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Human Performance Laboratory Center for Lifestyle Enhancement

Volume IV, Number 2

Spring, 1984

Newsletter

A GIFT TO YOURSELF

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I am often asked to speak on the topic of health. Usually the audience wants to know what they can do to improve their well-being. Many already have feelings about this, covering a wide range of topics.

For some the amount of exercise is most important, others feel nutrition is the key, while others are into stress management, weight control, etc. As science unravels the answers of the best ways to achieve optimum levels of health, we are beginning to catch glimpses of the total picture.

What we are learning is that no single act that we do well can cover up for several others that we have ignored. The current state of our well-being is determined by how we choose to lead our lives on a day by day basis. In other words, if we are to reach our highest health potentials, it is to our advantage to pay attention to our total being. So the secret to the "fountain of youth" is not an individual account of what we eat, how far we run, how heavy we are, etc., but how well we stack up on these and many other examples on a collective basis.

Becoming our best self is not a matter of one or a few acts, it is our total behavior and the kinds of choices we make:

the cigarettes we don't smoke
the alcohol we use in moderation or not at all
the food we choose or decline
the anxieties we learn to handle
the fitness and vitality we foster
the love we give and receive
the sense of humor we cultivate
the seat belts we fasten
the joy we bring to others
the rest we take when weary
the examples we set and
the encouragement we give to others
the use of medication wisely
the spiritual nourishment we receive

These are but a few of the things that determine the status of our health. They are our gift to ourselves.

FUND RAISING

As you know many of the programs our laboratory sponsors are self supported. The fees that you are assessed during your laboratory visits are used for these purposes. Because our resources are limited, we are forced to seek other avenues of funding. One resource we have used in the past is asking our members for gifts through the St. Cloud State University Foundation. These donations are tax exempt and may be deferred for income tax purposes, The Laboratory and the Foundation are asking for your support. Any gift will be appreciated and put to good use.

FROM THE SECRETARY'S DESK

Since our fall newsletter, the student workers and I have called many of you to schedule exercise retests. If we have not contacted you, please feel free to call us and schedule that retest. Tuesday, May 15th will be the last day of testing until September.

In order to keep our mailing list current, we are asking you to remember us whenever you make a change of address. Just give us a call at 255-3105 or send us a change of address card available from the post office.

All of us wish you a pleasant summer.

NUTRITION COUNSELING

We now have nutrition counseling available every Friday morning here at the Human Performance Laboratory. We are pleased to welcome Kathy McLaughlin as our nutrition consultant. She graduated from North Dakota State University with a B.S. degree in Dietetics. After graduation, Kathy was employed by Crosby Hospital and Nursing Home as Director of Dietary Services. She was responsible for total nutrition care of patients in the hospital, residents at the nursing home and all functions of the Dietary Department. Kathy also worked with community members in a weight-control program.

Now employed by ARA Services at SCSU, Kathy serves as a Registered Dietitian and assistant manager of food services. She is responsible for the nutritional analysis of menus served at St. Cloud State Food Services. In addition to these duties, she serves as a consultant to SCSU Health Services. She provides counseling on eating disorders, weight control and modified diets, and also travels to other universities affiliated with ARA providing these same services. Kathy is now serving as a consultant here at the Lab with nutritional analysis of individual diets and weight control.

Call the Lab office (255-3105) and set up an appointment to have your diet analyzed and a consultation with Kathy. There is no extra cost for this service to our Adult Fitness Program members.



WHAT IS NUTRITION?

by Kathy McLaughlin

What is nutrition? It has different meanings. Many people identify it with that portion of nutrition that arouses their own interest. By one definition, nutrition is "the combination of processes by which the living organism receives and utilizes the materials (food) necessary for the maintenance of its functions and for the growth and renewal of its components." Good nutrition is necessary for good health and is one of the most important environmental factors affecting the state of an individual's health.

A diet inadequate in kilocalories will bring about an impairment of physical efficiency. Muscle strength and muscle endurance are diminished in prolonged semi starvation.

Vitamin deficiency impairs physical fitness, affects mental well-being, and will also affect the capacity for work.

Protein deficiency causes muscular weakness, fatigability and, as a result impaired work performance.

Food habits are largely established during early childhood and can be changed later only by gradual introduction of new foods and new ideas. Poor food habits account for a large number of the nutritional deficiencies which are prevalent today. A poor diet is the first step toward poor nutrition.

Use of the Basic Four Food Plan is a good way to check to see how adequate your diet is. In this plan the foods eaten each day are divided into four categories: (1) meat and other protein foods; (2) vegetables-and fruits; (3) milk and dairy products; and (4) breads and cereals. If you eat the recommended number of servings in each group during the day, you will be eating the variety of foods necessary for good nutrition.

Recommended daily amounts:

- Meat and Protein group: Two (2-3 oz.) servings. This includes cheese, eggs, peanut butter, dried beans and peas.
- Vegetable and Fruit group: Four or more servings. These should include citrus fruits or vegetables rich in vitamin C everyday, and a dark green or yellow vegetable for vitamin A every other day.
- Milk group: Two or more (8 oz) servings. Bread and Cereal group: Four or more servings.

A good rule of thumb in practicing good nutrition is to include a variety of foods in your diet. No single food item supplies all the essential nutrients in the amounts that you need. You should, therefore, eat a variety of foods to assure an adequate diet. The greater the variety, the less likely you are to develop either a deficiency or an excess of any single nutrient. You will rarely need to take vitamin or mineral supplements if you eat a wide variety of foods.

A nutrition consultation with me can be arranged by calling the office and setting up an appointment. At this time a 24-hour recall is taken of your diet for one day. I will then meet with you individually and go over your diet for nutrient content. Nutrients lacking in your diet and good sources of these nutrients will be brought to your attention. Over consumption of nutrients which could possibly have future adverse affects on your health are emphasized (i.e. sodium, cholesterol, etc...). If a weight loss program is indicated and would prove to be beneficial to the individual, one is initiated at this time with follow-up visits for monitoring.

CHOLESTEROL - DIET - HEALTH

A recent study supported by the National Heart, Lung, and Blood Institute has demonstrated the importance of keeping the cholesterol in our blood at relatively low levels. In the ten year (\$150 million) study, it was found that for every 1% drop in serum cholesterol there was a corresponding decrease in heart disease risk by 2%. As a result of this study, most medical authorities are encouraging Americans to reduce their cholesterol levels to below 200 milligrams per deciliter of blood.

It would appear that nearly every adult could improve their cardiac health by lowering their cholesterol score if above 200. This can be done by (1) decreasing the cholesterol in our diet and (2) by decreasing the amount of fat in our diets. Jane Brody, the well known nutritionist, recommends that we do this by limiting cholesterol intake to 300 milligrams per day. Her comments were so interesting we thought you might benefit from her recommendations and observations:

- Limit meat portions to three or four ounces of lean well-trimmed meats eaten no more than once a day
- Eat no more than four egg yolks a week (you can eat all the whites you want) and eat liver and other organ meats only occasionally.
- Discard poultry skin, and remove visible hunks of fat before cooking poultry.
- Limit consumption of fatty fishes such as salmon, mackerel and canned tuna, salmon and sardines packed in oil.
- Eat more dried beans and peas as your main source of protein.
- Avoid fried foods, and use polyunsaturated oils in cooking.
- Switch to low-fat or skimmed dairy products: skim or 1 percent milk, low-fat cottage cheese, low-fat yogurt, ice milk instead of ice cream, evaporated skim milk, buttermilk, farmer cheese instead of cream cheese.
- Limit consumption of hard cheeses; most are 30 to 40 percent fat by weight. Even those made from part-skim milk are at least 20 percent fat, but small amounts of such cheeses (among them Parmesan and part-skim mozzarella) may be used.
- Limit fats in cooking and at the table. Use a teaspoon of fat where you now use a tablespoon. Use nonstick pans for cooking; these require little or no fat. Instead of butter, use vegetable oil, margarine or a butter-margarine blend that is at least one half margarine. The soft tub margarine and squeeze bottle margarines are higher in polyunsaturates. When using stick margarine, check the label; the first ingredient listed should be liquid oil and the ratio of polyunsaturates to saturates should be 2 to 1 or better.
- Limit your consumption of cakes, pies and cookies. Most are high in fat and those that are commercially prepared are likely to contain highly saturated coconut or palm oil. Angel food cake and sweetened yeast breads are low-fat substitutes for cake
- Eat fewer fatty plant foods, such as nuts and seeds, nut butter and avocados. Although low in saturated fat and free of cholesterol, these are high-fat foods that can raise your overall fat consumption.

Dietary fiber

Some dietary fibers help to lower blood cholesterol levels. Fiber is found only in plant foods. Especially effective in lowering cholesterol are the fibers in carrots; oats; apples and other fruits, and soybeans, chickpeas and probably other beans. Bran, however, has no beneficial effect on cholesterol. Thus, you can help to lower your cholesterol level by substituting oatmeal for breakfast eggs, eating chili without meal, eating fresh fruit instead of pie or doughnuts for a snack or dessert, grating carrots into your salad instead of crumbling bacon bits, substituting chickpeas for cheese or salami in a chef's salad and substituting tofu for meat in some main dishes.

Alcohol

Small amounts of alcoholic drinks seem to change the way the body handles cholesterol and in the process may help to prevent heart disease. Several major studies have shown that on the average, people who consume one or two alcoholic drinks a day have fewer heart attacks and live longer than nondrinkers. (More than two drinks, however, raises the risk of heart disease.) Thus, a glass of wine with dinner or a cocktail or beer before may have a favorable effect on blood cholesterol.

Weight loss

Losing weight if you are overweight will almost certainly lower your cholesterol level, even if so other changes are made in your diet. Of course, eating less fat and more fiber will help you to lose weight.

Exercise

Although diet is most important, it is not the only environmental factor involved in regulating cholesterol levels. Physical exercise also has an important influence. Studies have shown that it is not just the total amount of blood cholesterol but also the type of cholesterol that determines coronary risk. Exercise can change the relative amounts of the various types in favor of a more beneficial cholesterol fraction that seems to help remove cholesterol from the body. This beneficial fraction called HDL-cholesterol rises when people adopt a program of regular vigorous exercise. This may be part of the reason long-distance runners are relatively immune to heart disease.

The fact that you exercise daily should not be used as an excuse to eat all fats you please. No amount of exercise can fully compensate for the damaging effects of a diet high in cholesterol and saturated fats.



HOW MUCH CHOLESTEROL

Nutrition experts have determined that it would be to our advantage if we limited our cholesterol intake to 300 milligrams per day. The following table will help you determine how this may be done. After examining the table, it is obvious why we should cut back on egg yolks, whole milk, red meat and other dairy products.

Approximate cholesterol content of selected foods

	Amount	Total fat	Cholesterol		Amount	Total fat	Cholesterol
MEATS				shrimp meat	3oz (85g)	.65	127.5
(trimmed, cooked)		g	mg	Oysters	3oz (85g)	.8	187.0
Beef				tuna (in oil)	3oz (85g)	17.4	47.0
marbled	3oz (85g)	27.2	79.9	(in water)	3oz (85g)	2.5	53.5
lean cuts	3oz (85g)	10.5	77.3	DAIRY			
salami	slice (23g)	8.8	14.0	Milk			
bologna	slice (28g)	6.5	13.0	whole	1c (244g)	9.0	34.0
hot dog	one (45g)	16.8	22.0	2%	1c (246g)	4.9	22.0
pot pie	8oz (225g)	22.7	38.0	1%	1c (246g)	2.5	15.0
Pork				Cream			
chop (without bone)	3oz (85g)	13.1	75.0	Light	1c (240g)	49.4	158.0
ham	3oz (85g)	22.6	48.0	whipped	1c (60g)	22.0	51.0
sausage	2oz (53g)	25.0	39.0	Cheeses			
Lamb				blue	1oz (28g)	7.8	24.0
Leg	3oz (85g)	13.8	55.3	Cheddar	1oz (28g)	9.0	28.0
Chicken				Swiss	1oz (28g)	7.8	28.0
breast&skin	3oz (90g)	4.5	74.0	American	1oz (28g)	6.2	25.0
skinless breast	3oz (80g)	2.0	53.0	cottage (1% fat)	4oz (112g)	10.8	92.0
drumstick & skin	2oz (53g)	3.3	47.0	cottage (2% fat)	4oz (112g)	42.8	192.0
pot pie	8 oz (225g)	25.9	29.0	Eggs			
Turkey (skinless)				white	1 large	0.0	0.0
light meat	3oz (85g)	1.2	51.0	yolk	1 large	30.6	252.0
dark meat	3oz (85g)	4.3	64.0	FATS			
Seafoods				butter	1 tbs (14g)	11.3	35.0
cod fillet	3oz (85g)	.25	42.5	margarine (all veg. oil)	1 tbs (14g)	12.2	0.0
pink salmon	3oz (85g)	3.10	29.8	margarine (2/3 animal fat, 1/3 veg. oil)	1 tbs (14g)	12.2	7.0
flounder fillet	3oz (85g)	.68	41.0				

ANOTHER REASON FOR WARMING DOWN

For years we have known that it is important to conclude our exercise with a warm-down. For example, after running it is good practice to spend about five minutes jogging easily or walking, enhancing the body's recovery process. In the past we have stressed the warm-down because as muscles contract they squeeze our blood vessels creating a pumping action that assists in returning blood to the heart. Stopping abruptly after a strenuous workout makes it more difficult for the circulatory system's recovery. An extreme consequence of these abrupt stops could be fainting, while stiff and sore muscles are commonly experienced.

Now we have learned another reason why it is important to conclude exercise with a warm-down. In a recent study (Journal American Medical Association), scientists have determined that immediately after exertion our catecholamines (adrenaline like substances) reach their highest level. High levels of these very potent chemicals place added stress on our heart and other organs. In some cases they could cause the heart to become arrhythmic (loss of rhythm). The warm-down helps to bring these high catecholamines back to their resting levels, thus preventing the negative effects they might cause. Spend an extra few minutes at the end of your training to help your body feel better.

YOUR BEST FOOT FORWARD

Walking has been called the perfect exercise. It can be done alone slowly or briskly for short or long periods of time, in the city or in the country. You can use it as a stretching or limbering exercise. Or you can step up your pace and use it as an aerobic exercise to improve cardiovascular fitness. Some of the special advantages of walking are:

- There's nothing new to learn.
- You've been practicing this "fitness" program since you were a toddler.
- There's no special equipment.
- Just be sure to wear shoes with comfortable soles and good arch support.
- It doesn't look like exercise, so if you're self-conscious about exercising in public, relax. No one will notice.

INSPIRATION FOR WALKERS

"Of all exercises, walking is the best."
Thomas Jefferson, 1776

"The sum of the whole is this - walk and be happy, walk and be healthy. The best way to lengthen our days is to walk steadily and with a purpose..."
Charles Dickens

"The longest journey starts with just one step."
Tao Te Ching

"Walking is man's best medicine" and "That which is used develops. That which is not used wastes away."
Hippocrates, Greek physician

"A person should walk prior to the meal until his (her) body begins to be warmed... Anyone who lives a sedentary life and does not exercise... even if he (she) eats good foods and takes care of himself according to proper medical principus- all his (her) days will be painful ones and his (her) strength shall wane."
12th Century Maimonides, Jewish physician