

CONSENT TO ACT AS A SUBJECT IN A RESEARCH STUDY

TITLE: [Ver. 2.9; DMID v. 10.0] Social and Psychological Risk for Infectious Illness

PRINCIPAL INVESTIGATOR:

Sheldon Cohen, Ph.D.
Robert E. Doherty Professor of Psychology
Carnegie Mellon University
5000 Forbes Avenue
Pittsburgh, PA 15213 (412) 268-5691

CO-INVESTIGATORS:

William Doyle, Ph.D.
Professor of Otolaryngology
Children's Hospital of Pittsburgh
3460 Fifth Avenue
Pittsburgh, PA 15213 (412) 692-7354

Margaretha Casselbrant, M.D., Ph.D.
Professor of Otolaryngology
University of Pittsburgh School of
Medicine
Children's Hospital Drive
45th & Penn
Pittsburgh, PA 15201 (412) 692-
7354

Ronald Turner, M.D.
Professor of Pediatrics
University of Virginia Health Sciences
Center
Dept. of Pediatrics, P.O. Box 800386
Charlottesville, VA 22908 (434) 243-9864

Anna Marsland, Ph.D., R.N.
Assistant Professor of Psychology and
Nursing
University of Pittsburgh
Sennott Square, 210 S. Bouquet St.
Pittsburgh, PA 15260 (412) 624-4530

Ellen Mandel, M.D.
Associate Professor of Otolaryngology &
Pediatrics
University of Pittsburgh School of
Medicine
Children's Hospital Drive
45th & Penn
Pittsburgh, PA 15201 (412) 692-
7354

Todd Otteson, M.D.
Assistant Professor of Otolaryngology
University of Pittsburgh School of
Medicine
Children's Hospital Drive
45th & Penn
Pittsburgh, PA 15201 (412) 692-
8620

Todd Wine, M.D.
Fellow, Pediatric Otolaryngology
University of Pittsburgh School of
Medicine
Children's Hospital Drive
45th & Penn
Pittsburgh, PA 15201 (412) 692-3594

Dennis Kitsko, D.O.
Fellow, Pediatric Otolaryngology
University of Pittsburgh School of
Medicine
Children's Hospital Drive
45th & Penn
Pittsburgh, PA 15201 (412) 692-
7572

HaSheng Li-Korotky, M.D., Ph.D.
Assistant Professor of Otolaryngology and
Audiology
University of Pittsburgh School of
Medicine
Children's Hospital Drive
45th & Penn
Pittsburgh, PA 15201 (412) 692-
6664

Bruce Rabin, M.D., Ph.D.
Professor of Pathology
University of Pittsburgh School of
Medicine
Children's Hospital Tower, Rm. 5725
Pittsburgh, PA 15213 (412) 647-6150

Cuneyt Alper, M.D.
Associate Professor of Otolaryngology
University of Pittsburgh School of
Medicine
Children's Hospital Drive
45th & Penn
Pittsburgh, PA 15201 (412) 692-
5466



EXPERIMENTERS:

Ellen Conser, M.A.
Research Associate
Dept. of Psychology, Carnegie Mellon University
Pittsburgh, PA 15213 (412) 268-5691

James Seroky, M.A.
Research & Development Technologist
Department of Otolaryngology/ENT
Pittsburgh, PA 15201 (412) 692-5463

Berhane Messay, M.A.
Research Assistant
Dept. of Psychology, University of Pittsburgh
Pittsburgh, PA 15213 (412) 624-2431

Kristin Yahner, B.S.
Research Assistant
Dept. of Psychology, Carnegie Mellon University
Pittsburgh, PA 15213 (412) 268-5691

Cathy Lo, M.S.
Research Technologist
Department of Otolaryngology/ENT
Pittsburgh, PA 15201 (412) 692-5536

J. Douglas Swarts, Ph.D.
Assistant Professor of Otolaryngology
Department of Otolaryngology/ENT
Pittsburgh, PA 15201 (412) 692-5536

Denise Janicki Deverts, Ph.D.
Project Director
Dept. of Psychology, Carnegie Mellon University
Pittsburgh, PA 15213 (412) 268-3295

Julie Banks, B.S.
Research Technologist
Department of Otolaryngology/ENT
Pittsburgh, PA 15201 (412) 692-5536

Amy Seroky
Research Administrator
Department of Otolaryngology/ENT
Pittsburgh, PA 15201 (412) 692-6764

Rodlescia Sneed, M.P.H.
Research Assistant
Dept. of Psychology, Carnegie Mellon University
Pittsburgh, PA 15213 (412) 268-8112

Beverly Richert, C.R.N.P.
Pediatric ENT Research Nurse Practitioner
Department of Otolaryngology/ENT
Pittsburgh, PA 15201 (412) 692-5463

Kathy Tekely, R.N.
Research Nurse
Department of Otolaryngology/ENT
Pittsburgh, PA 15201 (412) 692-5463

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Why is this research being done?

You have been asked to participate in a research project designed to learn more about how psychological factors such as social support and stress, behaviors such as exercise and smoking, and genetics influence the body's resistance to the common cold. At your first study visit about 4 weeks ago, you were provided with materials that described the study purposes and your obligations in general, and you were screened for generally good health by questionnaire and for antibodies that could make you resistant to infection with the strain of common cold virus that we will be using in this experiment. Based on the results of that screen, you do not have protective antibodies and are eligible to proceed with this second screening visit (Visit 2) which focuses on a more complete assessment of your general health, begins to collect some information about you and explains in more detail the study procedures. However, before proceeding with that second "health" screening, it is important that you read and understand all of the materials included in this consent document and ask any and all questions that come to mind about the study. However, your signing this document does not guarantee that you will be allowed to participate in the full study, which includes all listed procedures, since that decision is made based upon the results of the described tests and procedures that we will do to make sure that you are in good health so as to minimize the chance that you could be harmed by study participation. Specifically, this part of the study involves both a health screening and a study participation component which



involves being exposed to a strain of the common cold virus and staying in a hotel for 6 days to examine your physical and psychological responses. The following describes what will be done on all who present for enrollment and who wish to be considered for study participation and what will be done on those who pass the health screening and are accepted for study participation. No procedure or study-related activities will be done with you until you have all of your questions answered, understand what the study involves, and sign this informed consent document.

Who is being asked to take part in this research study?

We plan to study between 20 and 40 healthy adults aged 18-55 at the same time as you, and a total of approximately 260 participants over the 5-year period of study. About half of the participants will be male and half female. Like you, all will be susceptible to infection with the study virus (rhinovirus type 39) and all will be in good health.

What procedures will be performed for research purposes?

All procedures and tests are being done for research purposes. No information about you will be obtained from pre-existing medical or physician records, and no information about you will be added to your medical or physician records. If you are accepted for study participation and complete the study, your total time commitment will be about 7 ½ days (including the 6 days you spend in a hotel under quarantine [isolation]). Of this 7 ½ -day period (spread over a period of approximately 3-5 months), you will spend a total of about 4 hours completing questionnaires.

Health Screening Procedures (Visit 2):

Procedures to determine if you are eligible to take part in a research study are called "screening procedures." For this research study, you have passed the first screening done at Visit 1, and will be evaluated based on Health Screening criteria at this visit to Children's Hospital, which will last about 90 minutes. For Health Screening, you will complete a brief health history questionnaire, be given a physical examination, an ears, nose, and throat (ENT) examination, have blood drawn (about 6 teaspoons) and be asked to submit a urine sample for analysis. Your blood sample will be tested for human immunodeficiency virus (HIV, the virus that causes AIDS); evidence of abnormal metabolic functioning (when substances in your blood that are necessary for good health are absent, or present at unusually high or low levels); and other abnormalities related to the functions of your blood (for example, anemia, infection, clotting problems). Your urine will be tested for certain chemicals that indicate good kidney and other body functions. You will be asked to sign a separate Hospital-appropriate informed consent form for the HIV testing. The results of the HIV test will not be made part of a medical chart/record.

At this stage of screening (results to take about 2 weeks from the time of your visit), there are a number of factors that can exclude you from participating in the study. Examples include:

- Abnormal blood/urine test results
- Presence of HIV antibody in your blood
- High blood pressure
- Hepatitis
- Cardiac abnormalities
- Renal (kidney) abnormalities
- Living with someone who is immunocompromised (has weakened immune function) or who has COPD (chronic obstructive pulmonary disease)
- Participation in another research study within the last month (one which involves psychological questionnaires and/or experimental products) or plans to participate in such a study at any time during the 3 month enrollment in our study



- Previous participation in a cold or laboratory stress study (with some exceptions) performed by any investigator listed on page 1 of this consent form
- Unable to stay in a hotel continuously for 6 days and on the specified cloister dates
- Cold/flu-like illness within last 30 days before quarantine (hotel stay)

Experimental Procedures:

If you qualify to take part in this research study, you will undergo the experimental procedures listed below. These procedures will take place in Pittsburgh at Children's Hospital and labs at the University of Pittsburgh, and at a local hotel.

Pre-Hotel ('Pre-Cloister') Phase

1. At Visit 2, (Health Screening visit done at the CHP) we will do the following in addition to the physical examinations, urine tests and blood tests. This visit should take about 90 minutes.
 - Test a portion of the blood sample for certain indicators of blood cell aging (telomere length, telomerase activity, and lymphocyte markers) that may be related to resistance to a cold/flu. We test the extra blood taken for screening so as to avoid the additional discomfort of a second blood draw. The results of these tests are not used to exclude people from the study. Because these tests are not done by an accredited clinical laboratory and do not have clear clinical applicability, the results of the tests will not be provided to you. (Alternatively, for some participants, this test will be performed on a portion of the blood sample drawn at Visit 5, during the hotel stay, or at Visit 6 [described below]. In this case, the amount of blood drawn at Visit 2 will decrease somewhat, and the amount drawn at Visit 5, the hotel, or at Visit 6 will increase somewhat.)
 - Collect a saliva sample to determine the level of a chemical (cotinine) associated with tobacco use. To give this sample, you will be asked to chew on a small piece of dental cotton and put it into a small plastic tube. The level of this chemical is not used to disqualify people from participating in the study.
 - Collect a buccal (cheek cell) sample by placing a small brush against the inside of your cheek, twisting it several times, removing it from your mouth, and swirling it in a clear fluid. The sample will be used to test for genes that control the production of certain chemicals that your body makes to fight infection. These tests are not done by a clinical laboratory and have no direct implications for your health. The results of these tests are not used to disqualify people from participating in the study. Because the genetic data from this testing cannot yet be interpreted or applied in a clinically relevant or meaningful manner, the results of this test will not be provided to you.
2. At Visit 3, you will go to Children's Hospital to fill out some questionnaires and to be trained in study related procedures that include saliva collection, evening telephone interviews (including psychological, health behaviors, and stressful life-event questions), wearing a pedometer, and using custom-made watches that measure your activity level during the day. This visit should take about 90 minutes.
3. At Visit 4, you will go to a University laboratory at Old Engineering Hall in Oakland and have a laboratory assessment of the effects of acute (mild) stress on your body's responses. There, you will perform a mental arithmetic task and a simulated public speaking task (in front of a camera) during which your heart rate, blood pressure, and respiration (breathing) will be monitored, and 8 saliva samples will be collected. These tasks will be videotaped. Videotapes will be labeled with only your study ID number, will be stored for no longer than 6 years after the end of the study, and will only be available to investigators listed on Page 1 of this form. At this session, you will also complete brief questionnaires. In preparation for this visit, you will not be able to drink alcohol for 48 hours, exercise and/or use non-prescription medications for 24 hours, consume food and liquids (except water) for 2 hours, and smoke for 1 hour. This visit will take about 2 ¼ hours.



4. Over a designated 14 day period (7 days per week for 2 weeks), a member of our staff will call you to complete short (about 15 minute) interviews that ask questions regarding any symptoms, your feelings, your moods, your activities and your behaviors that may be important to maintaining good health.
5. Over a designated two-day period, you will collect 14 saliva samples (7 samples at scheduled times per day for two days in a row), and afterward, return the samples to our laboratory (you will bring them with you to your next visit). Saliva sample collection involves holding a small roll of dental cotton in your mouth for about a minute, capping the sample and writing your ID number and other information on its label. A handheld computer or programmed watch will remind you to take saliva samples according to a personalized schedule.
6. You may be asked to wear a watch-like instrument for up to 20 consecutive days to assess the amount of your physical activity. The instrument measures the amount of energy that you use. The watch is waterproof and comfortable, and does not require any action on your part. However, because of equipment limitations, only about ½ of participants will be asked to wear these devices.
7. For 4 consecutive days you will wear a pedometer on your waist (a device that counts the number of strides taken by the wearer by responding to the impact of the wearer's steps) during your waking hours. The pedometer is comfortable and does not require any action on your part.
8. At Visit 5, you will go to Children's Hospital of Pittsburgh and the following will be done over a period of about 90 minutes. None of the test results will be used to exclude you from the study.
 - You will learn what to expect during the hotel phase of the study.
 - A blood sample (about 1 teaspoon) will be taken for repeat testing of antibodies to the common cold virus to be used in the study. Participants who have a blood sample collected at Visit 5 will not have a sample collected at the hotel.
 - You will also complete psychological and health behavior questionnaires.

Hotel ('Cloister') Phase

The hotel stay will begin late in the afternoon of a specifically scheduled day and will end 6 days later (for example, you will report to the hotel late Friday afternoon and be released 6 days later on the following Thursday at about the same time of day). One or two floors of the designated hotel will be dedicated to our study. You will have a room equipped with bed, dresser, table and chair, television, telephone and bathroom facilities. You will be served 3 meals per day. You ARE NOT PERMITTED to leave the study floor(s), and you CANNOT HAVE visitors. You ARE ALLOWED to socialize with the other study participants on your floor, but YOU ARE NOT ALLOWED in each other's rooms and must maintain a minimum distance of 3 feet from each other to avoid infecting one another. Other rooms will be set up with equipment for testing and physicals. You will be called to these testing rooms at various times throughout each day in the hotel. You will be asked to refrain from taking home remedies or over-the-counter medications (e.g., Vitamin C, zinc, echinacea, over-the-counter cold/ sinus/ allergy medications) during the 2 days prior to the hotel stay and the hotel stay itself, since these products can interfere with the body's expression of cold symptoms/signs, data about which is collected and analyzed in this study. People reporting to the hotel with signs/symptoms of a cold will be excluded from continued study participation.

1. On day 0 (the full 24 hour day before virus exposure), the following will be done in addition to what is done typically on all days of cloister (see below).
 - Have a urine pregnancy test done if you are female (Note that a positive result excludes you from study participation),
 - You will fill out several questionnaires assessing your feelings, attitudes, activities and behaviors thought to be important for health (this takes approximately 90 minutes),
 - Collect an overnight urine sample and 8 periodic saliva samples,



- Have a test done to measure your baseline lung function. This test is called spirometry and involves blowing as hard as you can into a tube connected to a recording machine that measures your maximum lung air flow.
 - At the end of day 0 (24 hours after you arrive at the hotel), you will be exposed to a safety tested strain of rhinovirus type 39 which is expected to cause signs and symptoms of a common cold in some, but not all, subjects. The virus is administered as nose drops, and the dose is typical of that estimated for person-to-person transmission outside the research setting.
 - If you did not have a blood sample collected at Visit 5, you will have a blood sample taken on day 0 for repeat testing of antibodies to the common cold virus used in the study. This sample will also be tested for certain indicators of blood cell aging (telomere length, telomerase activity, and lymphocyte markers) that may be related to resistance to a cold/flu.
2. On all days of cloister at the hotel (including day 0) the following will be done.
- You will be given a general physical examination, an ear, nose and throat examination, and be checked for symptoms and signs of a common cold. The daily physical and ear, nose and throat exams include the following: assessment of any abnormality related to your skin, neck, lymph nodes, lungs, heart, abdomen, and joints; a chest exam during which the study physician will measure your breathing and listen to your heart and breath sounds using a stethoscope; visual examination of nasal congestion, nasal or sinus discharge and nasal swelling; and measurements of body temperature, blood pressure, the rate of nasal mucosal clearance and the pressure in your middle ears. All of these procedures are standard for clinical evaluations of patients, and you have probably have had them done by your doctor many times.
 - You will have several ear, nose, and throat (ENT) tests during each day of your hotel stay. The purpose of these tests is to determine if you have any ear, nose and throat complications of infection with the virus, such as a secondary infection of the sinus (sinusitis) or the middle ear (otitis media).
 - In one test, the study physician will look into your ears with a camera and light, and project and view your eardrums on a standard TV monitor. This will tell him/her if your middle ears have developed a fluid or are infected with bacteria.
 - You will also undergo nasal clearance tests, during which the study physician places drops of a sterile sweet-tasting liquid into your nose; and you will be asked to report back to the doctor as soon as you are able to taste the liquid in the back of your throat. This test measures how well the normal clearance function for nasal secretions is functioning.
 - Using an instrument called a tympanometer, the pressure in your middle ears will be measured. This test will be used to help determine if your middle ears are developing an infection before the physician can see any fluid.
 - You will complete a short (5 minutes or less) questionnaire about your current symptoms and moods.
 - You will collect all of your nasal secretions (nose blowing, etc.) into tissues that are supplied to you by the staff and will seal the tissues in plastic bags. These bags will be weighed at the end of each day.
 - A nasal wash will be done by squirting sterile saline fluid into your nostrils and then recovering the water in a cup (with assistance from an experimenter technician). The recovered fluid is used to determine if you are infected with the virus (but this will not be known until after your participation is completed) and for assay (analysis) of chemicals made by the body in response to infection.
 - Other tests may be ordered by the study doctor, and these can include repeat pulmonary function tests among others. The study doctor will discuss this possibility with you in the morning after reviewing your symptoms, signs and test results for the previous day. His/her recommendations will be made in the best interest of your health.
 - If, during the hotel stay, your symptoms suggest pulmonary (heart/lung) complications, secondary bacterial infection, or other unexpected complications, the study physician may end your involvement in the study, and



make arrangements for follow-up (if applicable). This monitoring focuses primarily on complications related to ears, sinuses and lungs. If you show any signs of complications, you will be followed and treated appropriately.

- It is also possible that the study doctor will have you transported to the CHP for tests that cannot be done in the hotel. For example, if he/she suspects pneumonia, you could be transported to the CHP for a complete workup including chest X-rays.
3. On the last day in the hotel, you will be given an exit physical examination. If you are found to have a bacterial infection that can sometimes follow a cold, you will receive prescriptions for medications and a schedule for additional follow-up by the study doctors.

Monitoring/Follow-up Phase

Procedures performed to evaluate the effectiveness and safety of the experimental procedures are called “monitoring” or “follow-up” procedures. For this research study, the monitoring/follow-up procedures include the following.

You will be asked to contact the study physician if you experience any unexpected or continuing symptoms between study day 7 (post-discharge from hotel) and the day of your last visit (3-5 weeks after the hotel stay). If pulmonary complications are suspected, the study physician will order pulmonary function testing (and perhaps chest X-rays). If your symptoms suggest secondary bacterial infection, he or she will document and treat the condition, as is standard clinical practice. If complications develop (e.g., bronchitis, pneumonia), a coordinator will periodically call you to assess the clinical situation and follow-up with investigators or your primary care physician.

- Approximately 3-5 weeks after the hotel stay, you will report to a University laboratory (Oakland, Old Engineering Hall) for your last visit of the study. This visit (Visit 6) lasts about 2 ¼ hours. You will undergo your second and final laboratory stress assessment (similar to that described in Visit 4, above), during which your heart rate, respirations (breathing), and blood pressure will be monitored. You will also collect 8 saliva samples, and complete brief questionnaires (these take approximately 15 minutes, total). In preparation for this visit, you will not be able to drink alcohol for 48 hours, exercise and/or use non-prescription medications for 24 hours, consume food and liquids (except water) for 2 hours, and smoke for 1 hour. You will be asked to undergo a final nasal wash at this visit (with assistance from an experimenter technician). Lastly, you will undergo a final blood draw (about one teaspoon). The blood sample will be tested for antibody to the study virus. The amount of antibody in the sample reveals how strongly your immune system reacted to the virus exposure and/or infection. At this visit, women will be asked to provide a urine sample for a pregnancy test. If the results of this test are positive and indicate that you are pregnant, you should make arrangements with your current health care provider for prenatal care as is usual for pregnant women if you have not already done so. However, for purposes of this study, pregnancy is considered to be a protocol violation and the regulatory agency (the FDA) that oversees this study requires that we complete a report and send it to them detailing the outcome of your pregnancy to include any problems experienced by you during your pregnancy, problems experienced during delivery, and the health of your newborn. To obtain this information, we will ask any woman identified as being pregnant to sign a release of protected health care information (called a HIPAA waiver) as it specifically relates to her pregnancy.
- At approximately 3 months after completing the hotel portion of this trial (plus or minus 2 weeks), we will be calling you to check up on your general health. We will be asking a number of general questions about your overall health, hospitalizations, and physician visits during the three months prior to this call. If those questions identify any problems that could be related to study participation, we will ask you to come to Children’s Hospital



of Pittsburgh for a more complete physical examination and any medical tests that may help us to understand what is causing your reported problems. At that time, we may also ask you to sign a release of your protected health care information (called a HIPAA waiver) as it specifically relates to your health in the time period under consideration. Of course, it is not necessary that you wait until we call you at the 3 month time before contacting one of the investigators listed on page 1 of this form if you have any concerns that your participation in the trial has adversely affected your health. During these times when you call us, we will review your concerns with you on the phone and make recommendations as to what we believe would be best for your health as is consistent with good medical practice. This may or may not include scheduling a visit to Children's Hospital of Pittsburgh for a complete evaluation as discussed above.

What are the possible risks, side effects, and discomforts of this research study?

1) Risks of Virus Exposure

The primary risks associated with study participation are related to the virus exposure and provoked infection. The virus that you will be exposed to, a virus that causes a common cold (called a rhinovirus) has been safety tested for contamination with other viruses and bacteria. We expect that about one-third (33%) to three-quarters (75%) of the people in this study will develop mild to moderate cold symptoms.

- a) Risks that are LIKELY (occur in more than 25% of people, or more than 25 out of 100 people) include: Nasal obstruction, nasal discharge, sinus pain, sore throat, cough, chest congestion, sneezing, headache, and a general feeling of illness lasting 2-5 days.
- b) Risks that are COMMON (occur in 10% to 25% of people, or 10 to 25 out of 100 people) include: Chills, back pain, earache lasting 1-2 days.
- c) Risks that are INFREQUENT (occur in 1% to 10% of people, or 1 to 10 out of 100 people) include: Dizziness (unrelated to blood drawing), sinus infection, fainting (unrelated to blood drawing), hands trembling, middle ear infection.
- d) Risks that are RARE (occur in less than 1% of people, or less than 1 out of 100 people) include: Pneumonia, bronchitis.

To provide some symptom relief, you will be allowed to take acetaminophen [Tylenol (R)] after you are exposed to the virus. We will provide the acetaminophen so that we can control all medications that are being taken and record the time and amount consumed.

2) Risks of Having Your Blood Drawn:

The physical risks of the blood draws are low and are outlined below. With the exception of the HIV and screening test results, there is little risk to the inadvertent release of assay (analysis) results because these are not linked to your risk for chronic disease or illness. However, a positive diagnosis of HIV antibodies or suggestive evidence of other diseases based on the results of the screening tests may have risks associated with emotional acceptance. Accidental release of this information to other parties could impact insurability for you and your family members and have other negative effects on your quality of life. We will protect against this unlikely risk by coding all samples sent for testing and maintaining the study code in a locked and secure facility under the direct supervision of the Principal Investigator. The study code will only be available to the Principal Investigator and by transfer to the primary study physician who will discuss these results with you, interpret their meaning, provide immediate counseling and refer you to appropriate centers for more intensive counseling.

- a) Risks that are LIKELY (occur in more than 25% of people, or more than 25 out of 100 people) include: (None).
- b) Risks that are COMMON (occur in 10% to 25% of people, or 10 to 25 out of 100 people) include: Discomfort from the needle (during blood drawing).



- c) Risks that are INFREQUENT (occur in 1% to 10% of people, or 1 to 10 out of 100 people) include: Bruising at the site of blood drawing, fainting at or about the time of blood drawing.
- d) Risks that are RARE (occur in less than 1% of people, or less than 1 out of 100 people) include: Infection at the site of blood drawing.
- e) Risks that are UNEXPECTED include: inadvertent release of screening data that indicates the existence of a previously unsuspected chronic medical condition.

3) Risks Associated With Psychological Stress Tests:

These tasks typically result in mild but short-lived increases in heart rate, blood pressure and muscle tension as well as mild psychological distress (e.g., frustration, irritation).

4) Risks of Completing the Study Questionnaires:

You will complete a number of questionnaires that assess demographics, your physical and social environment during childhood, your current social networks and social supports, your usual moods and specific aspects of your personality. Some of the information requested is quite personal and may cause you feelings of discomfort or unease that may last for variable periods after you have completed the questionnaires.

5) Risks of Ear, Nose, and Throat Testing:

You will undergo several kinds of ear, nose, and throat (ENT) testing during your hotel stay and at Visit 6. These tests may cause you some minor discomfort.

6) Risks to Females of Childbearing Potential

For your protection (and the protection of others), the investigators will exclude or remove you from the study if you are pregnant, planning to become pregnant within 3 months of enrollment in the study, or breast-feeding. To avoid risk to the fetus, it is important that you (for female participants) or your female sexual partner (for male participants) not become pregnant while you are participating in this research study. Avoiding sexual activity is the only certain method to prevent pregnancy. However, if you choose to be sexually active, you should use an appropriate "double barrier" method of birth control (such as female use of a diaphragm, intrauterine device [IUD], or contraceptive sponge, in addition to male use of a condom) or the female should be using prescribed "birth control" pills, injections, patches, or implants. Such birth control methods should be used for two weeks (14 days) prior to your first day in the hotel, and continue for two weeks (14 days) after you are released from the hotel. If you choose to be sexually active during this study, you understand that even with the use of these birth control measures pregnancy could still result.

7) Risks of Buccal (Cheek Cell) Brushing

There are no known risks associated with buccal (cheek cell) brushing. DNA (DeoxyriboNucleic Acid) is hereditary material coded in cells that helps determine how all living organisms will look and behave. Your DNA will be isolated from the obtained cheek cells and assayed (analyzed) for differences in genes that MAY affect the production of body chemicals that control how well the body defends itself against virus infection. There is little risk to accidental release of this genetic information. The samples will not be tested for anything other than those genes and all samples will be stored in a secure location at Children's Hospital of Pittsburgh, and labeled with your study ID number, not your name. Co-Investigators William Doyle, Ph.D. and Ha-Sheng Li-Korotky, M.D., Ph.D. share overall responsibility for the control of this storage location, and only investigators listed on Page 1 of this consent form will have access to these samples and the coded data. Because the assays are not done in an accredited, clinical laboratory and the results have no clinical application, you will not be informed of the test results. In the unlikely event of breach of confidentiality involving your DNA sample, knowledge of the test results by others could potentially impact your future insurability, employability,



or reproduction plans, or have a negative impact on family relationships, and/or result in paternity suits, shame, stigmatization, or embarrassment.

If I agree to take part in this research study, will I be told of any new risks that may be found during the course of the study?

You will be promptly notified if, during the conduct of this research study, any other information develops which may cause you to change your mind about continuing to participate.

What are possible benefits from taking part in this study?

There is no guarantee of direct benefit from your participation in this research study. You may benefit indirectly by knowing that you have participated in a research study designed to better understand the factors that make people susceptible to the common cold.

Will my insurance provider or I be charged for the costs of any procedures performed as part of this research study?

All procedures conducted in this study are for research purposes only, therefore neither you nor your insurance company will be charged for any of the procedures performed as part of this research study.

Will I be paid for participating in the study?

Study participation does not make you an employee of the participating hospitals or universities, but you will be compensated for your time. At the final visit, approximately 3-5 weeks after the hotel stay, you will receive remuneration for your study participation. This remuneration may be taxable and will be reported to the Internal Revenue Service (IRS). Because final visits are scheduled over an approximately 2-week period, participants will not all receive their checks on the same day. The table lists the various components of the study and how much you will be reimbursed for completing each part.

For CMU employees only: Subject payment for current part- or full-time CMU employees will automatically be added to your CMU employee paycheck. Taxes (approximately 30%) will automatically be withdrawn; depending on your annual income, you may receive some of this back when you file your IRS tax return.



<u>Study Component</u>	<u>Number of Times or Days</u>	<u>Payment per Time or Day</u>	<u>Transportation Reimbursement</u>	<u>Total Payment for Component</u>
1. Follow-up screening for people who <u>do not</u> have antibodies to the virus (Screening Visit 2)	1	\$5	\$4	\$9
2. Training session for actigraph watch, pedometer, evening interviews, saliva collection (Visit 3)	1	\$20	\$4	\$24
3. Evening telephone interviews	14	\$5	----	\$70
4. Saliva collection prior to hotel stay	2	\$25	----	\$50
5. Laboratory stress assessment (#1), dropoff saliva and equipment (Visit 4)	1	\$45	\$4	\$49
6. Training for cloister (Visit 5)	1	\$36	\$4	\$40
7. Days in hotel	6	\$50	\$4	\$304
8. Final visit 3-5 weeks after hotel stay; laboratory stress assessment (#2) (Visit 6)	1	\$45	\$4	\$49
Bonus 1 for successfully completing all components of study (components #1-8)				\$350
Bonus 2 for successfully completing all 14 phone interviews				\$55
			TOTAL	\$1,000

You will receive payment at the last visit (part 8 in the table). If you withdraw prior to the end of the study you will receive partial payment as determined by what parts of the study you have completed. For example, if you withdraw from the study after having completed Visits 3 and 4 (parts 2 and 5 in the table) and 4 evening telephone interviews, you would receive $\$9 + \$24 + \$49 + (4 \times \$5) = \$102$. As indicated in the table, you may also receive two bonuses. You will receive Bonus 1 (\$350) if you successfully complete all of the parts of the study. You will receive Bonus 2 (\$55) if you successfully complete the 14 evening telephone interviews according to the schedule that you will receive at the training session. (The telephone interviews are conducted 7 times a week for 2 consecutive weeks.) Subjects who complete all of the components of the study and earn both bonuses will receive \$1,000. Payment for volunteers who do not complete the entire study will be available at the time of the final test session. If you withdraw from the study or are withdrawn by the investigators, you will receive a pro-rated monetary amount consistent with the above-listed schedule.

Please Note: If you incur any charges at the hotel that are not covered by the study (for example, long-distance telephone calls, or damage to the hotel or its furnishings) and do not pay for them before checking out, the check that you receive at the last test session will have these charges subtracted from it. If you do not return a wristwatch, handheld computer, Actigraph watch (if assigned), pedometer, and/or timer lent to you at Visit 3, the investigators will subtract a portion of the replacement cost from your check (\$50/ wristwatch; \$50/ handheld computer; \$100/ Actigraph (if assigned); \$10/ pedometer; \$5/ timer). Replacement or repair costs for damaged equipment may also be subtracted from your check (at investigators' discretion), at the same dollar amounts.

Room Sharing Bonus: In very rare, unexpected circumstances, overbooking at the study hotel may make it necessary for study staff to seek volunteers who are willing to share a room with ONE other volunteer for some or all days at the



hotel. Individuals volunteering to share a room will each earn a bonus of up to \$180 (\$30 per day times 6 days in the hotel). If an extra room(s) becomes available during the hotel stay, participants sharing rooms will be moved to their own room. In this case the bonus will be prorated according to how many days were spent sharing. A few days before check in (Visit 5), you will be given the opportunity to express your preferences if the hotel is overbooked (for example, a desire to room with a friend also currently enrolled in the study, or smoking status). Individuals of the same gender will be assigned to share rooms unless a different-gender friend or relative is specified by both parties of a pair. Members of a romantic couple cannot share a room with each other. In extremely rare cases, if there are not enough volunteers to share rooms, study staff at their discretion will assign pairs to rooms, but will do their best when possible to meet your preferences. When possible, we will contact you prior to check in if you will be assigned to share a room, to let you know. If you are assigned to share a room and that arrangement later becomes uncomfortable for you, study staff will attempt to accommodate your preference for a room change.

	Number of Times or Days	Payment per Time or Day	Transportation Reimbursement	Total Payment for Component
Bonus 3 for sharing a hotel room (IF NECESSARY)	Up to 6 days	\$30	-----	Up to \$180

Who will pay if I am injured as a result of taking part in this study?

University of Pittsburgh and CMU researchers and their associates who provide services at UPMC recognize the importance of your voluntary participation in their research studies. These individuals and their staffs will make reasonable efforts to minimize, control, and treat any injuries that may arise as a result of this research. In the event that you should develop ear, sinus or lung infections during or immediately after your hotel stay, study physicians will provide immediate treatment at no cost to you. You should contact the physicians to obtain information about any other treatment if it is needed. This treatment will be available without cost to you if you are exposed to a virus as part of the study, whether or not you complete the entire study.

If you believe that you are injured as a result of the research procedures being performed, please contact immediately the Principal Investigator or one of the co-investigators listed on the first page of this form. Emergency medical treatment for injuries solely and directly related to your participation in this research study will be provided to you by the hospitals of UPMC. It is possible that UPMC may bill your insurance provider for the costs of this emergency treatment, but none of these costs will be charged directly to you. If your research-related injury requires medical care beyond this emergency treatment, you will be responsible for the costs of this follow-up care. Every attempt will be made to bill the research project directly; however, in cases where this is administratively impossible, you will be reimbursed for testing/treatment ordered by the study physician. You will not receive any monetary payment for, or associated with, any injury that you suffer in relation to this research.

Who will know about my participation in this research study?

Only members of the study staff who directly interact with you will know that you have participated in this study. Any information about you obtained from this research, including information from your DNA and other samples, will be kept as confidential (private) as possible. All records related to your involvement in this research study will be stored in a locked file cabinet. Your identity on these records will be indicated by a case number rather than by your name, and the information linking these case numbers with your identity will be kept separate from the research records. You will not be identified by name in any publication of the research results unless you sign a separate consent form giving your permission (release). Research results about you will not be released to any third party (e.g., personal physicians,



insurance companies, relatives) without your prior written authorization.

Will this research study involve the use or disclosure of my identifiable medical information?

All information concerning you will be recorded only in research charts/files. No information will be placed in your medical records/physician office records and no use of such records will be made by the study investigators.

Who will have access to identifiable information related to my participation in this research study?

Only the Principal Investigator of this study (Dr. Cohen), the study physician (Dr. Casselbrant), and a designated member of our staff (CMU Project Director) will have access to the study code (allowing identification of your records), and only researchers listed on the first page of this form and their staff will have access to your coded research results. In unusual cases, your research records may be released in response to an order from a court of law. It is also possible that authorized representatives of the Food and Drug Administration, the study sponsor (National Institutes of Health [NIH]), and/or the University Research Conduct and Compliance Office may inspect your research records. While NIH and the U.S. Food and Drug Administration understand the importance of maintaining the confidentiality of your identifiable research information, the University of Pittsburgh and CMU cannot guarantee the confidentiality of this information after it has been obtained by those agencies. If during the course of this study, the researchers learn that you or someone with whom you are involved is in serious danger or harm, they are required by Pennsylvania law to inform appropriate agencies. The fact that you are participating in a research study and that you are undergoing certain research procedures (but not the results of the procedures) may also be made known to individuals involved in reimbursement and/or other administrative activities associated with the conduct of the study.

For how long will the investigators be permitted to use information and samples collected from me in this research study?

The investigators will use and store your information and samples in accordance with University and NIH policy. Your blood and overnight urine samples will be stored indefinitely, but will not be made part of your medical record. The DNA isolated from your cheek cells will be stored indefinitely if you provide consent for its use in future studies. If you do not provide such consent, they will be destroyed. The DNA obtained from cheek cells will be assigned a code number and kept in a separate, secure location at Children's Hospital of Pittsburgh. The only genes tested will be those that are believed to control the amount of chemicals that your body makes in response to infection and the hormones that control the production of those chemicals. The results of the gene tests will only be made available to the researchers listed on Page 1 of this consent form and only in coded form. Only the researchers listed on Page 1 and the experimenters listed on Page 2 will have access to your blood samples. Only the investigators listed on Page 1 of this consent form will have access to your cheek cell samples. If you withdraw or are withdrawn from the study prior to completion, your blood and overnight urine samples will be stored indefinitely, but will not be made available to anyone other than the researchers listed on Page 1 of this consent form, will not be tested for disease, drugs, or alcohol, and will not be made part of your medical record. If you agree to participate in the research project, use of your biological samples and genetic material will be under the control of the principal investigator of this research project.

Because we suspect that there are a large number of genes that can affect illness during a cold/flu and only a few have been identified so far, we would like to be able to test your genetic material for other genes identified in future studies as possibly contributing to the ease of catching a cold or the degree of illness experienced during a cold. We cannot perform these tests on your genetic material in the future without your permission, and we ask that you indicate your preference by initialing your choice (on the next page of this form) as to whether or not you allow us to perform these specific tests. We will perform future tests on genetic samples stored in our laboratory and labeled with a code number that does not identify you personally, will only test for genes suggested by our work or that of others to be related to cold/flu-like illnesses, will not share the results of these tests with investigators not listed on page 1 of this form, and will



make sure that any stored information related to test results does not include information that will allow anyone other than the Principal Investigator of the study (Dr. Cohen) to re-identify you personally. When the primary study is completed (all enrolled subjects have been exposed to the cold virus and followed in the hotel), all identifiers will be removed from the data forms and computer files containing genetic information so that not even Dr. Cohen will be able to re-identify you personally. If you do not give your permission for future testing, all genetic material obtained from you will be destroyed after we complete the tests listed in this consent form. Your decision to allow or not to allow for future testing of your genetic material does not affect whether or not you can participate in this research study. Please read the following statement. If you agree, write your initials at the end of the statement. For more information, see the section, "What procedures will be performed for research purposes?"

"I agree to have part of my blood, overnight urine, and buccal (cheek cell) samples frozen, stored, and tested at a later date, for telomere length, telomerase activity, lymphocyte markers, and measures of oxidative stress (biological indicators of human cell aging); blood components that may influence the body's resistance to colds; and for certain genes (DNA) that are thought to affect the body's resistance to the common cold. I understand that only study investigators (listed on page 1) will have access to my samples, and that my samples will not be used to test for drugs, alcohol, HIV, or biomedical markers of disease. Because the data from this testing cannot yet be interpreted or applied in a clinically relevant or meaningful manner, the results of these tests will not be provided to me."

(Write your initials if you agree with this statement: _____)
(initials)

(Write your initials if you **DO NOT** agree with this statement: _____)
(initials)

Your questionnaires, videotapes, and other biological samples will be stored in a secure location at CMU, Pitt, or Children's Hospital, and assigned a code number, with information linking this code number to your name kept in a separate, secure location. Only investigators listed on Page 1 of this consent form and experimenters listed on Page 2 will have access to your questionnaires and videotapes. Questionnaires will be destroyed (shredded) no later than 6 years after the end of the study. Videotapes will be erased or destroyed no later than 6 years after the end of the study. If you withdraw or are withdrawn from the study prior to completion, your questionnaires and videotapes will be destroyed no later than 6 years after the end of the study.

May I have access to my medical information that results from my participation in this research study?

There is no information collected in this study that will be included in your medical records. However, the results of our screening tests on your blood and urine can be obtained by a signed, dated, written request from you to the Principal Investigator.

Is my participation in this research study voluntary?

Your decision to participate is entirely up to you. Feel free to discuss study participation with your physician and others in whom you trust. Your decision with respect to participation will have no effect on your current or future relationship with the University of Pittsburgh, Children's Hospital, and CMU, on your current or future medical care at a UPMC hospital or affiliated health care provider, or on your current or future relationship with a health care insurance provider.

May I withdraw, at a future date, my consent for participation in this research study?

You may withdraw, at any time, your consent for participation in this research study. To formally withdraw your consent



for participation in this study you should provide a written, dated notice of this decision to the Principal Investigator of this research study at the address listed on the first page of this form.

If you withdraw, the following materials collected from you may be kept by the investigators listed on Page 1 for up to 6 years after the end of this research project: your signed consent form, screening forms, psychosocial questionnaires, and videotape from the lab stress task. Lab results from your screening physical will be kept by the investigators for up to 6 years after their collection. The following materials may be kept indefinitely: blood samples, nasal wash samples, and overnight urine samples. Cheek cell samples may be kept indefinitely if you give consent for their use in future studies. If not, they will be destroyed.

The investigators reserve the right to remove you from the study for any reason, including if it becomes apparent that you are unable or unwilling to complete any of the following tasks required by the study: 1) attend and complete two screening appointments; 2) attend and complete three appointments to learn how to collect saliva, use the actigraph wristwatch and pedometer, and conduct telephone interviews; and perform two laboratory stress assessments; 3) complete saliva sample collection (for a total of 3 days) and drop-off; 4) complete all demographic and psychological questionnaires; 5) complete fourteen (14) evening telephone interviews; 6) attend and complete the hotel cloister (6 days); 7) follow medical and other instructions while cloistered; and 8) attend and complete a final (post-hotel) appointment. For your protection (and the protection of others), the investigators will remove you from the study if you arrive at the hotel with a cold, or if you are pregnant, planning to become pregnant within three months after enrolling in the study, or breast-feeding. The study physician may also withdraw you (and make arrangements for appropriate follow-up care, where applicable) if, after infection with the study virus, you show symptoms suggesting pulmonary complications, secondary bacterial infection, or other unexpected complications.

If more volunteers than we can accommodate (given limited staff, equipment, and testing space) are eligible based on antibody to the cold virus and general good health (determined at Screening Visits 1 & 2), excess volunteers will be withdrawn from the trial, based on the date on which they gave written informed consent to participate at Screening Visit 2; volunteers enrolling earlier take preference over later enrollees. Discontinued volunteers will be paid for their time according to the payment schedule in this consent form, and will be offered the opportunity to participate (assuming they pass screening criteria at that time) in a later trial. We anticipate the likelihood of excess enrollment to be extremely low.

Your doctor may be an investigator in this research study, and as an investigator, is interested both in your medical care and in the conduct of this research. Before entering this study or at any time during the research, you may discuss your care with another doctor who is in no way associated with this research project. You are not under any obligation to participate in any research study offered by your doctor.

Your decision to withdraw your consent for participation in this research study, or the investigator's decision to remove you from the study will have no effect on your current or future relationship with the University of Pittsburgh, Children's Hospital of Pittsburgh, or CMU, on your current or future medical care at a UPMC hospital or affiliated health care provider or on your current or future relationship with a health care insurance provider.

No guarantees have been made as to the results of your participation in the study.



VOLUNTARY CONSENT AND AUTHORIZATION: All of the above has been explained to me and all of my current questions have been answered. I understand that I am encouraged to ask questions about any aspect of this research study during the course of this study, and that such future questions will be answered by the researchers listed on the first page of this form. I certify that I have read all 16 pages of this form and I understand and agree to its contents. I will receive a copy of this form. Any questions I have concerning my rights as a research subject will be answered by the Human Subject Protection Advocate of the IRB Office, University of Pittsburgh (1-866-212-2668), or the IRB Chair at Carnegie Mellon University (412-268-4727). A copy of this consent form has been given to me. My signature below means that I have freely agreed to participate in this project.

Subject's Name (*please print*)

Subject's Signature

Date

CERTIFICATION OF INFORMED CONSENT:

I certify that I have explained the nature and purpose of this research study to the above-named individual(s), and I have discussed the potential benefits and possible risks of study participation. Any questions the individual(s) have about this study have been answered, and we will always be available to address future questions as they arise.

Printed Name of Person Obtaining Consent

Role in Research Study

Signature of Person Obtaining Consent

Date