

**NATIONAL SCIENCE FOUNDATION**  
**OFFICE OF POLAR PROGRAMS**  
4201 WILSON BOULEVARD, SUITE 755-S  
ARLINGTON, VA 22230

**ELECTRONIC SUBMISSION OF MEDICAL FORMS**

**Notice to all participants in the US Antarctic Program**

**PLEASE DO NOT SUBMIT YOUR COMPLETED MEDICAL FORMS OR OTHER DOCUMENTS THAT CONTAIN PERSONALLY IDENTIFIABLE INFORMATION BY EMAIL. YOU MUST PRINT THE FORMS, MANUALLY SIGN THEM AND MAIL OR FAX THEM TO RAYTHEON POLAR SERVICES COMPANY.**

Explanation:

The NSF is bound by the requirements of the Privacy Act of 1974 and its amendments. All information collected for the purpose of determining your physical qualifications for deploying to Antarctica, is considered confidential. The NSF and its contractors that are in receipt of your medical and personal information are required to maintain your confidentiality and secure your information.

For your convenience, the NSF has made the medical forms interactive so that you may, if you choose, fill them out electronically and save a copy on your computer for your personal use. However, the NSF currently has no way to secure the data as it is electronically transmitted and therefore cannot protect your confidentiality if you transmit the data over unsecured lines.

In order to ensure that we do not violate the Privacy Act or any other federal law pertaining to confidential or personally identifiable information, Raytheon Polar Services Company has been instructed not to accept any electronically submitted medical forms. **Any medical forms received by email will be disposed of without action.**

If you have any questions regarding NSF privacy rules or procedures, please contact the NSF Office of the General Counsel at 703-292-8060.

NATIONAL SCIENCE FOUNDATION

4201 Wilson Boulevard  
ARLINGTON, VIRGINIA 22230



OFFICE OF POLAR PROGRAMS

Dear Grantee,

The National Science Foundation's Office of Polar Programs (OPP) would like to take this opportunity to remind you of the importance of being prepared for all aspects of your field work. You will have received a lot of information from OPP and from its support contractor, Raytheon Polar Services Company, with respect to working in Antarctica, including a link to the [USAP Participant Guide](#) which provides you with practical knowledge about working in Antarctica.

You are responsible for yourself and for all members of your team, including graduate students and postdoctoral fellows. All research staff (paid or volunteer) should be affiliated in some manner with your organization(s), so any worker compensation issues arising from injuries sustained while deployed can be addressed by your organization. NSF does not provide insurance for grantee personnel and the cost of insurance is not an allowable expense on NSF grants. As such, persons traveling to Antarctica are expected to have insurance appropriate to their normal life situations so that any needed health care, compensation for property loss, worker's compensation, or survivor benefit will be provided for in the event of a health care emergency. Emergency medical care for U.S. Antarctic Program participants in Antarctica is provided in clinics at the year-round stations, and persons who need hospital care will be transported to health care facilities in New Zealand, South America, or the United States, at which point they or their sponsors will be responsible for medical costs. An often overlooked aspect of field work is time you and members of your team will spend in the gateway cities of Christchurch, New Zealand and Punta Arenas, Chile. Check your health and life insurance policies to be sure that flights aboard scheduled military aircraft are covered and also that health care received in foreign countries is covered.

Wishing you a safe and productive deployment.

Handwritten signature of Brian Stone in black ink.

Brian Stone  
Division Director  
Antarctic Infrastructure  
and Logistics Division

Handwritten signature of Michael Montopoli in black ink.

Michael Montopoli  
Head  
Polar Environment,  
Safety and Health

Handwritten signature of Scott Borg in black ink.

Scott Borg  
Division Director  
Antarctic Sciences Division

Handwritten signature of Karl A. Erb in black ink.

Karl A. Erb  
Director  
Office of Polar Programs

## MEDICAL AND DENTAL - INSTRUCTION GUIDE – Long Form

	DESCRIPTION OF FORM	ACTION
Checklist Form ME-DT-D-112	Completed by RPSC Medical for each candidate, based upon age, gender, family history (if available), previous deployment history, and seasonal deployment needs. <b>Additional tests/exams may be required based on information received.</b>	Call your Doctor/Dentist: request appointment to include any/all tests indicated on checklist. Take the checklist with you to appointments, along with the “Dear Doctor” letter (ME-DT-D-102).  <b><i>Falsifying and/or non-disclosure of information may result in permanent disqualification from the United States Antarctic Program.</i></b>
Release Form NSF Form 1421	"Medical Risks for NSF-Sponsored Personnel Traveling to Antarctica" release.	Read, sign and date. Return to RPSC Medical. Participants <b>WILL NOT</b> be cleared for deployment until RPSC Medical receives this form.
Medical History NSF Form 1422	Five page medical history (long form).	Long form - Complete and take with you to your Doctor's appointment. Return to RPSC Medical.
Polar Physical Examination NSF Form 1423	One page examination form.	This is for your Doctor to complete during your appointment. This completes the medical history form. Return to RPSC Medical.
Lab Work Required <b>Raytheon and NANA Employees Only</b>  LabCorp Requisition or LabCorp Lab Kit	LabCorp is a nationwide chain that will send the results to, and direct-bill, the RPSC Medical Department. For LabCorp locations in New York and California, you may be asked to provide full or partial payment at time of service. You will be reimbursed.  Please follow the instructions on your checklist.  If you do not have a LabCorp location near you, please notify RPSC Medical and we will mail you a LabCorp Lab Kit.	Visit <a href="http://www.labcorp.com">www.labcorp.com</a> to find the closest LabCorp patient draw site to your location. Bring with you the <b>LabCorp Requisition</b> sent to you via email from the RPSC Medical Department.  If a LabCorp is not available, contact RPSC Medical and request a LabCorp Lab Kit be mailed to your attention. Your doctor’s office or other laboratory facility can follow the Lab Kit instructions. It is your responsibility to make sure that the laboratory specimens are mailed on the day they were collected.  Lab results will be directly faxed to the RPSC Medical Department.  <b>Labs must be done within 6 months of deployment. You must fast for 10-12 hours prior to the blood draw.</b>
Lab Work Required <b>Non-Raytheon Participants</b>  Required Labs Form ME-DT-A-109	Provides a list of required laboratory tests.  Please follow the instructions on your checklist.	Take this form with you to your doctor’s appointment.  All lab results should be faxed to the RPSC Medical Department.  <b>Labs must be done within 6 months of deployment. You must fast for 10-12 hours prior to the blood draw.</b>
HIV Consent NSF Form 1424	Explains the walking blood bank procedure and the need for HIV testing.	Read, sign and date this form. Take it with you to your Doctor’s appointment and have it returned with the medical forms.
Dental NSF Form 1425	Radiographs become the property of USAP and will not be returned to you or your Dentist. Instructions for digital radiographs can be found in the “Dear Dentist” letter (ME-DT-D-106).	Complete the top portion of the Dental Examination form BEFORE your appointment. Take the “Dear Dentist” letter to your Dentist. The exam form and ORIGINAL radiographs are to be sent to RPSC Medical.
Reimbursement Form ME-A-103	Form used by Raytheon employees for out-of-pocket reimbursable fees only. Use this form only if you are not currently working for RPSC.	Read and follow instructions on the Reimbursement form. Mail to RPSC Finance. This form is located on the website, but not currently in the medical packet.
Eyewear Policy for Antarctica Form ME-A-119	Sunglasses are a requirement in Antarctica. This form details all requirements.	RPSC employees are eligible to be reimbursed every other year for one (1) pair of prescription sunglasses. Additionally, if required of your job position, reimbursement for one (1) pair of prescription safety glasses. You will be reimbursed up to \$175.00 for each pair. <b>You must be Physically Qualified to obtain reimbursement.</b>
Medications Form ME-A-121	<b>Participants taking prescription or over-the-counter medications are required to bring an adequate supply for the deployment duration.</b> USAP does not provide motion sickness medication.	If you need physician-prescribed medications of any kind during your deployment, please consult your physician. <b>You will need to obtain a prescription for the length of your deployment.</b> Be sure to bring enough medication to allow for travel and extended time on Ice. See letter included in packet.
Immunizations	Current Tetanus immunization -USAP required. Influenza Vaccination – USAP required. Hepatitis A & B vaccines are strongly recommended for certain positions. See checklist.	Consult the Centers for Disease Control and Prevention International Traveler’s Hotline re: immunization for international travel at <a href="http://wwwn.cdc.gov/travel/default.aspx">http://wwwn.cdc.gov/travel/default.aspx</a>
Psychological Screening - Winter Over Participants	Required for candidates deploying to either McMurdo or the South Pole during the austral winter (March-October).	Call RPSC Medical at 800-688-8606, option 3, to arrange an appointment. Nicoletti-Flater Associates are located in Denver, CO, and will perform all psychological evaluations in Colorado.

# **NOTICE**

**You are required to report any changes in your health status occurring after your physical examination.**

**If you recently married or had a name change, please provide both of your names.**

**Report changes to:**

**RPSC Medical Screening  
7400 South Tucson Way  
Centennial, CO 80112**

**Fax (303) 649-9275**

**If you need medical care in New Zealand, please contact the RPSNZ Medical Coordinator, who will assist you with arranging medical/dental appointments. There will be a charge for your visit to the doctor/dentist.**

**If you require health care on your travel through Chile, contact the local AGUNSA office for assistance in making appointments. Be prepared to pay for services at your appointment.**

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**OFFICE OF POLAR PROGRAMS**

**January 21, 2011**

*POLAR ENVIRONMENT, HEALTH AND SAFETY OFFICE*

**New Government regulations require that we inform you of the following:**

“The Genetic Information Nondiscrimination Act of 2008 (GINA) prohibits employers and other entities covered by GINA Title II from requesting or requiring genetic information of an individual or family member of the individual, except as specifically allowed by this law. To comply with this law, we are asking that you not provide any genetic information when responding to this request for medical information. ‘Genetic information’ as defined by GINA, includes an individual's family medical history, the results of an individual's or family member's genetic tests, the fact that an individual or an individual's family member sought or received genetic services, and genetic information of a fetus carried by an individual or an individual's family member or an embryo lawfully held by an individual or family member receiving assistive reproductive services.”

**Therefore, you should leave blank all questions related to your family’s medical history and only answer those regarding your personal/individual history.**

NATIONAL SCIENCE FOUNDATION - POLAR PHYSICAL EXAMINATION

**MEDICAL HISTORY**

<p><i>Complete pages 1-5 in ink prior to Dr.'s exam</i></p>	<p><b>Polar Medical Staff Use Only</b></p> <p>Date: _____ <input type="checkbox"/> PQ <input type="checkbox"/> PQ Summer Only <input type="checkbox"/> NPQ</p> <p>Medical Condition(s):</p> <p>_____</p> <p>_____</p>			
<p><b>Polar Medical Staff Use Only</b></p> <p>Reviewed by: _____</p> <p>Date: _____</p>	<p><b>Restrictions and Follow-up:</b></p> <p>_____</p> <p>_____</p> <p>_____</p> <p><b>Reason for NPQ:</b></p> <p>_____</p> <p>_____</p>			
Name: last, first, middle (must match passport)		Age:	Birth date (MM/DD/YY):	Sex: <input type="checkbox"/> F <input type="checkbox"/> M
Nickname (aka)		Maiden Name:	Previous Name or Other Legal Name:	
Street		City	State	Zip
Telephone (include area code):				
Day:	Evening:	Mobile:	E-Mail:	
Emergency Point of Contact (Name, Address and Phone Number):				
<b>Job Title:</b>		<b>Current Deployment Dates:</b>		<b>Previous Polar (Arctic or Antarctic) Deployment?</b>
		From _____ to _____		Dates: _____
				Location: _____
<b>Affiliation:</b> <input type="checkbox"/> NSF		<b>Proposed Antarctic Season and Worksite:</b>		<b>Proposed Arctic Season and Worksite:</b>
<input type="checkbox"/> Science Event # _____		<input type="checkbox"/> Summer (Sep-Feb)		<input type="checkbox"/> Summer (Mar-Sep)
<input type="checkbox"/> Technical Event # _____		<input type="checkbox"/> Winter (Mar-Oct)		<input type="checkbox"/> Winter (Oct-Feb)
<input type="checkbox"/> RPSC		<input type="checkbox"/> Winfly _____ (dates)		<input type="checkbox"/> Summit
<input type="checkbox"/> CH2M HILL		<input type="checkbox"/> McMurdo Station		<input type="checkbox"/> USCGC Healy
<input type="checkbox"/> Other: _____		<input type="checkbox"/> South Pole Station		<input type="checkbox"/> Field Camp _____
		<input type="checkbox"/> Palmer Station		<input type="checkbox"/> Other: _____
		<input type="checkbox"/> RV/NB Palmer		
		<input type="checkbox"/> RV/LM Gould		
		<input type="checkbox"/> Field Camp _____		
		<input type="checkbox"/> Other (specify): _____		

NAME \_\_\_\_\_

DOB \_\_\_\_\_

CURRENT MEDICATIONS						
Name	Dose	Frequency		Name	Dose	Frequency

ALLERGIES			
Name	TYPE OF REACTION		TYPE OF REACTION

PAST HOSPITALIZATIONS			
Condition	Date	Condition	Date

PAST SURGERIES			
Condition	Date	Condition	Date

MEDICAL TESTING/PROCEDURES IN PREVIOUS 3 YEARS		
Type (specify body location)	Date	Describe: reason for test procedure and result
MRI		
CT		
Ultrasound		
Angiogram		
Biopsy		
Other		

IMMUNIZATION HISTORY			
	Date – most recent immunization		Dates of immunization
Influenza		Hepatitis A	
DT		Hepatitis B	
DPT		Other (specify)	
Pneumococcus			

NAME \_\_\_\_\_

DOB \_\_\_\_\_

<b>SOCIAL HISTORY</b>							
<b>Tobacco</b>		<b>yes</b>	<b>no</b>	Describe: Packs/week    Total yrs.    Year last			
Do you currently use tobacco products?							
Have you used tobacco products in the past?							
<b>Alcohol</b>		<b>yes</b>	<b>no</b>				
Do you drink alcohol?							
If abstinent, please enter date of your last alcoholic beverage:							
Have you ever felt you should decrease your alcohol consumption?				Describe:			
Have you ever received a DUI, DWAI or court ordered treatment for alcohol?							
Have you been diagnosed as an alcoholic?							
<b>Exercise and conditioning</b>		<b>yes</b>	<b>no</b>	Describe:			
Do you have a regular exercise program?				Date of last treadmill:			
Have you had a cardiovascular stress test?							
<b>GENERAL MEDICAL HISTORY</b>							
<b>ANSWER THE FOLLOWING QUESTIONS REGARDING YOUR PRESENT OR PAST MEDICAL HISTORY</b>							
<i>Condition</i>		<i>Yes</i>	<i>No</i>	<i>Condition</i>		<i>Yes</i>	<i>No</i>
<b>1</b>	<b>Neurology</b>			2D	Congestive heart failure		
1A	Cerebrovascular accident (CVA)			2E	Coronary angioplasty/stent/bypass		
1B	Concussion			2F	Coronary artery disease		
1C	Dizziness/Loss of Consciousness			2G	Heart murmur/valvular heart disease		
1D	Headaches (Migraine)			2H	Hypertension (high blood pressure)		
1E	Headaches (Other)			2I	Myocardial Infarction (MI)		
1F	Multiple sclerosis			2J	Supraventricular tachycardia (SVT)		
1G	Peripheral neuropathy			2K	Other cardiac condition		
1H	Seizures			<b>3</b>	<b>Vascular disease</b>		
1I	Transient ischemic attack (TIA)			3A	Abdominal aneurysm		
1J	Traumatic brain injury (TBI)			3B	Arterial emboli		
1K	Other neurological disorder			3C	Cerebral aneurysm		
<b>2</b>	<b>Cardiology</b>			3D	Deep venous thrombosis (DVT)		
2A	Angina/chest pain			3E	Venous stasis ulcers		
2B	Atrial fibrillation			3F	Other vascular condition		
2C	Cardiac pacemaker/defibrillator						
<p><i>For all "yes" answers, please provide details to include age of onset, frequency of event, date of last episode, current medications, other therapies and status of the condition.</i></p>							

NAME \_\_\_\_\_

DOB \_\_\_\_\_

<b>GENERAL MEDICAL HISTORY</b>							
<b>ANSWER THE FOLLOWING QUESTIONS REGARDING YOUR PRESENT OR PAST MEDICAL HISTORY</b>							
<i>Condition</i>		<i>Yes</i>	<i>No</i>	<i>Condition</i>		<i>Yes</i>	<i>No</i>
<b>4</b>	<b>Rheumatologic disease</b>			8L	Peptic ulcer disease		
4A	Fibromyalgia			8M	Ulcerative colitis		
4B	Osteoarthritis			8N	Other gastrointestinal disease		
4C	Rheumatoid arthritis			<b>9</b>	<b>Dermatology</b>		
4D	Systemic Lupus erythematosus			9A	Dermatitis		
4E	Other rheumatologic condition			9B	Melanoma		
<b>5</b>	<b>Ears Nose and Throat</b>			9C	Psoriasis/Eczema		
5A	Hearing impairment			9D	Skin cancer		
5B	Nosebleeds			9E	Other skin condition		
5C	Seasonal Allergies			<b>10</b>	<b>Orthopedic</b>		
<b>6</b>	<b>Ophthalmology</b>			10A	Cervical spine injury		
6A	Glaucoma			10B	Chronic pain		
6B	Visual impairment			10C	Dislocation		
6C	Other eye condition			10D	Fractures		
<b>7</b>	<b>Pulmonary</b>			10E	Low back injury		
7A	Altitude sickness			10F	Orthopedic pins/plates		
7B	Asthma			10G	Other orthopedic condition		
7C	Chronic bronchitis/bronchiectasis			<b>11</b>	<b>Metabolic</b>		
7D	Chronic obstructive pulmonary disease			11A	Adrenal insufficiency		
7E	Dyspnea (shortness of breath)			11B	Diabetes Type I		
7F	Obstructive sleep apnea			11C	Diabetes Type II		
7G	Pulmonary embolism			11D	Gout		
7H	BCG Vaccine or Positive TB Test			11E	Hypercholesterolemia		
7I	Other pulmonary condition			11F	Hyperthyroidism		
<b>8</b>	<b>Gastrointestinal disease</b>			11G	Hypothyroidism		
8A	Black tarry stools			11H	Pituitary insufficiency		
8B	Blood in stool			11I	Other hormonal disorder		
8C	Cholelithiasis (gallstones)			<b>12</b>	<b>Gynecology-female</b>		
8D	Crohn's disease			12A	Menstrual period in past 30 days		
8E	Frequent or persistent diarrhea			12B	Date of last PAP smear		
8F	Gastroesophageal reflux (GERD)			12C	Premenstrual syndrome (PMS)		
8G	Hemorrhoids			12D	Endometriosis		
8H	Hepatitis (describe type)			12E	Severe menstrual cramps		
8I	Hernia			12F	Ovarian cysts		
8J	Irritable bowel syndrome (IBS)			12G	Sexually transmitted disease		
8K	Pancreatitis			12H	Other gynecological conditions		

*For all "yes" answers, please provide details to include age of onset, frequency of event, date of last episode, current medications, other therapies and status of the condition.*

NAME \_\_\_\_\_

DOB \_\_\_\_\_

**GENERAL MEDICAL HISTORY**

**ANSWER THE FOLLOWING QUESTIONS REGARDING YOUR PRESENT OR PAST MEDICAL HISTORY**

<i>Condition</i>		<i>Yes</i>	<i>No</i>	<i>Condition</i>		<i>Yes</i>	<i>No</i>
<b>13</b>	<b>Psychiatric</b>			<b>15</b>	<b>Hematology/Oncology</b>		
13A	Addiction			15A	Anemia		
13B	Anxiety/panic attacks			15B	Cancer (describe type)		
13C	Attention deficit disorder			15C	Leukemia		
13D	Bipolar			15D	Lymphoma - Hodgkins		
13E	Depression			15E	Lymphoma – non Hodgkins		
13F	Eating disorder (bulimia/anorexia)			15F	Platelet disorder		
13G	Hospitalization for psych condition			15G	Other hematologic/oncologic		
13H	Post traumatic stress disorder			<b>16</b>	<b>Genitourinary - male</b>		
13I	Schizophrenia			16A	Prostate disease		
13J	Suicidal thoughts or attempts			16B	Sexually transmitted disease		
13K	Other psychiatric condition			16C	Testicular abnormality		
<b>14</b>	<b>Renal disease</b>			16D	Other genitourinary condition		
14A	Chronic Renal Disease						
14B	Frequent urinary tract infections						
14C	Hematuria (blood in urine)						
14D	Kidney stones						
14E	Other kidney condition						

*For all “yes” answers, please provide details to include age of onset, frequency of event, date of last episode, current medications, other therapies and status of the condition.*

*I certify that the information contained herein is complete and accurate to the best of my knowledge. I will inform the contractor’s medical staff of ALL medical/health changes, including medications that occur after submitting this form. I understand that failure to provide any or all of the requested information may result in a denial of my application for assignment to the Polar regions. I also understand that willfully providing false statements to a Federal agency or its representatives is a criminal offense.*

\_\_\_\_\_  
Print Name

\_\_\_\_\_  
Signature

\_\_\_\_\_  
Date

# Raytheon Polar Services Company

## Contracted Medical Provider List

7400 S Tucson Way Centennial, CO 80112-3938  
Local (303) 790-8606 ext 3 ~Toll free (800) 688-8606 ext 3 ~ Fax (303) 649-9275

RPSC has contracted with the following physicians, dentists, eyewear and other medical providers for services to RPSC employees and individuals deploying to Antarctica under the United States Antarctic Program (USAP). These contractors are located in the Denver Metro/Boulder Colorado area and will direct bill RPS Medical.

To see one of our contracted providers, please do the following:

**Step 1** Before making an appointment with a contracted Doctor, Dentist, Radiology or Mammogram office; please call the RPS Medical Office to request your checklist be faxed to the providers. The fax authorizes the scheduling of your appointments as part of your PQ process.

**Step 2** Call contracted providers and schedule your appointments.

### **BILLING INFORMATION**

The offices of HealthMark, Dr. Harris, Dr. Anderson, ImageOne and Rose Breast Center will direct bill RPS for authorized services provided. You will not be responsible for any payment to the contracted providers for any authorized services.

You are free to go to the doctor or dentist of your choice. Do not instruct **your** doctor or dentist to bill RPSC directly. If you do not choose one of the providers listed below **you will be responsible for paying all fees at the time of your visits.** You will then file for reimbursement from RPSC by submitting the Medical/Dental Expense Reimbursement Form in your medical packet along with the itemized bill from your doctor and/or dentist and your receipt of payment. If you are currently a RPSC employee you must file online using WebTE.

**NOTE: There is no provision for reimbursement of dental work that may be required for deployment.**

### **PHYSICIAN**

#### **Dr. John Harris, MD**

12150 E Briarwood Ave Ste 105  
Englewood, CO 80112  
Phone (303) 790-1999

### **PHYSICIAN**

#### **HealthMark**

4700 East Iliff Avenue  
Denver, CO 80222  
Appointments-Jennifer Robertson (303)584-5850  
Directions/Questions-Main Number (303)584-8900

### **DENTISTS**

#### **Dr. Roger Anderson, D.D.S**

Dr. Wellman, D.D.S  
Dr. York, D.D.S  
14000 E Arapahoe Rd, Ste 200  
Englewood, CO 80112  
Phone (303) 632-3638

### **PRESCRIPTION SUN GLASSES**

#### **Opticus Inc.**

760 E. Heartstrong  
Superior, CO 80027  
Phone (800)870-5557 or (303)499-0111  
Fax (303)499-0119  
Website: [www.opticus.com](http://www.opticus.com)

### **RADIOLOGY**

#### **Image One**

8101 E. Lowry Blvd Ste 120  
Denver, CO 80230  
Phone (303)340-8439

### **MAMMOGRAMS**

#### **Rose Breast Center – Founders Building**

4700 East Hale Parkway Ste 450  
Denver, CO 80220  
Phone Central Scheduling (303)320-2568

# Raytheon Polar Services Company

7400 S. Tucson Way, Centennial, CO 80112-3938  
(303) 790-8606 (800) 688-8606 FAX (303) 649-9275

Dear Doctor:

This person is applying for a position with the United States Antarctic Program (USAP). Due to the remoteness of the area, medical facilities have limited diagnostic and therapeutic modalities. The clinics in Antarctica can comfortably manage primary care problems. Emergency situations requiring hospitalization or sophisticated diagnostic procedures require evacuation to New Zealand or the South American continent. Under optimal conditions, medical evacuation can be performed in no less than twelve hours. At Palmer Station evacuation is only available by sea and may take several days. At McMurdo and the South Pole Stations, weather conditions can delay flights in and out of Antarctica for several days in the summer. Winter evacuations are virtually impossible. Consequently, common clinical situations in urban communities such as evaluating atypical chest pain, acute abdominal pain or treating renal calculi can present a major dilemma.

Antarctica is the highest, driest and coldest continent on earth. Temperatures at McMurdo Station are frequently well below freezing in the summer. South Pole temperatures on average are -30F degrees in the summer with wind chills commonly -60F degrees. Employees live in a confined space during the unrelenting six-month summer daylight or winter darkness. The South Pole is at a physiological altitude greater than 10,000 feet and has virtually no humidity. Altitude sickness is very 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 and the safety of the participant. The USAP has medical examination requirements for summer and winter deployment as discussed below:

## **Summer Deployment (August-February)**

Medical Examination/Testing:

All tests and labs to be performed on this candidate can be found on the “**Medical/Dental Checklist for Deployment Clearance to Antarctica.**” Additional tests and exams may be required based on this information. Please review the candidate’s checklist, five-page Medical History Form, and perform a physical examination. **A comment on all positive findings in the history and examination is required to help in expediting the medical clearance process. All sections of the medical exam must be performed.** The lab testing must be done within 6 months of deployment.

**Blood typing** is required for all applicants. Personnel are requested to contribute to the USAP’s walking blood bank. You may ask the participant if they are able to contribute blood. If the candidate indicates his/her willingness, please note the answer next to the blood type on the Physical Examination Form. This is not a requirement of you or the candidate and will not affect deployment clearance. **If the applicant does not wish to be a participant of the walking blood bank, please identify in the COMMENTS section of the exam – otherwise consent is implied.**

# Raytheon Polar Services Company

7400 S. Tucson Way, Centennial, CO 80112-3938  
(303) 790-8606 (800) 688-8606 FAX (303) 649-9275

## Summer Deployment (October to February)

All tests required for summer deployment – see Medical and Dental checklist

## Winter Deployment (February to October)

All tests required for summer deployment, plus the following:

- TSH
- HIV Testing
- Chest X-ray – send report only
- Psychological testing for McMurdo and South Pole stations

## Administrative Information

### **1. Lab Results: Labs to be completed no earlier than 6 months prior to deployment.**

Please follow the instructions in the Medical Deployment E-mail and Medical Deployment Packet for completing laboratory requirements. Additionally, the requirements are listed on the individual medical/dental checklist.

Visit [www.labcorp.com](http://www.labcorp.com) for the nearest patient service center to your location; bring with you the LabCorp requisition sent to you via email. If a LabCorp center is not near your location, contact RPSC Medical to request a LabCorp Lab Kit, which will be mailed to your attention. Your personal physician or other lab facility can follow the instructions for collecting the samples and forwarding them to LabCorp in Colorado for processing. Please ensure the lab kit instructions are closely followed.

Should you be completing your laboratory requirements outside the United States, please refer to form ME-DT-A-109 (titled “Required Laboratory Tests”) in the Medical Deployment Packet. Lab results are to be forwarded to RPSC Medical.

**2. Return of Examination/Tests:** Please send the completed original medical history and physical examination form, including requested test results, to RPSC Medical.

**3. Other Requirements:** Prescription medications (type and quantity) are limited at all Antarctic medical facilities. Candidates are required to bring a sufficient supply of their own medication for the duration of their deployment. Please refer to form ME-A-121 in the deployment packet. RPSC Medical can assist candidates in obtaining sufficient medications if their prescription plans limit the quantity allowed at each refill.

**Payment for this Examination: The candidate is responsible for payment! This includes insurance deductible(s), payment of all charges incurred by this exam if no insurance is available, or insurance payment is denied. RPSC WILL NOT REIMBURSE HEALTH CARE PROVIDERS.**

**THANK YOU FOR YOUR COOPERATION WITH THIS  
MEDICAL EXAMINATION.**

NATIONAL SCIENCE FOUNDATION  
**POLAR PHYSICAL EXAMINATION**

Name: _____			Date of Birth: _____			Blood Type: _____			
<b>VITAL SIGNS</b>				<b>VISION</b>					
Height: _____		BP: _____/_____		Without Correction			With Correction		
Weight: _____		Pulse: _____		DIST      NEAR		DIST      NEAR			
BMI: _____				R _____	_____	R _____	_____		
				L _____	_____	L _____	_____		
<i>Finding</i>	<i>Normal</i>	<i>Abnormal</i>	<i>Finding</i>				<i>Normal</i>	<i>Abnormal</i>	
General appearance			Inguinal, include hernia						
Head and neck			Genitalia						
Eyes			Anal Rectum						
Ears			Spine						
Nose			Upper extremities						
Mouth			Lower extremities						
Thyroid			Skin (include body marks/tattoos)						
Lymph nodes			Vascular						
Chest and lungs			Neurologic						
Breasts			Emotional Status						
Heart			Pelvic exam						
Abdomen			Prostate exam (age > 40)						
<i>Examiner – Please comment on all abnormal findings</i>									
<b>Guiaac Test (annually, age &gt; 50):</b> _____ <span style="float: right;">Result/date</span>				<b>Influenza Immunization</b> _____ (Mandatory annually for Antarctic deployment)      Date (Recommended for Arctic deployment)					
<b>TB Skin test (annually)</b> _____ <span style="float: right;">Result/date</span>				<b>Tetanus Immunization (every 10 years)</b> _____ <span style="float: right;">Date</span>					
<i>Examiner – Please comment on overall fitness and health conditions that might interfere with the applicant's ability to participate in a remote polar deployment.</i>									
Examiner's Name: _____				Examiner's Signature: _____ <span style="float: right;">Date</span>					
Street Address: _____				Office Phone: _____					
City: _____		State: _____		Zip Code: _____		Office Fax: _____			
<b>Please return the completed examination form and results of the requested tests to (return envelope enclosed)</b>									
<b>Raytheon Polar Services Company</b> Attention: <b>MEDICAL</b> 7400 S. Tuscon Way Centennial, CO 80112-3839 1-800-688-8606 Prompt 3 Fax: 303-649-9275									

## **IMPORTANT NOTICE TO THOSE SIGNING THE MEDICAL SCREENING FOR BLOOD BORNE PATHOGENS/HIV CONSENT FORM**

Please be advised that a signature on the medical screening form, Blood Borne Pathogens/NSF Form 1424, does not ensure that an HIV test will be done.

**If you would like the HIV test and it is not on the  
LabCorp Requisition, please call RPSC Medical at  
1-800-688-8606 ext 3.**

If you have chosen to use an outside laboratory, please note that you must request to have this test drawn.

If you choose to have this test, please sign the consent form and return it with your medical paperwork.

Screening for HIV is a requirement for participants who are wintering or who would like to participate in the walking blood bank.

If you have any questions, please contact RPSC Medical at 1-800-688-8606 option 3.

NATIONAL SCIENCE FOUNDATION  
4201 WILSON BOULEVARD  
ARLINGTON, VIRGINIA 22230

**OFFICE OF POLAR PROGRAMS**

**Medical Screening for Blood-borne Pathogens**

United States Antarctic Program (USAP) medical clinics at the three U.S. research stations do not maintain supplies of frozen blood. NSF research stations in the Arctic do not have readily available blood supplies. In the event of the need for a transfusion, other individuals at the research station with matching blood types would be asked to donate fresh whole blood for the patient. In order to maintain a viable donor pool, the National Science Foundation requests that USAP and Arctic participants during the austral summer season voluntarily submit to testing for Human Immunodeficiency Virus (HIV) along with the required Hepatitis virus B and C as part of their medical screening process. Please note that HIV testing is required for candidates intending to spend the winter in Antarctica or in the Arctic.

**Consent for HIV Antibody Blood Test**

I have been informed that my blood will be tested for Human Immunodeficiency Virus (HIV) antibodies, the causative agent of Acquired Immune Deficiency Syndrome (AIDS). I understand that the testing involves the withdrawal of a small amount of my blood by venipuncture and subsequent testing of that blood sample via ELISA and Western Blot methods.

I understand that if I have any questions regarding the testing procedure or interpretation of results, I should discuss them with my health care provider. I understand that my examining physician will receive a copy of these test results and may be required, under State law, to report positive test results to State Health Department authorities and I consent to these disclosures.

I understand that the results of this blood test will be incorporated into my USAP medical file. All information in that file is maintained in accordance with the Privacy Act (5 USC 552a) and protected against unauthorized release, as described in the appended Privacy Notice.

Having read and understood the above statements, I hereby give my consent to the collection and testing of my blood to determine the presence of HIV antibodies.

\_\_\_\_\_  
Print Name

\_\_\_\_\_  
Signature and Date

**NATIONAL SCIENCE FOUNDATION**  
4201 WILSON BOULEVARD  
ARLINGTON, VIRGINIA 22230

**PRIVACY NOTICE**

**Medical Examination Records for Service in Polar Regions**

The National Science Foundation's Office of Polar Programs is responsible for ensuring that all personnel traveling to Antarctica under the auspices of the United States Antarctic Program (USAP) meet certain medical standards, as outlined in 45 Code of Federal Regulations Section 675 (62 Fed. Reg. 31521 (June 10, 1997)). This medical screening process requires that certain medical records be generated on each individual participating in the USAP.

The information requested on USAP provided forms is solicited under the authority of the National Science Foundation Act of 1950, as amended, 42 U.S.C. 1870 et seq. It will be used by NSF and its contractors and subcontractors in the medical screening process to determine whether an applicant is qualified for deployment to Antarctica. An individual medical file will include information collected to determine whether one is qualified for Antarctic assignment, as well as clinical files that may be generated if one receives medical treatment in any of the USAP medical clinics in Antarctica or any off-ice treatment facilities arranged by the USAP.

The records are used for three primary purposes: (1) to determine the individual's fitness for Antarctic assignment, including individual waiver requests; (2) to assist in determining an appropriate course of medical/dental treatment should the individual seek medical care with any medical care provider while in Antarctica; and (3) to provide documentation for addressing quality of care issues associated with these medical functions.

Records contained within this system may be released to individuals involved in those three functions. Such individuals include, in addition to designated NSF employees as needed for assigned duties: (a) designated medical care practitioners and their administrative support personnel involved in determining an individual's fitness for Antarctic assignment, including individual waiver requests; (b) medical care providers in NSF-supported stations and field camps in the polar regions where the individual is assigned; and (c) medical experts advising the NSF on quality of medical care issues associated with NSF's polar research programs. In addition to these purposes, information in the medical records may be released to the individual's personal or examining physician or the individual's designated emergency point of contact when disclosure is necessary to determine initial medical clearance or to review treatment options if the individual requires medical attention while on assignment in the Polar Regions. The determination of whether the individual is physically qualified/not physically qualified (PQ/NPQ) may be released to representatives of the individual's sponsoring organization including academic institutions, and investigators on a grant to inform them whether an individual is approved for deployment or not.

If necessary, information may be released to Federal, state, or local agencies, or foreign governments when disclosure is necessary to obtain records in connection with an investigation by or for the NSF; and to another Federal agency, a court, or a party in litigation before a court or in an administrative proceeding if the government is a party, or when NSF determines that the litigation or anticipated litigation or proceeding is likely to affect the Agency.

Submission of the information requested is voluntary. However, if you fail to provide any of the requested information, NSF or its contractor may be unable to process or to approve your application for polar deployment through the USAP.

More detail about how and where these records are maintained in accordance with the Privacy Act, 5 U.S.C. 552a, is contained in the National Science Foundation's System of Records Notice, Medical Examination Records for Service in the Polar Regions, available upon request from the NSF<sup>1</sup>. No disclosure of information contained in your medical file will be made except as described by the NSF's System Notice or as otherwise authorized by law. You may request a copy of your records for review.

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<sup>1</sup> For a copy of the System Notice, please contact the OPP Safety and Occupational Health Manager at NSF at (703) 292-7438, or write to Safety and Occupational Health Manager, Office of Polar Programs, National Science Foundation, 4201 Wilson Blvd., Suite 755, Arlington, VA 22230.

NATIONAL SCIENCE FOUNDATION  
4201 WILSON BOULEVARD  
ARLINGTON, VIRGINIA 22230  
**OFFICE OF POLAR PROGRAMS**

**Medical Risks for NSF-Sponsored Personnel Traveling to Antarctica**

Travel to Antarctica imparts certain risks to the traveler, because of harsh environmental conditions encountered, limitations in the medical care available in Antarctica, and difficulties, in emergencies, of providing timely evacuation to tertiary medical care facilities in New Zealand, South America, or in the United States. United States Antarctic Program (USAP) participants should consider these risks before deciding to deploy to Antarctica.

With no indigenous support infrastructure in Antarctica, virtually all medical care to USAP participants is provided through the USAP medical care system. This includes medical clinic operations at all three year-round stations (McMurdo, South Pole, and Palmer Stations), dispensary operations on the two oceanographic research vessels, and first-aid/first responder support in the larger seasonal remote field camps. The three clinics are comparable to a small community hospital emergency room and ambulatory care facility, but without secondary or tertiary care facilities nearby for patient referral or specialist support. Radiography (X-rays) and selected laboratory tests are available in the clinics, but more sophisticated imaging procedures and diagnostic tests are not. Typical operating room surgical suites are not available at the stations, although each clinic has a triage/trauma room. The USAP does not maintain a frozen blood supply at each station, relying instead on a "walking blood bank" concept (where individual donors could provide fresh blood if transfusions were needed and blood types matched). The evacuation of critically ill or injured patients from Antarctic sites to sophisticated medical care off the continent (to New Zealand, South America, or the United States) is difficult during the austral summer and may be impossible during the austral winter (February through August).

It is important that USAP participants recognize these limitations in medical care while they are in Antarctica. It is, in part, because of these limitations, that the NSF requires medical and dental screening of personnel prior to deployment to Antarctica. These medical screening examinations are necessary to determine the presence of medical conditions that could threaten the health or safety of the individual while in Antarctica. They are also necessary to determine whether medical conditions exist that cannot be effectively treated while the individual is in Antarctica. Persons who fail to meet these medical/dental screening criteria will be notified of the specific reason(s) for their disqualification. Disqualified individuals may request reconsideration by completing a waiver request package (obtained from the NSF's support contractor).

Pre-deployment screening can identify existing medical conditions that may be difficult or impossible to treat effectively in Antarctica. USAP participants should realize that serious accidents or injuries might challenge the medical care system in Antarctica as well. Therefore, individuals should recognize the limitations in the medical care system in Antarctica before they engage in any risk-taking behaviors (whether on-the-job or during recreational pursuits) that may result in accidents or injuries.

Data collected as a result of this medical screening requirement are maintained in accordance with the Privacy Act (5 USC 552a) and protected against unauthorized release, as described in the appended Privacy Notice. The collection of this information must display a currently valid OMB control number. You are not required to respond to the collection of this information unless it displays a currently valid OMB control number.

I have read and understand this information sheet.

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Print Name

---

Signature and Date

# Raytheon Polar Services Company

7400 S. Tucson Way, Centennial, CO 80112-3938  
(303) 790-8606 (800) 688-8606 FAX (303) 649-9275

Dear Dentist:

This person is being considered for participation in the United States Antarctic Program (USAP). Antarctica is isolated and lacks dental facilities, therefore the state of the dental health of the candidates is important and **all preventive and corrective procedures must be completed before deployment.**

All participants must be free of dental disease and all treatment must be completed three weeks prior to deployment. This means there must be no caries, active periodontal disease, potential endodontic disease, prosthetic deficiencies, potentially symptomatic wisdom teeth or any uncompleted treatment. Additional treatment or procedures may be required before this person can deploy to Antarctica. All dental work must be completed, documented and sent to RPSC Medical for review in order for the candidate to be dentally qualified for deployment.

**All Candidates are required to:**

## **I. DOCUMENTATION OF DENTAL EXAMINATION**

Please chart all existing restorations, missing teeth and endodontically treated teeth only on the Dental Examination Form. The treating Dentist must sign the Dental Examination Form and document all completed work.

## **II. THIRD MOLARS**

To qualify for deployment to Antarctica with the USAP, treatment must be completed three weeks prior to deployment in order for the dental condition to stabilize before deployment.

Third molars must be extracted if they are symptomatic or any of the following are present:

1. Periodontal probe can contact the crown of an unerupted third molar;
2. Bleeding or poor hygiene is evident in the third molar area;
3. Pseudo pockets, bony pockets are present;
4. Soft tissue extends onto the occlusal surface of the third molar;

## **III. RADIOGRAPHS**

**ORIGINAL MOUNTED RADIOGRAPHS** must be included with the Dental Examination Form. **Copies or poor quality radiographs will not be accepted.** Digital radiographs can be sent in high-resolution JPEG format or **printed in high resolution on glossy photographic paper.** Radiographs become a part of the candidate's USAP record and **WILL NOT BE RETURNED** to you or the candidate, so you may wish to use a double film pack to retain original radiographs for yourself. Necessary radiographs include:

1. Set of four **ORIGINAL** bitewing x-rays **mounted** - showing crestal bone and all posterior teeth and **contacts clearly**. These films must be taken within 6 months of the deployment date and must accompany the completed examination form.
2. Panoramic and/or mounted full mouth survey - Must have been taken within 5 years of deployment date and updated every five years.
3. A periapical (PA) film of all endodontic work, crowns, and extensive restorations.

# Raytheon Polar Services Company

7400 S. Tucson Way, Centennial, CO 80112-3938  
(303) 790-8606 (800) 688-8606 FAX (303) 649-9275

## **IV. ORTHODONTICS**

Candidates with fixed orthodontic appliances or undergoing any active treatment may be considered for short deployments, only with written approval from the attending provider and approval from the RPSC Dental Reviewer.

1. Unrestricted Clearance – Fixed or removable orthodontic retainer only, with no active appliance.
2. Restricted Clearance for deployments up to six months – Candidates undergoing orthodontic treatment who do not require treatment for the period of deployment and who have not had active treatment for two months prior to deployment.

In view of the fact that there will be no orthodontic care, and in most cases, no dental care available, consideration should be given to placing the candidate in passive appliances or passive retention for the period of deployment.

## **V. SUBMISSION OF DENTAL FORM AND RADIOGRAPHS**

Send the signed, completed examination form, documentation of treatment, and ORIGINAL radiographs or digital files to RPSC Medical. (Digital files may be sent to [medical@usap.gov](mailto:medical@usap.gov))

## **VI. PAYMENT**

Insurance submission and payment of out-of-pocket fees/deductibles for all dental work, including exam, radiographs, and any necessary treatment **IS THE RESPONSIBILITY OF THE CANDIDATE.**

**THANK YOU FOR YOUR COOPERATION WITH THIS  
DENTAL EXAMINATION.**

NATIONAL SCIENCE FOUNDATION  
**POLAR DENTAL EXAMINATION**

NAME:	DATE OF BIRTH:	AGE:
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DAY TELEPHONE#:	EMAIL ADDRESS:
-----------------	----------------

YEAR OF PREVIOUS DEPLOYMENT:	CURRENT DEPLOYMENT DATES: FROM:	TO:
------------------------------	---------------------------------	-----

**AFFILIATION:**

NSF   
  S-Event or Group # \_\_\_\_\_   
  RPSC   
  CH2MHILL   
  Other \_\_\_\_\_

**ANTARCTIC DEPLOYMENT STATION:**

McMurdo   
  South Pole   
  Palmer  
 Field Camp \_\_\_\_\_  
 RVIB NB Palmer   
  RVIB LM Gould

**ARCTIC DEPLOYMENT STATION:**

Summit   
  Alaska   
  Thule  
 Other : \_\_\_\_\_

**Chart existing restorations, missing teeth and endodontically treated teeth only:**

**PERIODONTAL EVALUATION**

PROBINGS > 5 mm     YES     NO  
 ACTIVE DISEASE NOTED     YES     NO

**THIRD MOLAR EVALUATION**

3<sup>rd</sup> MOLARS PRESENT     YES     NO  
 POTENTIALLY SYMPTOMATIC     YES     NO

**ALLERGIES:**

**Documentation of all treatment identified and rendered and original radiographs must accompany this form.**

DATES	DIAGNOSES and TREATMENTS

Attach the following **ORIGINALS** to this exam:

PANO OR FULL MOUTH SERIES  
 (Required first deployment and every 5 years after)

\*Date of last Pano or Full Mouth Series: \_\_\_\_\_

BITEWING X-RAYS, SET OF 4 MOUNTED  
 SHOWING ALL POSTERIOR TEETH  
 (Required annually – within six months of deployment)

I have thoroughly examined this candidate for travel to the Polar Regions. All necessary treatment has been performed; all evaluations completed; and the appropriate diagnostic radiographs will accompany this completed form as requested by the "Dear Dentist" letter.

DENTIST'S NAME (PRINT)	DENTIST'S SIGNATURE	DATE
TELEPHONE NUMBER (include area code)	ADDRESS	
	CITY	STATE
		ZIP

**ATTENTION EXAMINING DENTIST:**  
 Please forward completed form, all documentation of treatment and all **ORIGINAL X-rays** to:

**RAYTHEON POLAR SERVICES COMPANY**  
**ATTN: Medical**  
**7400 S. Tuscon Way**  
**Centennial, CO 80112-3839**  
**1-800-688-8606 Prompt 3**

<b>MEDICAL STAFF USE ONLY:</b>			
PQ	<input type="checkbox"/>	<b>WINTER REVIEW</b>	<input type="checkbox"/>
NPQ	<input type="checkbox"/>		

NATIONAL SCIENCE FOUNDATION  
4201 Wilson Boulevard  
ARLINGTON, VIRGINIA 22230



OFFICE OF POLAR PROGRAMS

August 20, 2008

Dear Grantee,

Due to rising costs, we have eliminated the LabCorp service for centralized lab work required for deployment medical exams. Consequently, you must have the required lab work done in conjunction with your medical exam.

If the required tests are not covered by your employer or by your personal health insurance, you may pay for them from the grant as part of the medical exam costs that awards for field work contain. Contact your program officer if a supplement is required.

For additional information, please refer to your deployment medical packet or contact the Raytheon Polar Services Company Medical Department.

Sincerely,

A handwritten signature in blue ink, appearing to read "S. Borg", with a long horizontal flourish extending to the right.

Scott Borg  
Director, Division of Antarctic Sciences

A handwritten signature in black ink, appearing to read "Michael Montopoli", with a long horizontal flourish extending to the right.

Michael Montopoli, MD, MPH  
Head, Office of Polar Environment, Health, and Safety  
Chief Medical Officer, US Antarctic Program

# Raytheon Polar Services Company

7400 S. Tucson Way, Centennial, CO 80112-3938  
(303) 790-8606 (800) 688-8606 fax (303) 649-9275

## REQUIRED LABS

Please follow the instructions in your Deployment E-mail and Deployment Packet.

**RPSC and NANA Employees:** Follow instructions for utilizing LabCorp. If there is no LabCorp patient service center near you, contact RPSC Medical Department to request a LabCorp Lab Kit.

**Non-RPSC Participants:** Present this list of required labs to your medical provider.

Please complete the following tests and send results to the RPSC Medical Department.

### **Labs to be done no earlier than 6 months prior to deployment**

**You must fast for 10-12 hours prior to the blood draw.**

#### Lipid Panel T

- Triglycerides
- Cholesterol, Total
- HDL – cholesterol
- LDL – cholesterol
- CHOL/HDLC ratio

#### Biochem

- Alkaline Phosphatase
- Bilirubin, Total
- Calcium
- Chloride
- Creatinine
- Glucose, Serum
- Potassium
- Aspartate Transaminase - AST (SGOT)
- Alanine Transaminase - ALT (SGPT)
- Sodium
- Uric Acid
- HgA1c required for all Diabetics

#### Iron, Total

#### Iron Binding Capacity

#### % Saturation

#### CBC with differential/platelet

#### Urinalysis, reflex

#### Hepatitis B core AB total

#### Hepatitis C Antibody

#### RPR/VDRL (monitor) A

#### BO Group & RH type

PSA: For ages 40-49 with family history of prostate cancer; all males aged 50 and up

HIV: Recommended, but optional. Mandatory for winter-over in Antarctica (February – October) and for participants in the walking blood bank

TSH: Mandatory for Participants with a Thyroid Disorder or winter-over in Antarctica (February-October)



Technical Services Company LLC  
Polar Services

7400 S Tucson Way  
Centennial, Colorado  
80112-3938 USA  
303.790.8606

To RPSC Participants: **(Personal Prescription Medications)**

It is the responsibility of all participants to obtain a supply of their regular prescription medications to cover the time that they will be deployed. **The Stations do not have prescriptions available to support maintenance medications – our medication stock is limited to support emergent requirements, in accordance with NSF requirements.** Additionally, **if any changes to your medical well-being occurs after PQ, you are required to let us know so we can ensure your continued good health while deployed.** Participants will not be allowed to winter-over unless they have enough of their regular medications to last through the winter season. The New Zealand custom laws, however, only allow for three months of prescription medications and one month of controlled prescription medications to be hand carried through New Zealand. Therefore, if you will be deployed for a longer period of time, you must make arrangements for additional medication to be mailed to the Station Medical Clinic through the APO mail system. The medications will need to be in properly labeled pharmacy containers to be passed through the APO system. It is important that you hand carry the initial three months of medication (one month for controlled medications) in order to provide enough time for the mail to reach you in Antarctica. When you get your prescription medications filled, ask the pharmacist to put three months of medication (or one month of controlled medications) in one labeled container and the remainder in a separately labeled container. If you are not sure if your medication is controlled (Class II or III), ask the pharmacist when you get the prescription filled. Mail the containers with the remainder of the medication to the Medical Clinic at the Station where you will be deployed. Most health plans only allow one month of medication to be dispensed at a time. If you have difficulty in getting the amount that you need for your deployment, contact Medical at RPSC for assistance. We can coordinate with your health plan to help you obtain the sufficient quantity of your prescription to last your entire deployment.

To receive special shipping, medications must be addressed to the station address as below. Medications mailed to your name, will be sent as regular mail and not directly to the station medical clinics. Packages destined for summer participants should be mailed after Labor Day or they will be returned. The addresses for the Medical Clinics are:

**McMurdo Station – RPSC**

Medical Clinic, RPSC  
McMurdo Station  
PSC 469 Box 700  
APO AP 96599-1035

**South Pole Station – RPSC**

Medical Clinic  
South Pole Station  
PSC 468 Box 400  
APO AP 96598

The Medical Clinic will open the packages upon receipt at the Station and maintain an Excel spreadsheet listing the name of the participant, the name and amount of the medication, date received, the date that the medication was dispensed to the participant and the signature of the person dispensing the medication. The Medical Clinic will notify the participant when the medication is received. The participant will go to the Clinic to sign the medication spreadsheet and obtain their medication.

Chilean customs laws do not restrict the amount of personal medications hand-carried through Chile and participants that are deploying through Chile can hand carry the amount of medication that they need for their deployment.

Remember that you will have to clear customs in New Zealand to reenter the country on redeployment and the same restrictions on the quantity of medications will apply. If you have an excess amount on redeployment, mail the excess amount to yourself at home before leaving Antarctica.

If you have any questions about the procedure for transporting your prescription medications to Antarctica, contact the Medical Department at RPSC, 1.800.688.8606, option 3 on the menu.

**RAYTHEON TECHNICAL SERVICES COMPANY LLC  
POLAR SERVICES**

## Will You be Visiting South Pole Station?

In the upcoming season, you will be traveling to not only one of the coldest climates on earth, but also to a high altitude environment. When traveling to Antarctica, we prepare physically and mentally for the physical impacts of extreme cold. Below, we hope to stress the equal importance of preparing for the effects of high altitude on your body, and the efforts you can make in your first week at altitude to prevent altitude related illnesses.

**What is considered “high altitude”?** “High altitude” is defined as altitudes exceeding 6,000 to 8,000 feet. Above these levels, changes in the pressures of gases we breathe, and of oxygen in particular, result in a number of chemical changes in our bodies – some of which can be unpleasant.

**How do we adapt to high altitude?** We begin to adapt to these changes, or acclimatize, within hours of our exposure to altitude. Significant adaptations occur within the first four days at altitude. It may take a month or more to completely adapt. Individuals with certain medical conditions – most of which we screen for in your PQ process – may never properly adapt to high altitude environments, and therefore may not qualify for South Pole employment. South Pole residents are challenged in their acclimatization because they are not able to gradually ascend to altitude, as one might on a gradual climb to a mountain peak; instead, residents are flown directly from sea level to approximately 11,000 feet of altitude. This requires vigilance to prevent overexertion in the first days at altitude, as overexertion can significantly increase the risk of developing an altitude-related illness.

**What are the physical problems (Altitude Related Illnesses) I might experience with my initial arrival at altitude?**

- **Periodic Breathing of Altitude:** This irregular breathing pattern, part of normal acclimatization, presents as multiple breaths followed by pauses in breathing. Most evident at night, this breathing pattern can cause repeated awakenings, leading to poor or disrupted sleep and subsequent daytime fatigue. In some individuals, blood oxygen levels will drop significantly with breathing pauses, putting them at risk for further altitude related illnesses. Chemicals which suppress the drive to breathe – such as alcohol and sleeping medications – can worsen the effects of periodic breathing, and are therefore not recommended while acclimatizing. **Treatment:** Periodic breathing can be reduced through the use of acetazolamide (Diamox) 125mg at bedtime in the first three to four days at altitude.
- **Acute Mountain Sickness (AMS):** AMS, a syndrome of headache, nausea, loss of appetite, dizziness, and worsened periodic breathing, impacts approximately 30% of people traveling to high altitude. It normally presents in day one to three at altitude. **Anyone can get AMS – even people who have lived and worked at high altitude in the past without any problem.** Excessive exertion and dehydration in one’s first days at altitude, and possibly a high salt diet, increase the risk for getting AMS. Remaining well hydrated – at least four liters of water per day, practicing a low salt diet, and doing no heavy physical exertion for the first two to four days at altitude will reduce one’s risk of getting AMS. **Treatment:** Diamox (250mg) twice a day, started the day before ascent, and continued for the first three to four days at altitude, will reduce the risk of getting AMS. (This dosing will also treat Periodic Breathing, mentioned above.) Ginkgo, previously thought to be of benefit at altitude, has recently been found to be ineffective at preventing AMS. Using supplemental oxygen, especially at night, can also help reduce symptoms.

- **High Altitude Pulmonary Edema (HAPE):** HAPE occurs when leaky tissues and blood vessel spasms in the lung cause the lungs to backflow with fluid, including blood. Three percent of people going to altitude are expected to develop HAPE, which normally presents on day two to three at altitude. Symptoms initially include shortness of breath at rest and with lying flat; they can progress to dry, wet, pink-frothy or bloody cough, associated with an inability to catch one's breath. This is a serious and progressive condition, which if untreated can lead to death. Risk for HAPE can be reduced by avoiding heavy exertion in one's first three to four days at altitude, taking Diamox to reduce periodic breathing and pauses, and keeping warm – to include breathing through a neck gaiter outside to prevent cold-induced spasm of blood vessels of the lungs. **Treatment:** Diamox (250mg) twice a day, possible blood vessel dilators like nifedepine or Viagra, inhalers such as albuterol, dexamethasone, oxygen and possible descent from altitude. The medical providers at McMurdo and Pole Stations can best assist you on the advisability of any of the other medications beside or in addition to Diamox.
- **High Altitude Cerebral Edema (HACE):** HACE is brain swelling, resulting from the low oxygen environment, and the body's chemical reactions thereunto. HACE is rare at South Pole's altitude, but can be seen when oxygenation is worsened by the presence of HAPE. Therefore, HACE and HAPE are commonly seen together. HACE presents with severe headache, dizziness and ataxia (falling over due to lack of balance), extreme nausea/vomiting, altered levels of consciousness including unconsciousness, and seizures. Without treatment, HACE can be fatal. **Treatment:** Diamox (250mg) twice a day, dexamethasone to reduce brain swelling, oxygen and descent from altitude.

**What if I've never had an altitude related illness before, and I've been to altitude many times?** You are still at risk for getting altitude illness. If you've gone to altitude 99 times, you may get altitude illness on your hundredth ascent. If you live at altitude, your time in New Zealand and McMurdo is sufficient to allow you to lose your previous altitude acclimatization. The only predictor that you will get sick is that you've been sick before. Therefore, **everyone** must take seriously the above precautions and strongly consider taking medicine to prevent altitude illness.

**Where do I get Acetazolamide (Diamox)?** You can get Diamox at McMurdo Medical before you go to Pole at any time during the season. If you are going to Pole directly, you will be met by a member of the McMurdo medical team upon your arrival to Antarctica, given a briefing about altitude illness, and offered Diamox before your Pole flight. If you forget to get your Diamox in McMurdo, it is also available from the South Pole Clinic.

**What if I have other questions about Altitude Related Illnesses?** Feel free to stop by in the medical clinics at McMurdo or South Pole, or speak to your regular doctor before you deploy. A good website to read more about altitude illnesses is: [www.basecampmd.com](http://www.basecampmd.com).

## **EYEWEAR POLICY FOR ANTARCTICA**

Everyone in Antarctica is required to wear sunglasses! You are traveling to a part of the world where scientists have documented increased ultraviolet radiation due to depletion in the ozone layer. Snow and ice reflect 85% of Ultraviolet Radiation (UVR) and can cause a serious, painful and disabling condition known as snow blindness. Sunglasses are especially important on windy days to protect against volcanic ash particles and blowing snow in the eyes.

***The type of sunglasses you wear while you are in Antarctica is very important.*** Sunglasses must block 100% of the sun's Ultraviolet Rays. Some dark glasses do not block UVR and cause the iris to widen and admit more light that can cause damage to the eye. Frames must be non-metal to avoid injury to the skin from the cold. Retaining straps are mandatory. Side protectors are recommended, but not required.

### **Prescription Eyewear:**

If you wear prescription eyewear and choose to wear prescription sunglasses during your deployment, the sunglasses must meet the above criteria. Please obtain a current prescription from your ophthalmologist/optometrist (including pupillary distance) and bring it with you when you deploy. Eyeglass prescriptions are good for two years.

Contact lenses can be worn in Antarctica. At the South Pole, however, the dry climate can cause difficulties. It is suggested that you carry your lenses on your person to avoid possible damage and/or freezing. Limited lens cleaning supplies are available at the McMurdo, Palmer, and South Pole stores (heat-type is NOT available.)

RPSC will reimburse deploying employees up to \$175.00 for one pair of prescription sunglasses (frames and lenses combined) every other year. RPSC will also reimburse employees up to \$175.00 for one pair of prescription safety glasses if required for your job. RPSC will NOT reimburse you for the eye exam. You must be both medically and dentally qualified before you are eligible to be reimbursed. Once you are notified by the Medical Department that you are Physically Qualified, please submit your expenses on the RPSC Medical/Dental Expense Reimbursement Form (ME-A-103). If you are within 30 days of deploying or are currently an active employee, you must submit your expense report online via WebTE.

**Please bring two pair of glasses, prescription or non-prescription, in case of damage or loss.**

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