

Women's Health Study

Update

A New Study of Movement Patterns During the Day: What Patterns are Healthful?

We all know that physical activity is beneficial for health. Many studies, including those from the WHS, have shown that physically active men and women have lower risks of several chronic diseases, including heart disease, stroke, type 2 diabetes, colon cancer, and breast cancer, compared with inactive individuals.

You may have heard that in 2008, the US federal government released its first-ever Physical Activity Guidelines for Americans. These guidelines acknowledge that any amount of physical activity is associated with health benefits, a very encouraging message for the general population. The guidelines go on to recommend 150 minutes per week of moderate-intensity physical activity (e.g., brisk walking) for substantial health benefits in adults. Or, for those who prefer vigorous-intensity activities such as running, 75 minutes per week of such vigorous activities are recommended. (If you want to read more details about the federal government's guidelines, go to www.health.gov/paguidelines/guidelines/default.aspx)

However, most of the studies to date that show health benefits of physical activity have focused on activities which we typically think of as exercise – walking, jogging, biking, swimming, etc. There are almost no data on the usual movements we do during the day and their relation to health. For example, do women who don't intentionally "exercise", but move around a lot in their homes, bustling around cleaning and doing laundry, have the same health benefits as women who walk for exercise? Such movement patterns around the house cannot be accurately

reported on questionnaires, but can be measured accurately using electronic devices.

In order to answer this question about the potential health benefits of different patterns of movement during the day, we will be conducting a new study that is scientifically approved by the National Institutes of Health and is likely to be funded. The new study will involve measuring all daily movements using a device called an accelerometer (see photo above.) This is a small and lightweight device, measuring about one-and-a-half inches square and less than one inch thick, and weighing less than 1 oz. It is worn on an elastic belt around the hip. It is similar to a pedometer or step counter, which many of you are familiar with, except that it measures movements more accurately.

Participation in this new study will involve wearing an accelerometer



for 7 days, during all waking hours. We will send you the accelerometer by mail, with detailed instructions on use. We also will send you a prepaid return envelope to return the accelerometer in the mail once you have completed the 7 days of wear.

Stay tuned to hear more about participation in this study! We will contact you by mail with a detailed invitation on a rolling basis over the next 2 years. While participation is, of course, voluntary, we hope that many of you will be interested in this new study that will provide important information on what patterns of physical activity are healthful.

Information about Genotype Data Sharing

The blood samples that you have generously provided at the beginning of the WHS are an important part of research being done today. In recent years, our involvement in genetic studies such as genome-wide association studies (GWAS) has led to many exciting findings. In a GWAS, we study at one time many thousands of gene variants to identify chromosomal regions associated with the risk of various diseases. Due to the value of pooling data from multiple studies, the National Institutes of Health (NIH) has mandated that we submit genotype data from the WHS to the database of Genotypes and Phenotypes (dbGaP), which archives and distributes the results of genetic studies. Rest assured that any data we send to this database is completely devoid of personal identifiers (e.g., your name, year of birth, address, etc.). In addition, the NIH restricts access to qualified researchers who can show an appropriate scientific use for the data. More information about dbGaP can be found at www.ncbi.nlm.nih.gov/gap. If you have questions about data sent to dbGaP, or wish to have your data excluded from this database, please call us at 1-800-633-6911, or e-mail us at whs@rics.bwh.harvard.edu. You can also write to us at WHS, Brigham and Women's Hospital, 900 Commonwealth Ave. East, Third Floor, Boston, MA 02215.