

## **Alfred-Wegener-Institute for Polar and Marine Research**

**Of the Helmholtz Association of National Research Centres**

### **Ärztlicher Dienst - Medical Service**

**Am Lunedeich 115, 27572 Bremerhaven, Tel.: 0471-986931-00, Fax: 0471-986931-01**

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### **Information on Medical Examination for Expeditions of the Alfred-Wegener-Institute**

#### **General information for all expedition participants**

The detailed investigation into the medical case history (personal anamnesis) is intended to give the examining physician an overall picture of the state of health of the expedition participant that is as comprehensive as possible. The exact knowledge of any previous illnesses not only serves to ascertain the actual medical prerequisites for participation in the expedition but in particular also to avoid possible health risks during the expedition. We therefore ask you to complete pages 1-6 of this investigation form conscientiously before your visit to the doctor.\*

All questions answered with "yes" require a detailed explanation in the field indicated. Should there have been any alteration in your state of health in the period following the medical examination, please inform the Medical Service of the Alfred-Wegener-Institute in good time before the start of the expedition. Expedition participants suffering from chronic diseases should please send in a copy of pages 1-6 of the completed investigation form to the Medical Service of the Alfred-Wegener-Institute within one week after receipt of the documents. Otherwise the deadlines specified at the coordination meetings or by the Logistics department of the Alfred-Wegener-Institute shall apply. On reassignment to an expedition the examination must be repeated after 12 months; in the case of shorter assignment intervals pages 1 and 6 should be completed and sent in to the Medical Service.

**Please be so kind as to print out pages 1-10 of the investigation form only on one side of each page.**

#### **Expedition participants in marine expeditions to the Arctic and Antarctic**

It should be borne in mind that for every marine expedition to the Arctic or Antarctic an examination of expedition fitness is necessary. For participants in expeditions other than into the Arctic or Antarctica lasting more than ten days an examination is also required. The examination documents must include a confirmation issued by your dentist stating that your teeth have received adequate treatment. Expedition participants over 40 years of age are asked to attach ophthalmologic findings (not older than 36 months) regarding visual acuity, intra-ocular pressure and the retina.

### **Expedition participants to Spitsbergen**

Expedition participants who remain on Spitsbergen for less than four weeks are asked to submit pages 1-6 of the investigation form to the Medical Service of AWI not later than three weeks before departure. For this group of persons, a medical examination is required in exceptional cases only. A dental examination, however, is advised. In case of stays longer than four weeks an examination of expedition fitness is required. The examination documents must include a confirmation issued by your dentist stating that your teeth have received adequate treatment. Expedition participants over 40 years of age are asked to attach ophthalmologic findings (not older than 36 months) regarding visual acuity, intra-ocular pressure and the retina.

### **Expedition participants in land expeditions/flight missions to Antarctica**

For every expedition to Antarctica lasting more than five days an examination of expedition fitness is necessary. The examination documents must include a confirmation issued by your dentist stating that your teeth have received adequate treatment. Expedition participants over 40 years of age are asked to attach ophthalmologic findings (not older than 36 months) regarding visual acuity, intra-ocular pressure and the retina.

### **Additional information for overwintering personnel in the Arctic and Antarctica**

Overwintering personnel is required to send in a copy of pages 1-6 of the completed investigation form within one week after receipt of the documents to the Medical Service of the Alfred-Wegener-Institute where the examination for overwintering personnel takes place. In addition, the following examinations are required: ophthalmologic and dental examination, X-ray examination of the lungs, sonography of the abdominal region and a gynaecological examination for female overwintering persons. The scope of these additional examinations is stated on page 10 of the investigation form. After the overwintering period a follow-up examination is obligatory.

\* Data will only be processed as hardcopy on the basis of the Data Protection Act of Bremen and the Civil Service Act of Bremen (§§ 2, 3 para. 2 BremDSG resp. § 20 para. 1 BremDSG in conjunction with § 93 BremBG - Law of Bremen).

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## Medical Examination for Expedition Participants

Marine expedition

*Polarstern*

Research vessel

Land expedition/flight mission

Overwintering in Arctic:

Overwintering in Antarctic:

Last name, First name: .....

Date of birth: ..... Profession: .....

Home address: .....

Postal address: .....

Tel. home .....work:.....

E-mail: ..... Fax:.....

Duty region: .....

Expedition/Travel leg: .....

Period of stay: .....

Type of activity: .....

### Final comment of Medical Service of Alfred-Wegener-Institute regarding expedition fitness:

- Fit for expedition
- Fit for expedition under certain conditions forming the subject of notification to the expedition physician by the Medical Service.
- Unfit

Date: ..... Signature: ..... Stamp: .....

## Anamnesis (medical case history)

**The family case history need only be completed by persons staying over winter:**

**Have any of the following diseases occurred among one or more of your family members (parents, siblings or children)**

	yes	no	Degree of kinship
Diabetes	<input type="checkbox"/>	<input type="checkbox"/>	.....
Heart attack	<input type="checkbox"/>	<input type="checkbox"/>	.....
Stroke	<input type="checkbox"/>	<input type="checkbox"/>	.....
High blood pressure	<input type="checkbox"/>	<input type="checkbox"/>	.....
Kidney disease	<input type="checkbox"/>	<input type="checkbox"/>	.....
Cancer	<input type="checkbox"/>	<input type="checkbox"/>	.....
Emotional disturbance	<input type="checkbox"/>	<input type="checkbox"/>	.....

### Personal anamnesis:

**What diseases have you suffered from to date?**

#### Infectious diseases

Infectious hepatitis	yes	<input type="checkbox"/>	no	<input type="checkbox"/>
Rheumatic fever	yes	<input type="checkbox"/>	no	<input type="checkbox"/>
Tuberculosis	yes	<input type="checkbox"/>	no	<input type="checkbox"/>
Tropical diseases	yes	<input type="checkbox"/>	no	<input type="checkbox"/>
Venereal diseases	yes	<input type="checkbox"/>	no	<input type="checkbox"/>
Other infectious diseases (apart from the usual childhood diseases)	yes	<input type="checkbox"/>	no	<input type="checkbox"/>
The indication of HIV infection is voluntary				

#### Diseases of the ear, nose and throat

Sinusitis	yes	<input type="checkbox"/>	no	<input type="checkbox"/>
Tonsillitis/Tonsillectomy	yes	<input type="checkbox"/>	no	<input type="checkbox"/>
Diseases of the ear	yes	<input type="checkbox"/>	no	<input type="checkbox"/>
Other ENT diseases	yes	<input type="checkbox"/>	no	<input type="checkbox"/>

#### Dental diseases

yes  no

#### Eye diseases

Glaucoma (ocular pressure)	yes	<input type="checkbox"/>	no	<input type="checkbox"/>
Grey cataract (clouding of the lens)	yes	<input type="checkbox"/>	no	<input type="checkbox"/>
Diseases of the retina	yes	<input type="checkbox"/>	no	<input type="checkbox"/>
Do you wear glasses? For distance vision? For close vision?	yes	<input type="checkbox"/>	no	<input type="checkbox"/>
Other eye diseases or impaired vision	yes	<input type="checkbox"/>	no	<input type="checkbox"/>

#### Diseases of the lungs

Pneumonia	yes	<input type="checkbox"/>	no	<input type="checkbox"/>
Pleurisy	yes	<input type="checkbox"/>	no	<input type="checkbox"/>
Chronic bronchitis	yes	<input type="checkbox"/>	no	<input type="checkbox"/>

**With "yes" please include detailed explanations and specify dates (if appropriate including diagnoses and comments of the examining physician):**

Asthma yes  no

Other lung diseases (e.g. sarcoidosis) yes  no

**Cardiovascular diseases**

Heart attack yes  no

Coronary disease yes  no

High blood pressure yes  no

Stroke yes  no

Circulatory disturbances of neck/head vessels yes  no

Circulatory disturbances of extremities yes  no

Thrombosis/varicose veins yes  no

Other cardiovascular diseases yes  no

**Diseases of the abdominal and digestive organs**

Gallstones yes  no

Diseases of the liver yes  no

Diseases of the pancreas yes  no

Diseases of the stomach and oesophagus yes  no

Diaphragmatic hernia yes  no

Chronic intestinal disease  
(e.g. ulcerative colitis or Crohn's disease) yes  no

Intestinal bleeding/intestinal polyps/diverticula yes  no

Appendicitis yes  no

Haemorrhoids/anal abscess yes  no

Abdominal hernias yes  no

Other diseases of the abdominal organs yes  no

**Kidney and bladder diseases**

Inflammation of renal pelvis yes  no

Renal cysts yes  no

Kidney and bladder stones yes  no

Cystitis yes  no

Other diseases of the efferent urinary tract yes  no

**With " yes " please include detailed explanations and specify dates (if appropriate including diagnoses and comments of the examining physician):**

**Only for female expedition participants:**

- Inflammation of the Fallopian tubes or ovaries    yes  no
- Ovarian cysts    yes  no
- Severe menstrual pain  
or other menstrual disorders    yes  no
- Ectopic pregnancy    yes  no
- Mammary disease    yes  no
- Endometriosis (endometrium occurring  
outside the normal area)    yes  no

**Only for male expedition participants:**

- Diseases of the prostate    yes  no
- Inflammation of the epididymis    yes  no
- Other diseases of the male  
genitals    yes  no

**Metabolic disorders**

- Diabetes mellitus    yes  no
- Disorders of lipid metabolism    yes  no
- Gout    yes  no
- Thyroid diseases    yes  no
- Other metabolic diseases    yes  no

**Diseases of the joints, bones or spinal column**

- Injuries to the big joints    yes  no
- Bone fractures    yes  no
- Rheumatism    yes  no
- Arthritis    yes  no
- Lumbago    yes  no
- Sciatic complaints    yes  no
- Diseases of the intervertebral discs    yes  no
- Other diseases of the joints, bones  
or spinal column    yes  no

With "yes" please include detailed explanations and specify dates (if appropriate including diagnoses and comments of the examining physician):

## **Malignant diseases**

- Cancers of individual organs                      yes  no
- Cancer of the blood                                      yes  no
- Cancer of the lymph nodes                      yes  no
- Skin cancer    yes  no

## **Neurological disorders and emotional disturbance**

- Epileptic fits    yes  no
- Seizures of other origin                              yes  no
- Attacks of vertigo                                      yes  no
- Frequently recurring and/or  
persistent headaches                              yes  no
- Other neurological diseases                      yes  no
- Depression    yes  no
- Delusions    yes  no
- Phobias (e.g. fear of flying)                      yes  no
- Panic attacks    yes  no
- Sleep disturbances                                      yes  no
- Problems with alcohol/drugs                      yes  no

## **Other diseases**

- Blood diseases    yes  no
- Paroxysmal vascular constriction of the hands  
due to cold    yes  no
- Unexplained weight loss                              yes  no
- Skin diseases    yes  no

**Have you received in-patient treatment  
in the last two years?**

yes  no

**Were you obliged to undergo surgery  
in the past?**

yes  no

**Had you ever had accidents involving fractures  
of the skull or other serious injuries?**

yes  no

**Do you drink alcohol?**

on a daily basis?                                      yes  no

on a weekly basis                                      yes  no

seldom?    yes  no

What do you drink and how much?

**Do you take regular exercise?**                      yes  no

What activities and how often?

With "yes" please include detailed explanations and specify dates (if appropriate including diagnoses and comments of the examining physician):

**Current state of health**

Are you currently undergoing medical treatment yes  no

Have you received medical treatment in the last 24 months? yes  no

Do you take regular medication? yes  no   
Which drugs, for what ailments and in what dosage?

Do you suffer from chronic disease? yes  no

Do you suffer from allergies? yes  no   
Which?

Are you intolerant to certain drugs? yes  no   
Which?

Have you suffered from frostbite? yes  no   
When and involving what part of the body?

Do you smoke? yes  no   
How many cigarettes per day?

Height: ..... cm  
Weight: ..... kg

With " yes " please include detailed explanations and specify dates (if appropriate including diagnoses and comments of the examining physician):

**Vaccination status:**

When were you last vaccinated against tetanus? .....  
When were you last vaccinated against diphtheria? .....  
When were you last vaccinated against polio? .....  
When were you last vaccinated against hepatitis A and/or B? .....

Vaccine protection from tetanus, diphtheria and polio is required, vaccine protection from hepatitis A and B is recommended. Please ask your GP whether you have adequate basic immunisation from the above infectious diseases and whether booster inoculation is possibly required (Vaccination costs will only be borne for staff employed by the Alfred-Wegener-Institute.)

Please include a copy of your certificate of vaccination and blood group card with the examination documents.

**With my signature, I confirm**

**that I answered the above mentioned questions in all conscience and accept that fraudulent misrepresentation and hiding of diseases can result in an exclusion of the participation in the expedition.**

**I understand that false statements or hiding of diseases, which lead to medical emergency procedures or to an evacuation during an exhibition, may put my health at risk and jeopardize a safe progress of the expedition.**

**In the event that a further inquiry to the expedition suitability is necessary, I herewith release my doctors (e. g. family physician, specialist) from doctor-patient confidentiality obligation and expressly allow my information to be shared with the company physician and also towards to the expedition medical doctor (e.g. ship's doctor) and the medical logistic physician of the Alfred-Wegener-Institute.**

**Date and signature**

**Herewith I confirm the transfer of the final approach to capability for expedition (cf. page 1) to the contracting authority.**

**Date and signature**

**Name in block letters: .....**



Name of person examined: ..... Date of examination: .....

Visible deformation of the thorax yes  no

Visible deformation of the **spinal column** yes  no

Impaired mobility of the **spinal column** yes  no

**Finger-floor distance:** ..... cm

Is there tenderness on pressure in the **abdomen** or is **resistance** palpable? yes  no

Are the **liver** and/or **spleen** palpable? yes  no

Are the renal beds sensitive to percussion? yes  no

Are **scars** present? yes  no

Are **herniae** present? (rectus diastasis, umbilical hernia, inguinal hernia, post-operative hernia) yes  no

Are the **lymph nodes** enlarged? yes  no

Are the **extremities** deformed, have injuries been sustained or is there impaired mobility? yes  no

Is **articular swelling** present? yes  no

Are **varicose veins** present? yes  no

Abnormalities on palpation of the **foot pulses** yes  no

**Reflex status:**

Pat. reflex left: Pat. reflex right:

Ach. tendon reflex left: Ach. tendon reflex right:

Biceps reflex left: Biceps reflex right:

Radial reflex left: Radial reflex right:

Are there **sensitivity** disorders? yes  no

Is any **tremor** present? yes  no

Is there **impaired coordination**? yes  no

Is **Romberg's test** pathological? yes  no

Are other **neurological findings** present? yes  no

Are there **abnormalities in behaviour**? yes  no

Signs of **mental disease**? yes  no

**Other findings** not explicitly mentioned in the questions? yes  no

Please give a detailed description of the findings and/or diagnosis

# Resting and Exercise ECG

Name of person examined: ..... Date of examination: .....

Date of birth: ..... Height .....cm Weight: .....kg BMI: .....

## Resting ECG (Please include ECG printout without fail)

Evaluation:

### Assessment of resting ECG:

### Ergometry according to WHO standard (Please include ECG printout without fail)

If the resting ECG and the findings of the cardiac examinations show no abnormalities and there are no relevant physical symptoms or risk factors an exercise ECG is not required for persons under 35 years of age. For persons staying over winter an exercise ECG is obligatory regardless of age.

With a renewed medical examination prior to an expedition the exercise ECG must be repeated after two years in the case of persons under 45 years of age and after one year for persons over 45 years of age provided no abnormal examination findings and cardiologically relevant diseases have occurred since the previous examination.

Required heart rate: 200 minus age (submaximal load)

### Excerpt from ergometric record:

(if no separate record is attached as an annex):

Before load:	Blood pressure:	Heart rate
Initial load .of ..... watt:	Blood pressure:	Heart rate
With load of 150 watt:	Blood pressure:	Heart rate
With max. load of ..... watt:	Blood pressure:	Heart rate
1 min. after load:	Blood pressure:	Heart rate
3 min. after load:	Blood pressure:	Heart rate
5 min. after load:	Blood pressure:	Heart rate

### Performance in watt with HR of 150/min)

Actual ..... watt  
Required ..... watt

(Required: 1.8 watt/kg body weight for women and 2.1 watt/kg body weight for men)

Symptoms?	yes <input type="checkbox"/>	no <input type="checkbox"/>
Extrasystoles?	yes <input type="checkbox"/>	no <input type="checkbox"/>
Arrhythmia?	yes <input type="checkbox"/>	no <input type="checkbox"/>
Pathological ST segments?	yes <input type="checkbox"/>	no <input type="checkbox"/>

If " yes " description:

Reason for stopping ergometric test:

Assessment of ECG under load:

Assessment of RR and HR behaviour:

Assessment of state of fitness:

Assessment summary for ergometric test:

# Laboratory Diagnostics:

Name of person examined: ..... Date of examination: .....

## Standard laboratory diagnostics: (Please attach laboratory reports)

- ESR:**
- Blood count:**
  - Leukocytes:**  
(under 4.0 and over 10.0 /nl differential blood count required)
  - Erythrocytes:**
  - Haemoglobin:**
  - Haematocrit:**
  - MCV:**
  - MCH:**
  - MCHC:**
  - Thrombocytes:**
- Blood sugar:**
- Creatinine:**
- Uric acid:**
- GPT:**
- Gamma GT:**
- Cholesterol:**
- HDL chol.:**
- LDL chol.:**
- Urine findings:**
- Blood group:**  
(if known, please include a copy of blood group card)

## Additional laboratory diagnostics for persons staying over winter: (Please attach laboratory reports)

- Differential blood count:**
- Bilirubin:**
- Alk. phosphatase:**
- Triglycerides:**
- TSH:**
- CRP:**
- CDT:**
- Attach hepatitis serology for HA, HB and HC**
- HIV:**
- TPHA:**
- VDRL:**
- PSA (for male persons over 45 staying the winter):**

<b>Haemocult:</b>	<b>Date</b>	<b>neg.</b>	<b>pos.</b>
1. Test: .....		<input type="checkbox"/>	<input type="checkbox"/>
2. Test: .....		<input type="checkbox"/>	<input type="checkbox"/>
3. Test: .....		<input type="checkbox"/>	<input type="checkbox"/>

## Reports of specialist findings:

**Ophthalmologic examination:** Obligatory for persons staying over winter. Other expedition participants over 40 years of age are asked to please include findings (not older than 36 months) regarding visual acuity, intra-ocular pressure and the retina (examination with dilated pupils).

**Dental examination:** Please attach confirmation (not older than 3 months). For persons staying over winter an orbital pantomogram (OPT) with a detailed report of findings is also necessary.

**Gynaecological examination:** Obligatory only for persons staying over winter. Please attach reports of findings for physical gynaecological examination, PAP smear test and mammography (mammography from 35 years of age).

**Other specialist examinations:** If required following general examination, please attach reports of findings.

**X-ray-of thorax and abdominal sonography:** Obligatory only for persons staying over winter. Please attach reports of findings and images.

## Assessment of expedition fitness by the examining physician:

Physicians performing the examination of expedition fitness are asked to check the anamnesis form filled in by the expedition participant and complete it where necessary. Please ensure you provide a meaningful assessment of expedition fitness, for which the findings of any specialist examinations additionally necessary should be taken into account. Please attach the reports of findings and printouts of ECGs and spirometric tests to the examination documents without fail.

- Fit for expedition**
- Fit for expedition under certain conditions (please explain)**
- Unfit (please give reasons)**

Date: ..... Signature: ..... Stamp +Tel: .....