

## Hot Flashes Dataset Introduction

### **Abstract**

This dataset contains baseline data from a 14-year cohort study by Freeman et al (2001) that investigated race differences among 375 participants (182 African Americans versus 193 Caucasians) in the occurrence of hot flashes (# events = 118) during the late reproductive years. Both the primary outcome and predictor variables are binary and include self-reported hot flashes in the past month at baseline and race, respectively. There are 12 baseline covariates that provide information on prior menopausal symptoms, demographics, body mass index, reproductive hormone levels, and smoking. The data include a small number of missing values but are otherwise clean.

### **Background**

Menopause heralds a complex array of hormonal and physiologic changes, the most common of which is the feverish discomfort of hot flashes and often accompanied by sweating, chills and anxiety. The Mayo Clinic defines a hot flash as the “sudden feeling of warmth in the upper body which is usually most intense over the face, neck and chest”. Among women in the menopausal transition, hot flashes typically occur daily, are between 2-5 minutes duration, and can be expected to persist for more than 7 years (<https://www.mayoclinic.org/diseases-conditions/hot-flashes/symptoms-causes/syc-20352790>).

Variations in hot flash experiences during the menopausal transition among different populations have been observed but are incompletely understood. Freeman et al (2001) explored race differences in self-reported hot flashes in a multivariable analysis that also considered other hypothesized correlates: prior symptoms of menopause, current reproductive hormone levels, obesity, sedentary lifestyle and smoking.

### **Study Objective**

The purpose of this study was to investigate race differences in the odds (OR) of self-reported hot flashes (African American versus Caucasian), both unadjusted and after adjustment for pre-menopausal symptoms, current reproductive hormone levels, obesity, sedentary lifestyle, smoking, age, and education.

### **Study Design**

The original study of Freeman et al (2001) was a 14-year prospective cohort study of ovarian aging. Participants were generally healthy and regularly menstruating women aged 35-47 at the time of enrollment and were recruited through random digit dialing in Philadelphia County, PA. Recruitment was stratified by race to ensure equal numbers of African American and Caucasian women.

This dataset is cross-sectional, as it only contains baseline data.

### **Subjects & Variables**

The subjects and variables included in this dataset are a subset from the Freeman et al (2001) study. The study enrolled 436 participants.

375 subjects

14 variables



Subjects are n=375 (182 African American, 193 Caucasian). Inclusion criteria were: 1) age 35-47 at baseline; 2) regular (22-35 days) menstrual cycles in the previous 3 months; 3) intact ovaries and uterus; and 4) English speaking. Exclusion criteria were any of the following: 1) pregnant or breastfeeding; 2) any serious health condition that might compromise ovarian function (e.g., diabetes, liver disease, breast or endometrial cancer); 3) any use of hormonal medications, including oral contraception or hormone replacement therapy in the past three months; 4) any use of psychotropic medication in the past year; or 5) any alcohol or drug abuse in the past year.

There are 14 variables, all measured at baseline, including: one outcome variable, 0/1 indicator of self-reported hot flashes in the past month; one primary predictor, 0/1 indicator of African American self-reported race (referent = Caucasian); one 0/1 indicator of menopausal symptoms; five measures of baseline hormone levels; two demographic variables; one 0/1 indicator of body mass index  $> 30 \text{ kg/m}^2$ , score on the SF-12 Physical Health Survey; one 0/1 indicator of smoking; age, grouped; and a 0/1 indicator of completion of high school education.

### **Citation(s)**

Freeman EW, Sammel MD, Grisso JA, Battistini M, Garcia-Espagna B, Hollander L. Hot flashes in the late reproductive years: risk factors for African American and Caucasian women. *J Womens Health Gend Based Med.* 2001 Jan-Feb;10(1):67-76. doi: 10.1089/152460901750067133. PMID: 11224946.