

AK Health Bulletin/Health Capsules Reference Guide to 1989 Published Articles

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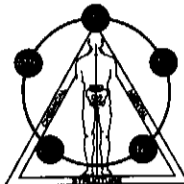
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Questions From Our Readers...

- Q:** DK asks "Can a doctor who uses applied kinesiology treat allergies?"
- A:** Lead from ceramic dishes does not pose a problem for large numbers of people. Even a few cases of lead poisoning from this category warrants caution. Ceramic dishware made in the U.S. (and those imported) allows 0.1 micrograms of lead per milliliter of test solution in a 24-hour test period. This is the new FDA standard which goes into effect January 1, 1990, and is up to 50 times lower than the current allowable levels of lead. Ceramic items purchased abroad may have very high levels of lead. These products are not regulated as to their lead content.
- A:** In one sense, no. But we do care for patients with allergies. We don't treat names, like sciatica, headaches, asthma, and arthritis. We treat people. And, those people may have complaints of pain, difficulty breathing, etc. For convenience, a name is applied to a person with certain symptoms, but everyone is an individual and should be cared for as such.
- Q:** Your last issue on lead in drinking water made me think of the lead in dishes. Does this also pose a health risk?



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CAPSULES

Hypertension and Sodium..... Just Another Scare?

The general concept that sodium causes high blood pressure is quite inaccurate. An excessive amount of sodium may, in susceptible individuals with high blood pressure, aggravate existing hypertension. Some people with existing high blood pressure, perhaps 30%-40%, are sodium sensitive. This means that dietary sodium, in moderate amounts, can increase their blood pressure further. And for these people, sodium intake should be modified.

Salt modification for those whose blood pressures are normal is not necessary, as sodium has never been shown to cause high blood pressure in these individuals. Unfortunately, the public is continually being given erroneous information about sodium and blood pressure.

Sodium is a necessary nutrient, essential for good health. In an average healthy man of 150 pounds, about 90 grams of sodium may exist in his body. One third of this is in the bones, and most of the remaining two thirds surrounding the cells throughout the rest of the body. Sodium is a major player in the regulation of all the cells of the body. Balanced with potassium, sodium acts as an "electrochemical pump" in accomplishing this remarkable feat.

Sodium also helps regulate acid/alka-

line balance, water balance, the heart beat, normal muscle contractions, sugar regulation, and even in blood pressure balance.

The problem of hypertension should not be taken lightly, as it is a serious health risk. But what is the definition of hypertension?

Experts disagree on the definition of high blood pressure. In Canada, for example, physicians generally do not consider blood pressures of up to 200/110 mm Hg in the elderly a problem requiring medication. In the U.S., pressures of 140/90 are often considered borderline hypertension. In people over the age of about 60, the "normals" tend to be higher, up to 160/95.

One factor does have general acceptance: some individuals, due to some genetic and/or acquired problem in their kidneys, are unable to process sodium normally. This results in an increased blood pressure.

Despite the fact that the American Heart Association and the Surgeon General recommend sodium restriction to prevent hypertension, other equally valid scientific opinions disagree. The American Council on Science and Health states in their literature that "stronger evidence should be available before persons are advised to alter their diets, and further caution that the possibility of harmful effects

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WATER FILTERS . . .

In our last issue, we addressed some potential problems encountered with tap water. In this issue, the topic of water filters as a method of improving the safety of your water is discussed.

Annual sales of home water filtering units, and other water treatment devices, is approaching four billion dollars. The first step in buying a water filter is knowing what contaminants are in the water. This was discussed last time. Once you know what (if anything) needs to be filtered, you can use the appropriate device. Unfortunately, there is no single water filter which will solve all your water problems.

Basically, there are four categories of water filters: activated carbon systems, reverse osmosis systems, ion-exchange resin filters, and distillation units. Each one will filter water of specific contaminants.

Carbon filters, used by the ancient Greeks and Romans, traps contaminants as the water passes through the carbon filter. The newer, solid-carbon-block filters are the most effective for this process (as opposed to granular carbon devices). Reverse osmosis has been used on a large scale, such as for desalination of seawater, in industry. Basically, its a more fancy filtration system which includes carbon. Home units generally are more expensive when maintenance is considered. Ion exchange, a simple unit made of a resin, filters only a few contaminants. Distillation, like carbon filtration, is an ancient method of treating water.

The process involves boiling the water to be treated, capturing and cooling the steam, which gives you cleaner water.

Here's a list of the different types of filtration systems and the substances they best eliminate:

Activated Carbon Systems (using solid-carbon-block filters)

- removes most organic chemicals, such as pesticides and herbicides, chlorine, bacteria, metals (lead, iron, copper) and radon
- won't remove minerals (won't soften water), nitrates, viruses, and radioactive particles
- usually improves the taste of the water
- some carbon filters have silver nitrate to prevent bacterial build-up — this may be effective but may also leak silver
- can cost as little as \$40 and as much as several thousand dollars or more for the entire system
- ideally, the carbon part must be replaced every 6-12 months to maintain effectiveness, normal water flow.

Reverse Osmosis Systems

- removes toxic metals and radiation contamination (except radon)

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“BRIDGING THE GAP”

In this edition of , we review a journal article which discusses some healthy and effective methods of losing weight. Many questions are asked about weight loss. The answers are individual in nature as people often have very different needs. However, some general rules apply when one is attempting to lose weight in a healthy way.

An article in *Medical Hypothesis*, (1989) 28, 13-33 entitled “Prostaglandins, Brown Fat and Weight Loss,” discusses some of these rules, and, once again, dispels certain myths that have become traditional strong-holds in weight loss programs.

The authors, from Princeton’s Brain Bio Center, stress the necessity of *increasing* the metabolism in overweight individuals as a means of weight loss. This is important because people who are overweight generally have a lower, or slowed, metabolism, and it is through this increased metabolism that fats and carbohydrates (and at times protein) are “burned.”

There are three times that the metabolism “burns” calories (or energy): 1) during rest, 2) during activity and exercise, and 3) the production of heat. Together, all three areas play a vital role in weight loss. Let’s look at each area separately.

- 1) The resting state potentially can burn the highest amount of calories — 73% of our daily energy in the form of calories. One goal of any healthy weight loss program is to increase the calories burned during the resting state. This is accomplished by the two remaining factors.
- 2) Physical exercise uses only about 12% of the daily energy used. The fact is that inactive overweight and lean people have the same level of physical activity, the difference being the lean person has a higher metabolism. But through exercise, the calories burned during the resting state can be increased. In other words, exercise can increase the metabolism, causing weight loss. There is no basis for counting the calories burned during exercise, as they truly do not account for a significant quantity. But increased metabolism resulting from exercise is very significant, because the total calories burned may be twice that of the exercise itself.
- 3) Heat production in the body accounts for 15% of the energy used. This process, called thermogenesis, includes food intake and exposure to cold. The consumption of a meal can increase the metabolism, thereby burning more energy with a resultant weight

loss. Exposure to cooler temperatures (below 71 degrees F) also has a stimulating effect on the metabolism, as well as improving sugar regulation. Both diet and temperature effect the metabolism as a result of the presence of brown fat, which, when stimulated, increases the metabolism. One of the most important area of the body which regulates thermogenesis is the thyroid gland. Individuals who frequently complain of feeling cold, and have low temperatures, often have less than adequate thyroid gland function.

The second and third categories are those which we have direct control over, through exercise and diet.

The authors recommend the following exercise habits to optimize weight loss:

- Exercise in an environment below 71 degrees F if possible, such as outdoors in cool weather. Avoid overheated exercise areas indoors.
- On hot days, cool off with a cool shower.
- Avoid over-dressing. Wear loose-fitting clothing when exercising. Avoid sweat-suits which hold the heat and promote sweating.
- Take cool showers before and/or after exercise.
- Preferred exercises are continuous, rhythmical and “aerobic” in nature. Some of these are walking, running, rowing, skating, skiing, and swimming. After 30 minutes of exercise, the body “burns” more fats for energy.
- The authors recommend a minimum of 20-30 minutes per exercise session, at least three times per week.
- It is also suggested that lifestyle changes be made regarding activity, such as taking the stairs instead of an elevator when practical, or parking the car further away from the store and walking farther.

The authors spend most of their time discussing the third category. Specifically, how certain dietary factors can change metabolism. The following items pertain to this important aspect of weight control:

- Certain factors relating to diet can suppress (decrease) metabolism. They include:
 - ✓ A low caloric diet (caloric restriction) and short term fasting. The best example of this is skipping meals.
 - ✓ Snacking throughout the day on high sugared foods

(candy, colas, cakes, gum, etc.). Also, eating or drinking sweets before exercise prevents proper benefits.

- Certain factors relating to diet can stimulate (increase) the metabolism. These include:
 - ✓ Dietary fats. These include vegetable oils such as olive and safflower. These foods contain fats called “essential fatty acids.” Following ingestion, some of these fats chemically change to substances called prostaglandins, which can increase metabolism. This is accomplished, in part, through the stimulation of stored brown fat.
 - ✓ Inclusion of high fiber foods including whole grains, fresh vegetables, and fresh fruits.
 - ✓ Certain nutrients normally part of a healthy diet are often missing in the those who cannot lose weight. Sometimes, this is due to frequent self-imposed diet restriction, and the high requirement when proper dietary changes are made. These nutrients help to convert fats to prostaglandins along with other processes which help increase metabolism. They include vitamin B-6, zinc, manganese and others. It is recommended that the appropriate doctor be consulted for your particular needs.
 - ✓ Capsaicin, a naturally occurring substance found in hot spicy foods like Mexican chile peppers, stimulates the metabolism. The authors recommend including small amounts of this substance in the diet if tolerated.
 - ✓ Carbohydrates in the diet (not in the over-processed state such as sugar), including whole grain foods (breads, pasta, etc.), fruits and vegetables, help to stimulate the metabolism. Conversely, protein foods, meats, fish, etc., can slow the metabolism.
 - ✓ Alternating a high calorie day with a low calorie day has a stimulating effect on the metabolism. The example given is for men alternate caloric intake: one day consume 1700 calories, the next day 1200 calories, the third day 1700, the fourth day 1200. For women, 1400 calories the first day, and 1000 the next, and so on.
 - ✓ Eating 3-6 meals per day has a stimulating effect on metabolism. The proportions recommended are 55% carbohydrate, 25% fat, and 20% protein. All white flour and sugar are to be avoided.

Finally, the authors state that when people are given more food in the diet, including essential fats, they tend to lose weight despite the increased caloric intake.

HYPERTENSION

Continued From Page 1

(of sodium restriction) cannot be totally discounted.”

In 1988, the British Medical Journal (297:307) reported on the Intersalt Cooperative Research Group’s international study on sodium and hypertension. The group demonstrated that a large reduction in sodium intake would result in an insignificant decrease in blood pressure. Specifically, an average decrease of 2.2 mm Hg systolic and 0.1 mm Hg diastolic pressures.

Almost everyone, however, agrees that hypertensive persons sensitive to sodium should restrict its use. But not as a primary treatment.

Other Factors Associated with Hypertension...

Treatment of hypertension should be preceded by an attempt to find its cause. Two common examples of causes of high blood pressure include kidney problems and narrowed or “clogged” arteries. Some doctors indicate that when certain nutrients are low, such as vitamin A and C, and calcium, the blood pressure will rise. In other cases, emotional factors may play a primary role. A lack of activity — exercise — has also been shown to correlate with hypertension.

In the U.S., over 3 billion dollars is spent annually for blood pressure medication. Correcting hypertension without medication is the healthiest approach. When drugs are required, the proper medication and dose, along with careful observation for harmful side effects is vital. Although high blood pressure is dangerous, lowering it too much is not without potential problems. The findings of Dr. Michael Alderman and co-workers of the Albert Einstein College of Medicine show that too much lowering of blood pressure may reduce blood flow to the heart, which can put the heart at risk. The safest approach is a 10% reduction in blood pressure in a person with hypertension.

Many people do not realize that they can often control their own elevated pressures in the following ways:

Activity is a very important factor in high blood pressure. Studies show that unfit (non-exercising) persons are 1.5 times more likely to develop hypertension than fit individuals. Even in children, higher blood pressures are seen in those most inactive. Not only does increased activity in

children result in lower blood pressures, but those who are active in sports have a lower incidence of hypertension later in life.

Hypertension has also been associated with dietary fats. Unfortunately, the common belief is that a lowfat diet lowers blood pressure. This is untrue. Actually, studies have shown just the opposite. Unsaturated vegetable oils can lower blood pressure in many individuals. In one study (*Am J Cardiol* 6/88), low levels of substances called prostaglandin E2 (which is derived from the fats found in egg yolk, butter, and cream) were related to the inability of the kidney to eliminate salt which causes higher blood pressures.

Another factor associated with high blood pressure is being overweight. The prevalence of high blood pressure is 50% higher in overweight individuals aged 40-64 years of age. The *New England Journal of Medicine* (1978;298:1) reported a large study which showed that 75% of the hypertensive patients who lost weight (without sodium restriction) reduced their blood pressures to normal. In another study (*Journal of the American Medical Association* 1985;253:657), 325 patients with high blood pressures who were on medication for at least 5 years were divided into three groups. One group for weight reduction, one for sodium restriction, and one where no change in the diet was made. All were taken off their medication for the one year duration of the test. After that time, 60% from the weight loss group maintained a normal blood pressure without medication.

It is also known that children and adolescents who are overweight are much more likely to have high blood pressure as adults.

Weight loss can easily be maintained when the person is healthy all around. This means a good diet without extreme caloric restriction, including natural carbohydrates, proteins and fats, and regular activity or exercise. Finding a doctor who can help in these areas may be the first step.

Hypertension is a serious health problem. Attempting to find the cause may give a clue as to the most effective treatment. Assuming no emergency exists, following a thorough evaluation, where no cause can be found, conservative measures should be considered first. These include weight control, exercise, diet, and nutrition.

WATER FILTERS

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- will not remove many organic chemicals or radon
- interferes with normal water flow (by 25-50%), and for every gallon of clean water, 6-8 gallons of water are wasted.
- may cost \$150 to several thousand dollars

Ion-Exchange Resin Filters

- removes nitrates and nitrites, toxic metals and radiation contamination (except radon)
- will not remove many organic chemicals or radon
- cost \$200-\$500

Distillation Units

- all around best method, as it “filters” more items than any other one device
- removes toxic metals and radiation contamination (except radon)
- will not remove all organic chemicals or radon
- removes minerals (softens the water)
- makes water taste “flat”
- cost from \$300 to \$3,000

The manufacturer of these filtering devices should provide you with specific information on what contaminants it removes as well as proper use, installation and maintenance costs. Also, it is well worth testing your water again after installing a water filter to be certain it is performing properly.

Most importantly, if your water is contaminated you should attempt to find the source of that problem and correct that, rather than just remedying it with a filter.

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