



NIH UPDATE

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FOR RELEASE
Monday, August 17, 1998

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Statement on Sodium Intake and High Blood Pressure

High blood pressure, or hypertension, affects about 50 million Americans--one in four adults. It is the leading cause of stroke and contributes to heart attack, heart failure, and kidney failure. Some Americans, such as older Americans and African Americans, are at a particularly high risk from high blood pressure.

The National Heart, Lung, and Blood Institute (NHLBI) supports a range of research, including epidemiological and clinical studies, to help Americans and their health care professionals better prevent and control high blood pressure.

As part of this public health effort, the NHLBI works with other public and private sector organizations to develop clinical practice guidelines based on reviews of the scientific literature. The latest hypertension guidelines were released in November 1997. The NHLBI also conducts periodic reviews on topics such as dietary sodium as new findings are published.

One important aspect of hypertension prevention and management that has raised questions among scientists and in the media is the effect of sodium consumption on blood pressure. Sodium chloride, or table salt, increases average levels of blood pressure. Some individuals have greater blood pressure responses to salt than others.

Various controlled intervention trials and observational studies have provided strong evidence that consuming a moderately reduced intake of sodium contributes to lowering blood pressure. As yet, science cannot distinguish between those whose blood pressures are and are not more responsive to sodium. Available evidence shows that a moderately reduced intake of dietary sodium causes no harm. Thus, a moderate salt intake is recommended for all Americans to help prevent and treat hypertension, especially in those who are responsive to sodium.

Recently, more research findings have become available about the effects of dietary sodium and salt in those with and without high blood pressure. For instance, the Trials of Hypertension Prevention, Phase II (TOHP II), published in 1997, found that short-term sodium reduction and weight loss each lowered blood pressure in those who were overweight and had slightly elevated blood pressures. However, the interventions did not fully maintain weight loss and sodium

reduction over 3 to 4 years and the effects on blood pressure reduction were lessened.

In 1998, the Trial of Nonpharmacologic Interventions in the Elderly (TONE), a multi-center clinical trial, reported that lifestyle changes--dietary salt reduction, weight loss, or both together--reduced blood pressures in older patients with hypertension, decreasing their need for medication.

In a 1997 article, the trial of Dietary Approaches to Stop Hypertension (DASH) described the effects on blood pressure of entire eating plans. DASH found that, without testing the effect of salt reduction, a diet lower in fat and higher in vegetables, fruits, and low fat dairy foods significantly reduced blood pressure in those with normal to slightly elevated pressures.

These and other findings have yielded important new information about sodium and other nutrients and lifestyle factors that may affect blood pressure. Consequently, the NHLBI has decided to hold another workshop in the coming months to review the latest findings on sodium and hypertension. The workshop will involve leading experts and cover such issues as sodium intake and cardiovascular risk factors, and future research needs.

The NHLBI continues to support the sodium and salt intake recommended by the National High Blood Pressure Education Program, which was based on the evidence available. That evidence suggested that, as part of an overall healthy diet, Americans should consume no more than 2,400 mg of sodium a day. That equals about 6 grams of salt (sodium chloride). This amount also is recommended in the 1995 Dietary Guidelines for Americans, published by the U.S. Department of Agriculture and the U.S. Department of Health and Human Services, and in the 1996 Dietary Guidelines for Healthy American Adults, put out by the American Heart Association.