

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, eight-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.**

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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 Deployment E-mail and Deployment Packet.

For RPSC and NANA Employees: Visit www.labcorp.com for the nearest patient service center to your location; bring with you the individualized LabCorp requisition sent to you via email. If a LabCorp center is not near your location, contact RPSC Medical; a LabCorp lab kit 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.

For Non-RPSC Participants: Please refer to form ME-DT-A-109 in the Deployment Packet. Lab results are to be forwarded to RPSC Medical.

2. Return of Examination/Tests: Please send the original medical history and physical examination, including requested tests, 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 or ME-A-121a 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.**

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)	Tetanus Immunization Date (Update every 10 years)	TB Skin Test (Required Annually)
_____ Results Date	_____ Date	_____ Results Date

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):

Raytheon Polar Services Company
 Attention: **MEDICAL**
 7400 S. Tucson Way
 Centennial, CO 80112-3839
 1-800-688-8606 ext 32287 Fax: 303-649-9275

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

- 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)

ABO 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)

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

Influenza Vaccination – Important Notice

Effective 14 July 2008, every deploying USAP participant is required to receive an influenza vaccination prior to deployment. The National Science Foundation concluded that influenza resulted in a significant impact to 2007-2008 operations and therefore, going forward, all deploying personnel must receive a flu shot.

**** Requires Signature and Return****

The *Influenza Vaccination - Read, Sign, Return* form requires your signature and return to RPSC Medical prior to purchase of deployment airline tickets. *Sign and return the document immediately.*

Obtaining Flu Shots:

1) Participants will be given flu shots in Denver at orientation, in Christchurch prior to departing for Antarctica, or upon arrival at Palmer Station.

OR

2) Participants may obtain a flu shot from their medical provider during the PQ process and submit the supporting documentation to RPSC Medical.

Below you will find Frequently Asked Questions (FAQs) regarding the Influenza Vaccination program. Once you have reviewed all the information, please contact your hiring manager or the Human Resources department for questions relating to your employment. For medical-based inquiries, please contact the Medical department at 1.800.688.8606 ext 3.

FAQs

Q: Why do we have to take the flu shot to go to Antarctica?

A: A panel of medical consultants to the National Science Foundation recently reviewed health care in Antarctica. The report included the summary of two outbreaks of influenza at McMurdo during the 2007-2008 summer season. There was a very significant impact on productivity and health care costs. The medical experts recommended that the vaccine should be given in order to prevent the likelihood of similar outbreaks in the future. The NSF accepted the recommendation and issued a directive making the immunizations mandatory. Success of this initiative was recognized throughout the 2008-2009 summer season with only two positive flu tests.

Q: Will having the shot prevent me from getting the flu?

A: Not always. The vaccine is made up of multiple strains of influenza virus. There are many strains of “flu” viruses. Reports from all over the world are studied each year to predict the strains most likely to cause flu epidemics across different regions. The vaccine is 90% effective in protecting healthy young adults from illness when the vaccine strain is

similar to the infecting strain. It is important for everyone to keep their immune systems healthy through regular exercise and good nutrition because the vaccine is less effective in preventing illness in older people and those that have diseases that reduce immunity. The “PQ” examinations are intended to prevent deployment of unhealthy people.

Q: How will I get the shot?

A: Ideally, you would get the shot from your personal physician as part of the “PQ” exam. However, the vaccine may not be available in the United States until late September, after many are on their way to Antarctica. The vaccine will also be given at the Denver HQ during deployment orientation, if available. The vaccine will be given in Christchurch if it is not available in the U.S. before deployment. It will be available at McMurdo, and given to the winter-over employees there. There is a one–two week period after getting the shot before full protection has developed, so the earlier in the deployment cycle it can be given, the better for you and your contacts.

Q: What if I’m allergic? Will I have a localized reaction?

A: If you have had a severe reaction to a flu shot in the past (severe reaction is throat, mouth or airway swelling, difficulty breathing, rash or hives), then bring documentation from the treating physician or emergency room. If you have a proven severe reaction to egg protein (same symptoms as above), then bring the report from your physician or allergist. People with previous severe reactions to the shot or to egg protein should not receive the shot. With proper documentation, you will be excused from the requirement. Localized reactions associated with the flu shot may include mild problems such as soreness, redness or swelling where the shot was given. These reactions have occurred less often as vaccine preparation has improved. They are generally not serious and do not justify exemption from the annual requirement for receiving the immunization.

Q: How can I learn more about the shots?

A: To learn more about the flu vaccine, related benefits, risks, and precautions contact the Centers for Disease Control and Prevention (CDC):

- Call 1-800-232-4636 (1-800-CDC-INFO)
- Visit CDC’s website at www.cdc.gov/flu

Remember to sign and return the ***Influenza Vaccination - Read, Sign, Return*** form.

Thank you.

Medical Director
RPSC Medical Department

Influenza Vaccination

READ, SIGN, RETURN

This sheet must be signed and returned to the RPSC Medical department prior to the purchase of deployment airline tickets.

Every deploying USAP participant is required to receive an influenza vaccination prior to deployment.

You will receive the flu shot in Denver at orientation, in Christchurch prior to departing for Antarctica, or upon arrival at Palmer Station. Alternatively, you may obtain the flu shot from your medical provider during the PQ process and submit the supporting documentation to RPSC Medical.

Receiving the vaccination is a condition of your deployment. Exemptions based on medical reasons will be considered on an individual basis.

Please sign, date and return this completed form to:

Raytheon Polar Services
Medical Department
7400 S. Tucson Way
Centennial, CO 80112

Or fax to:

RPSC Medical at (303) 649-9275

My signature below indicates that I am aware of this requirement and agree to receive an influenza vaccine for the 2009-2010 season.

Please check one of the following options indicating your status:

Grantee Contract Employee NANA Employee Fulltime RPSC Sub-Contractor

Printed Name – Last, First and MI

Signature

Date

To learn more about the flu vaccine, contact the Centers for Disease Control and Prevention (CDC):

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- Visit CDC's website at www.cdc.gov/flu