Expedition participants in land expeditions/flight missions to the Arctic (Greenland, Canada, Alaska, Siberia)

For every expedition to the Arctic lasting more than 10 days an examination of expedition fitness is necessary.

Important

Additional examinations for general expedition fitness

1.Dental examination
The examination documents must include a confirmation issued by your dentist stating that your teeth have received adequate treatment

2.Ophthalmological examination
Expedition participants over 45 years of age are asked to attach ophthalmologic findings (not older than 36 months) regarding visual acuity, intra-ocular pressure and the retina.

3.Spirometry
Pulmonary function test for all expedition participants, please include a printout of the result

4.Stress ECG
A stress ECG is required for persons over 45 years of age, as well as for participants with relevant physical symptoms and risk factors. If a new medical examination is performed prior to an expedition, the stress ECG must be repeated after one year (see page 12)

5. Other specialist medical examinations
If necessary due to the general examination. Please include reports of findings.

Medical Service – Werksarztzentrum Fischereihafen
Am Lunedeich 115, 27572 Bremerhaven, Tel.:0471- 986931-00, Fax: 0471- 986931-01
E-mail: doc@awi.de

Medical Examination for Expedition Participants

Marine expedition	☐
RV 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 (please explain)**

☐ **Unfit (please give reasons)**

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

Anamnesis (medical case history)

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

		Degree of kinship
Diabetes	yes ☐ no ☐	.....
Heart attack	yes ☐ no ☐	.....
Stroke	yes ☐ no ☐	.....
High blood pressure	yes ☐ no ☐	.....
Kidney disease	yes ☐ no ☐	.....
Cancer	yes ☐ no ☐	.....
Emotional disturbance	yes ☐ no ☐	.....

Personal anamnesis:

What diseases have you suffered from to date?

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

Infectious diseases

Infectious hepatitis	yes ☐ no ☐
Rheumatic fever	yes ☐ no ☐
Tuberculosis	yes ☐ no ☐
Tropical diseases	yes ☐ no ☐
Venereal diseases	yes ☐ no ☐
Other infectious diseases (apart from the usual childhood diseases)	yes ☐ no ☐

The indication of HIV is voluntary.

Diseases of the ear, nose and throat

Sinusitis	yes ☐ no ☐
Tonsillitis/Tonsillectomy	yes ☐ no ☐
Diseases of the ear	yes ☐ no ☐
Other ENT diseases	yes ☐ no ☐

Dental diseases

yes ☐ no ☐

Eye diseases

Glaucoma (ocular pressure)	yes ☐ no ☐
Grey cataract (clouding of the lens)	yes ☐ no ☐
Diseases of the retina	yes ☐ no ☐
Do you wear glasses? For distance vision? For close vision?	yes ☐ no ☐
Other eye diseases or impaired vision	yes ☐ no ☐

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

Diseases of the lungs

Pneumonia	yes ☐	no ☐
Pleurisy	yes ☐	no ☐
Chronic bronchitis	yes ☐	no ☐
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 esophagus	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 ☐
Hemorrhoids/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 ☐

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):

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?

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? Which?	yes ☐	no ☐
Are you intolerant to certain drugs? Which?	yes ☐	no ☐
Have you suffered from frostbite? When and involving what part of the body?	yes ☐	no ☐
Do you smoke? How many cigarettes per day?	yes ☐	no ☐
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 immunization 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: .....

Findings of Medical Examination (to be completed by the physician)

Name of person examinated: …….. Date of examination: ……..

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

Note: A BMI greater than 35 or a body weight over 125kg represent a criterion for exclusion from an expedition.

Is the person to be examined one of your patients?	yes ☐	no ☐	**Please give a detailed description of the findings and/or diagnosis**
Abnormalities in the **general state of health**	yes ☐	no ☐	
Pathol. examination findings for the **ears**	yes ☐	no ☐	
Abnormalities of the **cervical lymph nodes?**	yes ☐	no ☐	
Enlargement of the **thyroid?**	yes ☐	no ☐	
Pathol. examination findings for the **eyes?**	yes ☐	no ☐	
Pathological reaction of **eyes** to light and convergence?	yes ☐	no ☐	
Is **nystagmus** present**?**	yes ☐	no ☐	
Are **spectacles** and/or **contact lenses** worn? Is **myopia** or **hyperopia** present?	yes ☐	no ☐	
Do the **teeth** seem to require treatment?	yes ☐	no ☐	
Are **dentures** worn?	yes ☐	no ☐	
Does the **tongue** show any abnormality?	yes ☐	no ☐	
Pathol. findings of the **skin** or **mucosa**	yes ☐	no ☐	
Impaired mobility of the **head**	yes ☐	no ☐	
Are **nerve exits** sensitive to pressure or tender on percussion?	yes ☐	no ☐	
Abnormalities of the **nose or pharynx**	yes ☐	no ☐	
Abnormalities of the **tonsils/tonsillectomy**?	yes ☐	no ☐	
Do auscultation and percussion of the **lungs** result in pathological findings?	yes ☐	no ☐	
Does auscultation of the **heart** result in pathological findings?	yes ☐	no ☐	
Does the **heart** seem enlarged?	yes ☐	no ☐	
Are there signs of cardiac **insufficiency?**	yes ☐	no ☐	

Blood pressure and **heart rate** at rest: **RR: ..... / ..... HR ...../min**

Name of person examinated: …….. 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 **hernia** 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 ☐

Spirometry (include printout):

Resting and Exercise ECG

Name of person examinated: …….. 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 40 years of age. For persons staying over winter an exercise ECG is mandatory, regardless of age.

In case of a renewed medical examination prior to an expedition, a repetition of the exercise ECG is required after one year for persons over 40 years of age.

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 ☐	no ☐
Extrasystoles?	yes ☐	no ☐
Arrhythmia?	yes ☐	no ☐
Path. ST segments?	yes ☐	no ☐

if "yes", description:

Reason for stopping ergometric test:

Assessment of ECG under load:

Assessment of RR and HR behavior:

Assessment of state of fitness:

Assessment summary for ergometric test:

Laboratory Diagnostics

Name of person examinated: …….. Date of examination: ……

Standard laboratory diagnostics: **(Please attach laboratory reports)**	**Additional laboratory diagnostics for persons staying over winter:** **(Please attach laboratory reports)**
ESR: **Blood count:** **Leukocytes:** (under 4.0 and over 10.0/nl **differential blood count** required) **Erythrocytes:** **Hemoglobin:** **Hematocrit:** **MCV:** **MCH:** **MCHC:** **Thrombocytes:** **Blood sugar:** **Creatinine:** **Uric acid:** **GPT:** **Gamma GT:** **Cholesterol:** **HDL chol.:** **LDL chol.:** **Blood group:** **(if known, please include a copy of blood group card and vaccination certificate)**	**Differential blood count:** **Bilirubin:** **Alk. Phosphatase:** **Triglycerides:** **TSH:** **CRP:** **CDT:** **Attach hepatitis serology for HA, HB and HC** **HIV:** **TPHA:** **VDRL:** **PSA (men over 45 years of age):** **Hemocult: Date: neg. pos.** **1. Test: …… ☐ ☐** **2. Test: …… ☐ ☐** **3. Test: …… ☐ ☐**

Additional specialist medical examinations for overwinterers:

Ophthalmological examination:
Mandatory for persons staying over winter. (see page 2)

Dental examination:
For persons staying over winter an orbital pantomogram (OPG) with a detailed report of findings is also necessary.

Gynaecological examination:
Mandatory 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).

X-ray-of thorax and abdominal sonography:
Please attach reports of findings and images.

Assessment of expedition fitness by the examining doctor
The physicians who perform the examination for expedition fitness are asked to check the medical history form filled out by the participant and to complete it if necessary. We ask for a meaningful assessment of the expedition fitness, taking into account the findings of any specialist medical examinations that may be necessary. Please include reports and printouts of ECGs and spirometry with the examination documents.

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

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

Version: 2021/03