

NATIONAL SCIENCE FOUNDATION
4201 WILSON BOULEVARD, STE 265-S
ARLINGTON, VIRGINIA 22230
(703) 292-8124



NSF HEALTH UNIT

Dear Doctor:

This person is being considered for participation in one of the United States National Science Foundation sponsored research projects in the Arctic. Due to the extreme environment and the remoteness of the polar regions participation is contingent upon obtaining a medical clearance for deployment.

In certain areas of Greenland medical facilities are limited and evacuation is required for serious illness and injury. Evacuations during the summer months can be arranged, but usually at significant impact on the research support system. Winter evacuations are always dangerous and sometimes impossible. Consequently, common clinical situations in urban communities such as evaluating chest pain, acute abdominal pain or treating renal calculi can present a major dilemma.

Altitude sickness is common and must be differentiated from other serious causes of dyspnea, dizziness and chest pain. Accordingly, it is vitally important to thoroughly screen individuals to identify risk factors for cardiopulmonary and psychological conditions. Your comments on the overall health of the applicant are valuable in contributing to the success of the Program.

The participant's health status is a key factor in the success of the scientific research program. We value and appreciate your assistance in the examining process. Please provide all of the necessary tests as indicated in the enclosure.

Administrative Information

Payment for these examinations: The science participant is responsible for payment of all charges associated with this examination. Please do not bill the National Science Foundation for this examination.

Other Requirements: Prescription drugs (type and quantity) are limited at all Arctic field camps. Candidates are required to bring a sufficient supply of their own medications for the duration of their deployments. The candidates may be responsible for costs required to resupply chronic medications, keeping in mind that if they run out, their medications may not be available.

Return of Examination/Tests: Please send the original medical history and physical examination results, including required test results to the NSF Health Unit Medical Director at the following address:

NSF HEALTH UNIT MEDICAL DIRECTOR
NATIONAL SCIENCE FOUNDATION
4201 WILSON BLVD, STE 265-S
ARLINGTON, VA 22230

If you wish to discuss the medical requirements for deploying to the Arctic, please contact me at 703-292-8124 or by email at jregier@nsf.gov.

Sincerely,

Janet F. Regier, M.D.
Medical Director

Enclosure
Laboratory and Testing Requirements

NATIONAL SCIENCE FOUNDATION
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ARLINGTON, VIRGINIA 22230
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TESTING REQUIREMENTS FOR ARCTIC DEPLOYMENT

Summer Support candidates (March – September)

Medical Examination/Testing: The tests that are required for this candidate are indicated below. In addition, the candidate will require a physical examination and a review of the medical history (forms included). A comment on all positive findings, which are noted on the medical history and physical examination, will be helpful in determining the examinee's fitness for deployment and in expediting the medical clearance process.

A summary of the **REQUIRED** testing for **ALL CANDIDATES** is listed below:

1. Laboratory:

- a. Fasting Lipid Panel to include:
 - (1) Total Cholesterol
 - (2) HDL
 - (3) LDL
 - (4) Ratio
 - (5) Triglycerides
- b. Biochemistry to include:
 - (1) Alkaline Phosphate
 - (2) ALT
 - (3) AST
 - (4) Bilirubin
 - (5) Calcium
 - (6) Chloride
 - (7) Creatinine
 - (8) Fasting Glucose
 - (9) Potassium
- c. Total Serum Iron or Ferritin (over 40 years of age, only)
- d. CBC with manual differential
- e. Blood type and RH Factor (first time applicants only)

2. Tuberculin Skin Test:

Required within the last six months for all applicants, including those who have received BCG vaccine previously. Anyone with a positive PPD reaction should receive a chest X-Ray to rule out active disease. Please document results on the physical examination form (NSF Form 1421-B).

3. **Chest X-Ray is required only for the following:**
 - a. Individuals with a positive Tuberculin skin test (PPD)
 - b. Individuals with clinical signs or symptoms of pulmonary disease
 - c. Every three years for individuals who have a greater than 20 pack per year smoking history
4. **Twelve-Lead EKG Tracing:**
See "Age Requirements" below.
5. **Immunizations:** (Note: This is a new requirement beginning in 2009.)
 - a. Tetanus – Must be current within 10 years and the date documented on the Physical Examination Form (NSF Form 1421-B)
 - b. Influenza
6. **Pap Smear and Pelvic Examination** - Annually

AGE SPECIFIC REQUIREMENTS

1. **35-39:**
Baseline Mammogram on file, up to age 40
2. **40-49:**
 - a. Mammogram every 2 years
 - b. Prostate Specific Antigen for African-American males >45 and all males with a family history of prostatic cancer
 - c. Baseline Twelve-Lead EKG on file, current within 5 years for all candidates
 - d. Exercise Stress Test (Bruce Protocol) as determined by examining physician or the NSF Medical Advisor after review of the candidate's medical history (stress echo should be done if candidate has had previous positive stress test(s))
3. **50-59:** Previously listed requirements, plus the following:
 - a. Stool Guaiac test – Annually
 - b. Twelve-Lead EKG – every 2 years, unless clinical indications suggest more frequent
 - c. Prostate Specific Antigen – Annually
 - d. Mammogram – Annually
 - e. Exercise stress test – every 2 years
4. **60 and over:** Previously listed requirements, plus the following:
 - a. Twelve-Lead EKG - Annually
 - b. Exercise stress test – Annually

Note:

Any abnormal finding should be explained on the form and will require follow-up evaluation prior to deployment (e.g., elevated PSA, abnormal pap smear)

POLAR PHYSICAL EXAMINATION

NAME: _____ DOB: _____

BLOOD TYPE: _____

COMPLETE ALL SECTIONS USING CODES WHERE APPROPRIATE

VITAL SIGNS		VISION			
		WITHOUT CORRECTION		WITH CORRECTION	
HEIGHT: _____	WEIGHT: _____	DIST	NEAR	DIST	NEAR
BP: _____/_____	HEART RATE: _____	R _____	_____	R _____	_____
RESPIRATIONS: _____	TEMPERATURE: _____	L _____	_____	L _____	_____

CODES: O – Within Limits
 I – Significantly Abnormal
 X – Not Examined

Code Remarks (discuss abnormal findings in detail)

1. General Appearance.....		
2. Head and neck.....		
3. Eyes.....		
4. Ears.....		
5. Nose.....		
6. Mouth.....		
7. Thyroid.....		
8. Lymph nodes.....		
9. Chest, Lungs, Breasts.....		
10. Heart.....		
11. Abdomen.....		
12. Inguinal, include hernia.....		
13. Genitalia.....		
14. Anal and Rectum.....		
15. Spine.....		
Forward Bend, Fingers Miss Floor ____ Inches		
16. Upper Extremities.....		
17. Lower Extremities.....		
Varicosities.....		
18. Skin, Lymphadenopathy.....		
Identify Body Marks, Scars, Tattoos.....		
19. Peripheral Vascular.....		
20. Neurologic Status (include Reflexes)....		
21. Emotional Status.....		
22. Pelvic Exam.....		
23. Men > Age 40: Prostate Exam.....		

Physical Examination

Guiac Test (Required annually for age 50 and up) _____ Results Date	Tetanus Immunization Date (Update every 10 years) _____ Date	TB Skin Test (Required Annually) _____ Results Date
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Examiner's Diagnoses and Comments:

(Please ask the candidate if there is any other medical information not already obtained which should be known prior to deployment.)

I have thoroughly examined this candidate for travel to the Polar Regions. I have reviewed the participant's history with him/her, including ALL positive responses, and commented appropriately. I have performed all diagnostic tests as requested.

 Examiner's Name (Type or Print):

 Examiner's Signature DATE

 ADDRESS

 CITY STATE ZIP

I have been informed regarding the medical examination findings herein (signature optional).

PHONE #: _____

 PATIENT'S SIGNATURE DATE

Return the completed examination form and results of the requested tests to (return envelope enclosed):

National Science Foundation
 Attention: **NSF Medical Director**
 4201 Wilson Boulevard, Ste 265-S
 Arlington, VA 22230
 703-292-8124 Fax: 703-292-9001