

Title of Intervention: Trials of Hypertension Prevention (TOHP), Phase 1

Website: <https://biolincc.nhlbi.nih.gov/studies/tohp/>

Intervention Strategies: Group Education, Supportive Relationships

Purpose of the Intervention: To utilize non-pharmacologic interventions to lower diastolic blood pressure

Population: Healthy 30-54 year old adults with no evidence of medically diagnosed hypertension or gross obesity

Setting: Ten health care facilities in major urban areas throughout the United States; health care facility-based

Partners: None mentioned

Intervention Description:

- **Group Education:** The lifestyle intervention initially consisted of weekly 90-minute group educational sessions. Later sessions were semi-monthly and monthly. The duration of the weekly groups depended on the specific lifestyle change being observed in the participants. Demonstrations and practice were incorporated into each group meeting. Topic included weight loss, dietary sodium reduction and stress management. Nutritional supplement interventions included calcium, magnesium, potassium and fish oil.
- **Supportive Relationships:** Individual counseling (in-person or through mail or telephone) supplemented the lifestyle group educational sessions.

Theory: Not mentioned

Resources Required:

- **Staff/Volunteers:** Trained, certified observers to make blood pressure assessments, TOHP Staff to collect nutritional information, Health care providers to conduct group educational sessions, Staff to conduct individual counseling
- **Training:** Training for staff to take blood pressure measurements and to collect nutritional information
- **Technology:** Computer
- **Space:** Group meeting space, private meeting space for individual counseling
- **Budget:** Not mentioned
- **Intervention:** Nutritional supplements (magnesium, calcium, potassium, fish oil), mailing materials, attendance incentives, informational handouts related to intervention
- **Evaluation:** Random-zero sphygmomanometer, weight scale, clinical laboratory and materials for urine and blood specimen testing, 24-hour diet recall forms, food frequency questionnaires, a psychological general wellbeing index, Lazarus' Hassles Scale questionnaire

Evaluation:

- **Design:** Randomized trial
- **Methods and Measures:**
 - Biological measurements included blood pressure, sodium content, dietary intake of nutrients, weight
 - 24-hour diet recall and Food Frequency Questionnaire measured nutrition behaviors
 - General Wellbeing Index measured quality of life
 - Lazarus' Hassles Scale questionnaire measured stress reduction

Outcomes:

- **Short Term Impact:** In the sodium reduction and weight reduction groups, systolic and diastolic blood pressure was consistently reduced and measurements of psychological well-being improved. Participants in the sodium reduction group also showed a statistically significant reduction in dietary sodium intake and reduction in weight at 6 and 12 months. There were no significant effects on diastolic and systolic blood pressures in those taking nutritional supplements.

- Long Term Impact: Not mentioned

Maintenance: Not mentioned

Lessons Learned: Differences among the results in participants of different races suggest that cultural factors may somehow influence the results of attempted dietary changes.

Citation(s):

Kumanyika, S. K., P. R. Hebert, et al. (1993). "Feasibility and efficacy of sodium reduction in the Trials of Hypertension Prevention, phase I. Trials of Hypertension Prevention Collaborative Research Group." *Hypertension* 22(4): 502-12.

Satterfield, S., J. A. Cutler, et al. (1991). "Trials of hypertension prevention. Phase I design." *Ann Epidemiol* 1(5): 455-71.

The Trials of Hypertension Prevention Collaborative Research Group (1992). "The effects of nonpharmacologic interventions on blood pressure of persons with high normal levels. Results of the Trials of Hypertension Prevention, Phase I." *Jama* 267(9): 1213-20.