the food groups and variety and moderation in the foods consumed. There is no need to look further for special dietary guidelines just for athletes.

The only nutrient for which active people do have an increased requirement is **water**. The simplest rule of thumb is to replace what is lost, ounce for ounce, based on weight before and after exercise. Another easy guideline is to drink 3 - 6 ounces of fluids during every 10 - 20 minutes of strenuous activity².

The Energy Equation

When the word "caloric" is mentioned to the weight-conscious public, their first thought is food and ways to cut calories from their diets. Yet this same unit of heat which measures the fuel value of food also describes the energy expended by the body during physical activity.

Regular exercise provides a double caloric advantage to those trying to lose weight. It increases the body's muscle mass and, by raising the basal metabolic rate, burns more calories while at rest. In addition, exercise increases energy output during the workout, which can help deplete body fat stores or allow more calories to be consumed without gaining weight. Therefore, by replacing some of the "no power" of dieting with the "go

Table 1

ESSENTIAL NUTRIENTS IN HUMAN NUTRITION

13	Vitamins	Vitamins A, C, D, E, K; B Vitamins Thiamin, Riboflavin, Niacin, B6, Folate, and B12; Biotin and Pantothenic Acid
15	Minerals	Calcium, Phosphorus, Magnesium, Iron, Zinc, Iodine, Selenium, Sodium, Potassium, Chloride, Copper, Manganese, Fluoride, Chromium, Molybdenum
9	Amino Acids	Histidine, Isoleucine, Leucine, Lysine, Methionine, Phenylalanine, Threonine, Tryptophan, Valine
1	Carbohydrate	Glucose
1	Fatty Acid	Linolenic Acid
1	Fluid	Water

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Several other nutrients, such as beta-carotene and boron, and dietary factors such as fiber are known to play an important part in human nutrition, but specific requirements have not been established by the National Research Council to date.

Recommended Dietary Allowances, 10th edition, Food and Nutrition Board, National Research Council, National Academy Press, Washington, D.C., 1989

Table 2

DAILY FOOD GUIDE

FOOD GROUP	DAILY SERVINGS	COMPOSITION		
		CARBOHYDRATE (grams)	PROTEIN (grams)	FAT (grams)
VEGETABLES	3 - 5	15 - 25	6 - 10	0
FRUITS	2 - 4	30 - 60	0	0
BREADS, CEREALS, RICES AND PASTA	6 - 11	90 - 165	18-33	0 - 8
MILK, YOGURT AND CHEESE	2 - 3	24 -36	16 - 24	10 - 20
MEAT, POULTRY, FISH, DRY BEANS AND PEAS, EGGS, NUTS AND SEEDS	2 - 3 (5-7 oz.)	0 - 30	25 - 49	15 - 45
		159 - 316	65 - 116	25 -73
TOTAL CALORIES*		PERCENT OF CALORIES		
1121 - 2385		53% - 57%	19% - 23%	20% - 28%

*Additional calories and fat will be supplied by sweet and savory snacks, beverages, condiments and spreads. With these foods included in the diet, the distribution of calories will reach the recommended levels of 55%-70% carbohydrates, 12%-15% protein and 18%-30% fat.

power" of exercise, calories can become a strong ally in weight control.

The Final Score

Dashing for a commuter train a few mornings a week and playing a vigorous game of racquetball on Saturday morning does not increase one's nutritional needs. More important, these occasional bursts of physical activity cannot cancel out the ill effects of poor eating habits.

Priority time must be given to both halves of the fitness

formula – diet and exercise – to gain a competitive advantage in good health.

While eating a diet with balance, variety and moderation 100 percent of the time is ideal, achieving perfection is not the goal. But eating a diet with balance, variety and moderation at least 75 percent of the time will assure optimal nutrition for most people — that's 16 of 21 meals per week. While there is no need to exercise every day of the week, if you devote just 2 percent of your time each week to sustained physical activities, you'll be exercising 4 hours per week.

Now on your mark, get set, go!

References:

- (1) Applegate, L. Fad diets and supplement use in athletics. *Sports Science Exchange*, 1 (9):1-4, 1988. (2) *Dietary Guidelines for Americans*, third edition, 1990, Home and Garden Bulletin No. 232, U.S. Government Printing Office, Superintendent of Documents, Washington, D.C. (3) *Sports Nutrition - A Guide for the Professional Working with Active People*, Jacqueline B. Marcus, editor, The American Dietetic Association, Chicago, Illinois, 1986.

