WORLD HEALTH DAY 2013

Control your blood pressure... Control your life

Diet, NUTRITION and hypertension

Summary

- Unhealthy diet and physical inactivity contribute to around 30% of preventable morbidity and mortality from noncommunicable diseases, including morbidity and mortality due to hypertension. Hypertension, or high blood pressure, is a condition associated with increased risk for stroke, cardiac failure, renal failure and peripheral vascular disease.
- Excessive intake of saturated fatty acids and trans fatty acids, along with higher consumption of salt and sugar, are risk factors for cardiovascular diseases including hypertension.
- Public health approaches (e.g. reducing calories, saturated fat and salt in processed and prepared foods and increasing community/school opportunities for physical activity) can achieve a downward shift in the distribution of a population's blood pressure, thus potentially reducing morbidity, mortality and the lifetime risk of an individual's becoming hypertensive.
- These public health approaches can provide an opportunity to interrupt and prevent the continuing costly cycle of managing hypertension and its complications.

How are risk factors related to high blood pressure?

Sodium intake

Higher sodium intake has been associated with higher risk of incident stroke, fatal stroke and fatal coronary heart disease.

Reduction in dietary sodium intake will reduce the mean population blood pressure, as well as the prevalence of hypertension.

A decrease in salt consumption of 3 grams per day would result in a reduction in blood pressure which in turn would lead to a reduction of 22% and 16% in stroke and ischaemic heart disease deaths, respectively.

Even in hot, humid climates, there are only minimal loses of sodium

World Health Organization

Regional Office for the Eastern Mediterranean

through faeces and sweat. Acclimation to heat occurs rapidly; thus, within a few days of exposure to hot and humid conditions, individuals lose only small amounts of sodium through sweat.

WHO recommends a reduction in sodium intake to less than 2 grams per day of sodium (5 grams per day of salt) in order to reduce blood pressure and risk of cardiovascular disease, stroke and coronary heart disease in adults (individuals 16 years of age and older). Intake levels should be adjusted downward based on the energy requirements of children relative to those of adults. Each country should determine the energy requirements of various age groups, especially within the paediatric population, relative to the recommended maximum intake value of 2 grams per day for adults.

Potassium intake

Dietary intake of potassium lowers blood pressure and is protective against stroke and cardiac arrhythmias. Potassium intake should be at a level which will keep the ratio of sodium to potassium close to 1:1, i.e. at daily potassium intake levels of 70–80 mmol per day. This may be achieved through adequate daily consumption of fruits and vegetables.

Healthy weight

Physical activity has been shown to lower the overall risk of all-cause mortality between the ages of 45 and 84 by 18%. To reduce blood pressure, maintain a healthy weight with a body mass index between 18.5 and 24.9.

Healthy eating

Adapting the DASH (Dietary Approaches to Stopping Hypertension) eating plan can reduce blood pressure by 8–14 mmHg. The DASH diet consists mainly of fruits, vegetables and low-fat dairy products and includes whole grains, poultry, fish and nuts while limiting the amount of red meat, sweets and sugar-containing beverages.

Saturated and trans fatty acid intake

Intake of saturated fatty acids should be reduced to less than 10% of total energy consumption, and trans fatty acids to less than 1%. Intake of trans fatty acids can be reduced by replacing them with polyunsaturated fatty acids.

Reducing or eliminating meat may influence blood viscosity. Numerous studies have linked beef, veal, lamb, poultry and animal fat to high blood pressure. Saturated fat appears to influence blood viscosity. A higher proportional intake of fatty acids from polyunsaturated sources (linoleic acid and alpha-linolenic acids), compared with saturated fats, is associated with lower risk for developing hypertension.

What is the situation in the Region?

The prevalence of risk factors for cardiovascular diseases is high in most countries of the Eastern Mediterranean Region. Two out of five adults in the Region are affected by high blood pressure.

Levels of overweight and obesity are very high in Bahrain, Egypt, Jordan, Kuwait, Saudi Arabia and the United Arab Emirates, with the prevalence of overweight and obesity ranging from 74% to 86% among women and 69% to 77% among men.

Estimates of sodium intake indicate that the amount of salt in diets in most countries in the Region is higher than the recommended level of <5 grams per person per day. Intake ranges from 7.2 grams/person/day in Lebanon to 19 grams/person/day in Jordan. In all countries, bread alone contributes to around 20% of dietary salt intake.

Total fat intake has increased in most countries of the Region, contributing between 35.9% and 38.9% of the total energy intake. This percentage is higher than the maximum value of 30% recommended by WHO. There is also a trend towards increased consumption of fat from animal products, which are high in saturated fatty acids.

What can we do about it?

Healthy diet contributes to reduction of hypertension through limiting sodium intake, managing weight, limiting alcohol and increasing consumption of vegetable, fruit, whole grain and low-fat dairy products.

Early intervention

Breastfeeding contributes to a lifetime of good health. Adults who were breastfed as babies often have lower blood pressure and lower cholesterol, as well as lower rates of overweight, obesity and type 2 diabetes.

Reduce salt intake

Reducing salt intake to less than 5 grams of salt per day can result in a decline in both systolic and diastolic blood pressure of > 10 mmHg.

Reducing fat intake

Avoid animal fat, stick margarine, vegetable shortenings and commercial bakery and deep-fried foods. Reduce fat intake in general and avoid eating food rich in animal fat, such as red meat, processed meat and butter, and eat olive oil and fish oil instead.

Weight management

Maintain a healthy body weight (body mass index of 18.5 to 24.9). Lose weight if you are overweight.

Healthy eating: the DASH diet (Dietary Approaches to Stop Hypertension)

Eat at least 5 servings of fruit and vegetables every day while reducing saturated and total fat intake and incorporating healthy fats in moderation, such as those in olive oil, nuts and seeds. Following such a diet reduces systolic blood pressure on average by 8 to 14 mm Hg.

The DASH diet consists mainly of fruits, vegetables and low-fat dairy products and includes whole grains, poultry, fish and nuts while reducing the amount of red meat, sweets and sugar-containing beverages.

Stress management

Manage stress. Stress may temporarily increase blood pressure. Learn to find healthy ways to cope with stress. Avoid coping with stress by eating high fat or high salt foods, or by smoking or drinking alcohol. Learning relaxation techniques and finding a time to walk each day are some good ways to start.

Key messages

Messages to the public

» Maintain a healthy body weight.
» Be active.
» Limit intake of fats and oils.
» Limit intake of sugars, especially sweetened foods and beverages.
» Limit salt intake.
» Eat a variety of foods every day.
» Eat cereals, preferably whole grains, as the basis of most meals.
» Eat more vegetables and fruits every day.
» Eat legume-based dishes regularly and choose unsalted nuts and seeds.
» Eat fish at least twice a week.
» Consume milk/dairy products daily (preferably low fat).

» Choose poultry and lean meat.
» Drink lots of clean water.
» Eat clean and safe food.

Messages to countries

» Develop and implement food and agriculture policies that will enable adequate production and domestic supply of fruits, vegetables and whole grain cereals, at affordable prices to all segments of the population.

» Employ regulatory measures to restrict the salt content in processed food including bread, cheese and other food products, and the hydrogenation of oils and fats intended for dietary consumption or manufacture of food products.

» Enact and enforce measures for the labelling of food products with clear information regarding their sodium and fatty acid content, which will enable consumers to readily identify products with high sodium and/or fatty acid content.

» Facilitate the development of national food-based dietary guidelines through consultation with nutrition experts and community representatives.

» Develop national standards for manufacture and marketing of fats and oils.

» Recognize that salt reduction and salt iodization are compatible. Monitoring of salt intake and salt iodization at country level is needed so that salt iodization can be adjusted over time, depending on observed salt intake in the population, so that individuals consuming the recommended amount of sodium will continue to consume sufficient iodine.

Messages to the food industry

» Make low sodium and low fat foods widely available in the market, through appropriate manufacturing practices and lower the sodium content of regularly consumed foods such as breads and cereals.

» Implement effective food labelling practices that will help consumers make informed choices with respect to sodium and fatty acid content of purchased foods.

Further information

Regional nutrition strategy http://applications.emro.who.int/dsaf/dsa1230.pdf
Promoting a healthy diet: a user's guide http://applications.emro.who.int/dsaf/emropub_2011_1274.pdf
Sodium intake guidelines http://www.who.int/nutrition/publications/guidelines/sodium_intake/en/index.html
Potassium intake guidelines http://www.who.int/nutrition/publications/guidelines/potassium_intake/en/index.html
WHO Global Strategy on Diet, Physical Activity and Health http://www.who.int/dietphysicalactivity/en/
WHO Regional Office for the Eastern Mediterranean
Nutrition http://www.emro.who.int/entity/nutrition
Noncommunicable diseases http://www.emro.who.int/entity/noncommunicable-diseases