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Cardiovascular Risk Factors Part III – Obesity

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Your Life Your Health

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Remember, according to the American Heart Association and the American College of Cardiology, the major and independent risk factors for cardiovascular heart disease are:

- cigarette smoking of any amount
- elevated blood pressure
- elevated serum total cholesterol
- elevated low-density lipoprotein cholesterol (LDL-C)
- low serum high-density lipoprotein cholesterol (HDL-C)
- diabetes mellitus
- advancing age
- obesity (AHA)
- sedentary life style (AHA)

The designation of these risk factors as “independent,” means that each one is a risk factor in and of itself. For instance, if all of conditions or circumstances named above are negative or normal in a particular person, but they smoke, they are at risk, as smoking is an independent risk factor requiring no other abnormality in order to increase one’s risk of heart disease.

Beyond these major, independent factors there are conditional risk factors. These factors are associated with an increased risk for CHD but their direct causative, independent, and quantitative contributions to CHD have not been documented.

- Obesity
- Abdominal obesity
- Physical inactivity
- Family history of premature coronary heart disease
- Ethnic characteristics
- Psychosocial factors

You will notice that obesity and physical inactivity are listed as both major, independent risk factors and as conditional risk factors. This is because the American Heart Association identifies them as major, independent risk factors while the American College of Cardiology does not.

Facts About Fat

- Overweight male non-smokers lose 3.1 years of life and women 3.3 years.
- Obese men lose 5.8 years of life and obese women 7.1 years of life.

The risk of death increases with an increasing body mass index (BMI), however, this increase is modest until a BMI of 30 is reached. Obese adults have a 50% to 100% increased risk of premature death compared to adults with a BMI of 18.5 to 25.

In addition to BMI, the presence of excess abdominal body fat (as measured by waist circumference) is considered an independent predictor of health risks associated with obesity. Excess abdominal fat is clinically defined as a waist circumference greater than 40 inches in men and greater than 35 inches in women. Population studies have shown that people with excess abdominal fat have impaired health and increased cardiovascular risk compare to those with normal waist circumferences.

Definitions

Overweight - A person is overweight if their Body Mass Index (BMI) is higher than 25 but lower than 30. Your SETMA provider calculates your BMI every visit and part of SETMA **LESS Initiative** (Loss weight, exercise, stop smoking) is to give you a weight management assessment which includes your BMI.

Obesity (Overfat) - Over 30 specific diseases have been linked to obesity. Obesity is defined as a BMI over 30 and severe obesity is a BMI over 40.

Percentage Body Fat - is the percentage of total body weight that is fat. This is a much more accurate measurement of obesity than the BMI. This is not determined by calculations based on height and weight but by measures by one of several methods of the actual fat in your body. Again, the determination of your body fat is part of your assessment at every visit to SETMA.

Body Fat - functions as insulation, protection and energy reserve. When the percentage is too high, fat increases a person's risk of high blood pressure, elevated cholesterol, diabetes, heart disease, and some forms of cancer. It can also interfere with the immune system, prevent heat loss, stress the musculoskeletal system, cause sleep problems, and may affect self-esteem.

Basal Metabolic Rate (BMR) - is the rate at which the body burns calories to maintain normal body functions while at rest. It is affected by the amount of muscle you have. Body weight remains constant when you burn up the same number of calories you eat. A 3,500 calorie difference between dietary intake and energy expenditure is necessary to gain or lose one pound of fat. Weight loss by diet alone may result in a loss of muscle, and this will slow the metabolic rate, making it more difficult to keep the weight off. Exercise, however, increases your metabolic rate for hours even after exercise, and can

increase the amount of muscle you have. SETMA provides calculate your BMR at every visit and tell you what it is as part of your weight management assessment – no matter what your reason for visiting the doctor.

Determining Obesity

Height-Weight Tables - were originally developed by insurance companies to establish recommended weight ranges for men and women. The "desirable" weights were those associated with the lowest mortality among large population studies of insured people. Unfortunately, these studies do not accurately represent a cross-section of the entire American population.

Body Mass Index (BMI) - is a simple calculation that determines height to weight ratio. This index correlates a person's physical stature with mortality ratios based on actuarial studies. According to the National Institutes of Health and World Health Organization, overweight is defined as a BMI of 25-29.9, and obesity as a BMI equal to or greater than 30. A person with a BMI of 30 is about 30 pounds overweight/overfat. A BMI of 18 or lower indicates that a person is underweight/underfat.

While BMI is widely accepted, it can be misleading. Current guidelines do not differentiate for gender, ethnicity or age, and do not distinguish obesity or leanness for individuals who are extremely muscular. It is, however, more precise than height/weight tables and allows comparisons of population groups. Studies have confirmed that obesity-related health risks start in the BMI range of 25-30.

Waist Measurement - Waist size is an additional, independent risk factor and can be used in conjunction with any other method. It reflects growing evidence that excess visceral fat - surrounding the abdominal organs - on its own increases the chance of heart disease or diabetes.

Research indicates that visceral fat (waist size) is more important in the disease process than subcutaneous fat which is just under the skin. ("love handles", "pinchable inches"). Abdominal fat cells appear to produce certain compounds that may influence cholesterol and glucose metabolism. A waist size of 35 inches or more is deemed a risk for people who have a BMI over 25.

Obesity and Physical Inactivity

Each year, an estimated 300,000 adults die of causes related to obesity, making it the second greatest environmental cause of death after tobacco. Data for adults suggest that overweight prevalence has increased by more than 50% in the past 10 years. An overweight condition is the most common health problem facing American children, particularly for African Americans and Hispanics. More than one decade ago, the direct costs of obesity and physical inactivity accounted for 9.4% of the US health care expenditures; therefore, these costs must be greater now.

Obesity and Activity

- Regular physical activity appears to provide substantial protection against coronary heart disease, especially in overweight men.
- Regular physical activity appears to reduce the risk of developing hypertension in men with elevated BMI, and this reduction was greatest in men with the high BMI categories.
- Physical fitness has the same protective effect in normal-weight diabetic men as in overweight diabetic men.

Inactive women with BMIs less than 29 have a slightly higher relative risk of for coronary heart disease than active women with BMIs greater than 29. Increasing physical activity from sedentary levels to 30 min of moderate activity each day will also lower cardiovascular risk within the same BMI. America's emphasis on loss of body weight in overweight individuals, although appropriate, usually overlooks, equal mention that inactivity, alone, worsens the prevalence of most chronic health disorders without a change in BMI. The health outcomes from campaigns to lower the number of calories consumed each day would be improved if a greater emphasis on moderate physical activity were included with eating less.

What Can I Do?

Can my diet reduce the risk of cardiovascular disease?

Yes; what you eat can affect your heart. See the table below for some healthy food choices. To lower your risk of heart disease, try to make the following changes to your daily diet:

Eat fewer calories. Try to eat less at each meal, and skip dessert. Snack on low-calorie foods such as carrot sticks. Try not to eat fried foods. When eating out, ask that gravy, sauces, or salad dressings be served on the side, and use only a little of them. Cut down on the amount of fat added to your starches (for example, don't put butter on a baked potato or a slice of bread). Remove the skin from chicken after cooking and before eating.

Eat less saturated fat. Change from full-fat dairy products (such as whole milk, cheese, yogurt, cottage cheese) to reduced-fat and then low-fat (or skim) versions. Use only small amounts of butter or use a margarine that has no trans-fatty acids (such as tub or squeeze packages of margarine). Eat smaller portions of red meat (4 to 6 ounces instead of 6 to 8 ounces). Buy leaner cuts of meat. Eat chicken breasts instead of dark meat. Have at least one meatless dinner per week (but do not use eggs or cheese instead of meat in this meal).

Eat more whole grains. Eat whole wheat bread, brown rice, oatmeal, and puffed-grain cereals. Whole-wheat pasta or pastas made from quinoa (say: keen-what) or other grains are sold in health food stores and some supermarkets. Eat whole grain crackers and side dishes such as bulgur wheat.

Eat more fruits and vegetables. We should all eat at least five servings of fruits and vegetables each day. Eat fruit for snacks instead of chips. Count how many fruit and vegetable servings you eat each day. Look for ways to get your "five-a-day" (two servings of fruit and three servings of vegetables).

Eat fish. Cold water fish have omega-3 fatty acids, which are good for your heart. Adding fish to your diet is healthier than red meat or cheese. Tuna, salmon, whitefish, and mackerel are good choices. Baking, broiling, or poaching fish will help you avoid extra calories from breading and frying.

Use healthier fats. Olive oil, canola oil, and sesame oil are healthier than corn oil or vegetable shortening. Use only small amounts of lard, pork fat, or vegetable shortening for cooking. Try using the healthier oils in your recipes. These small changes will bring you large health benefits.

Making Carbohydrate Choices

Poor carbohydrate choices (low in fiber, some high in sugar and/or fat)	Better carbohydrate choices (high in fiber, low in sugar and fat)
Apple juice (presweetened)	Apple (whole, with skin)
Bran muffin	Oatmeal (rolled oats)
Carrot cake	Angel food cake with fresh fruit
Chocolate chip cookies	Oatmeal cookies
Corn flakes cereal	Raisin bran cereal
Corn, sweet (cooked)	Lentils (boiled)
Croissant	English muffin
Doughnut	Whole wheat waffles
Fried tortilla or corn chips	Baked tortilla or corn chips
Potato (russet, baked)	Sweet potato, yam (baked)
Rice (white, long grain)	Brown rice (steamed)
White bread or bagel	Seven-grain or whole wheat bread

Joining a medically based weight management program with dietary counseling, accountability and encouragement can make a difference in your weight and making a difference in your weight can make a difference for your heart. Remember, it is your life and it is your health.