Novel Measures and Determinants of Smokeless Tobacco Use
Study 1: Toxicant Exposure Across Brands of Smokeless Tobacco
Consent form

You are invited to be in a research study that examines the exposure to tobacco-related carcinogens (cancer-causing chemicals) and other toxins in the bodies of smokeless tobacco users. This study is being conducted by Dorothy Hatsukami, Ph.D., Sharon Allen, M.D., and Stephen Hecht, Ph.D. of the University of Minnesota's Cancer Center. It is also being conducted at Oregon Research Institute in Eugene, OR and at the University of West Virginia in Morgantown, WV and a total of 600 people will participate. Your participation in this study will take place at the Tobacco Use Research Center at the 717 Delaware St SE, Room 205, Minneapolis, MN

Purpose

This study is being done to evaluate the amounts of tobacco-related toxins delivered by different brands of smokeless tobacco. We will be measuring the amount of exposure your body has to toxins by measuring biomarkers. Biomarkers are the amount of by-products of toxins in your body. We will obtain several health measures related to tobacco use, including levels of cancer-causing toxins and risk factors for heart disease, nicotine levels, and cell changes in your blood. These biomarkers can be found in your blood, urine, saliva, breath samples, cheek cells and used dips.

Procedures

You will attend a clinic visit at the Delaware Clinic Research Unit. You will be interviewed or asked to complete questionnaires that ask personal questions such as demographics , tobacco use history, health history, prescription and over-the-counter medication use, diet, nutritional supplements, caffeine intake, occupational exposure to chemicals and tobacco smoke, exercise habits, and use of alcohol and use of drugs.

All participants will have the following tests and procedures:

- Vital signs (blood pressure, heart rate, weight).
- Mouth cells samples. To do this, you will be provided with a mouthwash that you will swish in your mouth to cleanse your mouth. You will have your cheek cells collected by having a toothbrush rubbed on your cheeks. These cells will be analyzed for changes related to tobacco use.
- Breath sample. Breath samples will measure your carbon monoxide (CO) level to determine if you smoke cigarettes. Breath samples are taken by having you exhale into a carbon monoxide monitoring device.
- Spot urine sample today and at your clinic visit.
- First morning urine sample from the morning of your appointment.

- Fasting blood draw (meaning no food and only water for 8 hours before the blood sample is obtained). The blood draw will consist of 6 tubes of blood (1/4 cup). The blood samples will be analyzed for several tobacco-related compounds and you will not receive feedback on those results. The samples will also be analyzed for indicators of heart disease risk, such as cholesterol, fibrinogen, and C-reactive protein.
- Daily diary of the amount of tobacco used per day and alcoholic drinks you may have consumed.
- Collect three used dips. You will be given a special container for this collection. You may be asked for a sample of unused tobacco from the same tin. These samples will be analyzed by the Center for Disease Control (CDC) for tobacco related toxin and nicotine content. The samples will be discarded after analyses are completed.

Tobacco Related Biorepository
Your blood and urine samples collected for the Biorepository will be analyzed and stored by Dorothy Hatsukami, Ph.D. at the Tobacco Use Research Center or by Stephen Hecht's laboratory at the Masonic Cancer Center at the University of Minnesota. If your samples are used, it may be for studies currently in progress or studies conducted in the future. Your samples will be kept until they are used up or no longer needed. The details, results, and implications of these studies are unknown. Any scientific or medical findings that result from the use of your biological samples will have no impact on your immediate medical care. You will not receive any feedback on the analysis of your samples used in this study or by the future studies.

In the future, we may use your samples for genetic testing to see if certain genes provide better or worse protection from tobacco-related disease risk.

Your biological samples will be coded to protect your confidentiality. Information about your demographics, health status and tobacco use history will accompany these samples. This information and your samples will be marked by a code with no identifying information. There will be no way for the Biorepository staff (where your samples are shared) to identify or contact you.

Risk and Benefits
Participation in this study has several risks.

<u>Risk with blood draws</u>
Throughout the study, 12 tubes of blood will be drawn (60 ml total or about ¼ cup of blood). A typical amount collected if you donate blood would be 1 pint or 2 cups. Your blood will be drawn by trained personnel using standard blood drawing techniques. Potential complications of blood drawing include slight bruising, soreness, redness or swelling near the puncture site. In addition, some

people occasionally experience dizziness, nausea or fainting. If you have recently donated blood (within the past week), it is important to tell the investigator. A decision can be made about whether to delay your start in the study.

Risk of Disclosure of Information

Another risk to you is the release of information from our study records that may be used to identify you. The chance that this information will be given to someone else is very small. Making sure that your identity does not become known will minimize the chance that you will experience any psychological or social harm. Therefore, we will take every precaution to safeguard your identity. As soon as they are collected, your specimens and your clinical information will be assigned a code number. That code number will be the only information attached to your biological samples and clinical information. All other widely used identifying information, such as your name, address, phone number will be removed. The master list, which will link your name and the code number, will be kept under lock and key and in a computer with electronic safeguards. Only authorized people who have agreed in writing to protect your identity will have access to your linked information. Therefore, the researchers and others working with your samples at the biorepository will not know your identity.

You will receive no direct benefit from your participation in this study.

Compensation

You will receive $25 for today's visit and $75 for the next clinic visit to cover your time and transportation costs.

Future Studies

Initials and date ☐

If you initial here, you give permission for the Tobacco Use Research Center at the University of Minnesota to contact you in the future to invite you to participate in future research studies. You may choose to whether or not to participate after you are contacted and informed of the nature of the study. You do not have to agree to be contacted in the future to participate in this study. If you do not wish to be contacted about any future studies, please leave the box blank.

Alternative treatments

This is not a tobacco cessation treatment program. Methods of treatment instead of this study include standard tobacco cessation clinics, or consulting your physician about other cessation options or the use of an over the counter nicotine replacement medication. Please ask the study staff if you would rather participate in a quitting study.

Research Related Injury
In the event that this research activity results in an injury, medical treatment will be available. Medical treatment includes first aid, emergency treatment and follow-up care as needed. Care for such injuries will be billed in the ordinary manner, to you or your insurance company. If you think that you have suffered a research related injury, let the study staff know right away.

New Information
If during the course of this research study, there are significant new findings discovered which might influence your willingness to continue, the researchers will inform you of those developments.

Confidentiality
The records of this study will be kept private. In any publications or presentations, we will not include any information that will make it possible to identify you as a subject. Your record for the study may, however, be reviewed by a representative of the funding agency (National Cancer Institute) and by departments at the University with appropriate regulatory oversight. Your study information will not be part of your medical record. To these extents, confidentiality is not absolute.

To further protect any sensitive information that is collected from you, a Certificate of Confidentiality has been obtained from the Department of Health and Human Services (DHHS). An example of sensitive information would be a discussion of addiction. This certificate will protect your identity even under a court order or subpoena. This protection, however, is not absolute and does not apply to any state requirement to report certain communicable diseases or certain cases of child abuse to the appropriate authorities. Additionally, an auditor of the funding agency may review your records.

Protected Health Information (PHI)
Your PHI created or received for the purposes of this study is protected under the federal regulation known as HIPAA. Refer to the attached HIPAA authorization for details concerning the use of this information.

Voluntary Nature of the Study
Participation in this study is voluntary. Your decision whether or not to participate in this study will not affect your current or future relations with the University. If you decide to participate, you are free to withdraw at any time without affecting those relationships.

Contacts and Questions
The researchers conducting this study are Dorothy Hatsukami, Ph.D., Sharon Allen, M.D. and Stephen Hecht Ph.D. Your decision regarding participation will not prejudice your future relations with the University of Minnesota. If you decide

to participate, you are free to discontinue participation at any time without prejudice. Please ask any questions you may have about the study and your responsibilities as a participant. If you have questions for the primary investigator you may contact Dorothy Hatsukami, Ph.D., (612) 627-1808; Sharon Allen, M.D., (612) 624-2446 or Stephen Hecht, Ph.D. (612) 624-7604.

If you have any questions or concerns regarding the study and would like to talk to someone other than the researchers, you are encouraged to contact the Fairview Research Helpline at telephone number 612-672-7692 or toll free at 866-508-6961. You may also contact this office in writing or in person at Fairview Research Administration, 2433 Energy Park Drive, St. Paul MN 55108.

You are making a decision whether or not to participate. Your signature indicates that you have read the information provided above and you have decided to participate. You may withdraw from the study at any time without prejudice after signing this form. You will be provided with a copy of this form to keep.

Statement of consent

I have read the information. I have asked questions and have received answers. I consent to participate in the study.

_____

Print Name

_____

Signature of subject Date

_____

Signature of staff member obtaining consent Date