

BRITISH ANTARCTIC SURVEY MEDICAL UNIT (BASMU)
IMMUNISATION POLICY

This policy is in three parts.

Part I outlines the requirement for staff to be immunised against certain diseases and advises how to achieve this before departure for Antarctica.

Part II provides comprehensive background on immunisation protocol in the UK and explains why certain Antarctic staff will be advised by BASMU to have additional cover for some diseases.

Part III gives consideration to staff who plan to travel through Africa or South America on the way south or on the way home.

(This policy will be reviewed regularly in the light of any new advice from the Department of Health.)

PART I

Introduction.

Immunisation is a method of protecting people from infectious disease. Following recommendations from the Health protection Agency and Department of Health, BASMU has developed a schedule of vaccination which is recommended for those living and working in Antarctica. This is for your protection.

Most vaccines require an initial course (usually 3 injections at specified time intervals) to build up protection, which is then maintained by boosters at intervals dependant on the vaccine.

BASMU recommendation and requirement for Immunisations before travelling to Antarctica / Arctic. For the reasoning behind this schedule and further information, see Part II of policy below.

For Everyone before leaving UK:

<u>Immunisation</u>	<u>Method</u>	<u>Requirement</u>
Diphtheria /Tetanus/ Polio	Combined Vaccine	One course. +/- Booster in last 10y (or 5 in life)
Meningitis ACWY	Vaccine	Single dose; Booster Every 5 years to age 35
MMR	Combined vaccine	One Course (proven rubella immunity in women)

Individual choice (as recommended by authorities who operate Brize Norton to Falklands air route)

Yellow fever	Vaccine	One Course. +/- Booster in last 10 y
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For certain people (as advised by BASMU):

TB	BCG	Discuss with GP or BASMU
Hepatitis A	Vaccine	For worker exposed to <u>raw</u> sewage
Hepatitis B	Vaccine	For some healthcare workers.

Also

- Check what you may need for any travel plans on the way home. (see part III) Complete any initial courses.
- If concerned discuss TB immunisation with your doctor or BASMU
- If your work will involve regular exposure to raw sewage Hepatitis A vaccination is recommended.
- If involved in healthcare at KEP, Hepatitis B vaccination will be offered.
- Note; Influenza inoculation, if recommended will be provided by BASMU.

Vaccines are delicate preparations that do not, in general, travel well. BASMU doctors on the bases and ships do not have stocks of most vaccines. Only Dip/Tet/Pol (for use against tetanus) is routinely available. It is therefore important that everyone is in date before leaving UK and will remain so whilst in the Antarctic.

You should therefore ensure that you are “up to date” with the recommended adult vaccination schedule. . Check at least 3 months prior to departure whether any of your vaccinations need a booster for travel and tell your doctor. All of these vaccines are available from your GP. Some will be available free of charge on the NHS, but you may be asked to pay for some of these as GP’s are not required to provide treatment for travel purposes. It is the responsibility of the individual to ensure that they consult their GP in good time, and notify BASMU of their immunisation status.

Record Keeping

Despite the best will in the world we are all prone to forget details about when we received vaccinations. Please update BASMU on your immunisation status when possible.

PART II

Background to Immunisation in the UK

Immunisation is used to build up immunity to infectious disease. Usually this is done by vaccination, the injection of a very small amount of material related to the disease, to produce a response so that the body’s defences are ready if the disease attacks. Over the years immunisation programmes have been very successful in reducing and even eliminating certain diseases, such as smallpox, diphtheria etc, but continued

success of these programmes relies on a high take up rate amongst individuals. There has, in recent years, been a lot of discussion in the press about side effects and possible long term complications of certain vaccines, particularly some combined vaccines. Despite good evidence that these do not cause undue problems, the take up rate in children in UK has decreased.

Vaccines may be able to completely prevent the individual from contracting the disease, or they may significantly reduce the severity if the disease is contracted. They do not replace sensible standards of hygiene, and physical or other precautions that can be taken to avoid infection.

The Department of Health in the UK recommend that as children we are vaccinated against the following diseases:

- Diphtheria
- Tetanus (Lockjaw)
- Whooping Cough
 - This protection is given to babies in the first year of life using a combined vaccine (DTwP) which needs booster injections preschool and before leaving school. Thereafter protection and diphtheria and tetanus are maintained by boosters every 10 years or after exposure to a high risk of tetanus.
- Polio
 - Given as an oral vaccine (on a sugar lump) or as a combined vaccine, in first year with boosters preschool and before leaving school. Boosters are needed every 10 years thereafter for life. The recommendations are that no adult should remain unvaccinated against this serious disease. The vaccine is now routinely given along with tetanus and diphtheria as a combined booster.
- Haemophilus Influenza (a cause of serious infections in children)
 - HiB vaccination in first year of life which does not need to be continued into adult life.
- Meningococcus GpC (one of the groups of meningitis bacteria)
 - Again given in first year, but effective and recommended for anyone who has not previously been immunised up to age 24. There are other types of meningococcus and not all have vaccines available. The use of other meningococcus vaccines is recommended for travellers to certain areas only. Routine boosters over age 24 are not recommended.
- Tuberculosis.
 - BCG vaccination given previously to susceptible individuals at about age 14. recent changes in policy now target infants from high risk groups. See BAS policy on Tuberculosis.
- Measles, Mumps and Rubella (German Measles)
 - MMR vaccine given in 2 year of life with preschool booster. This does not need to be maintained in adult life if immunisation successful.
 - Measles in adult life can be quite serious, and mumps can cause severe complications including pancreatic disease and sterility. Rubella carries high risks to unborn children it is recommended that women of child bearing age are tested to determine their

reaction to the vaccine and re-immunised if not proven to be immune.

- Pneumococcus.
 - Very recent adthreaction to the vaccine, and reimmunised if not proven to be immuvice from the DoH has begun pneumococcus vaccination in infancy. This will take several years to have any effect on the BAS population. At the moment adult vaccination is only recommended for high risk groups.

The child vaccination schedule above is recommended for everyone living in the United Kingdom and BASMU expect that most UK nationals will have had this undertaken. To allow BASMU to know when you require boosters and in the interests of maintaining a comprehensive medical record in your interest please keep BASMU updated on your immunisation status.

In the unlikely event that you have not had these vaccinations as a child, BASMU recommend that you take steps to protect yourself. However please note there are some vaccinations in the list above, designed for childhood diseases, which are not essential in adult life.

In summary, **if you have never been vaccinated**, BASMU recommend that you have the following schedule of vaccination:

- Diptheria / tetanus /polio course.
- Meningitis ACWY Vax which provides wider cover than Meningitis C alone. You should consider this too if ever travelling to sub Saharan Africa.
- MMR. If you have only had one MMR jab you should consider having another.
- [Note; Whooping Cough and HiB are not of value in the adult patient.]

Other vaccinations that must be considered for Antarctic Service

There are no specific infectious disease risks requiring separate vaccination from those recommended in the UK. However BAS and BASMU also recommend persons travelling to the Antarctic have additional vaccinations in some circumstances.

1) Yellow Fever

Those individuals travelling by RAF flight from Brize Norton to the Falklands are recommended to have Yellow Fever vaccination. This is a single dose, which lasts 10 years. When immunised you should be issued with an International Certificate of Vaccination which is a requirement for entry into some countries. This is recommended because the diversion for the RAF flight is to Senegal where there is a high risk of Yellow Fever (the last major outbreak in the capital, Dacca, was in November 2005). Although individuals who are travelling by ship or by civilian flight may not consider this vaccination essential, it should be remembered that travel plans may change at short notice, and return may be by a different route. Emergency repatriation (for example in a medical emergency) is almost always by RAF flight. Yellow Fever is also required for travel through South Africa. It is the responsibility of the individual to obtain vaccination, which is only available from recognised

centres. Your GP can advise where the nearest centre is located. There will be a charge levied for this vaccination, which can be reclaimed through BAS personnel department. *It is down to personal choice as to having this vaccination or otherwise.*

2) Influenza

BASMU recommends that, because of the possible rapid transmission of influenza on a base in winter, and the limited facilities available for the treatment of the rare but potentially serious complications of influenza on an isolated base, where possible individuals who are going to winter in the Antarctic are protected by vaccination against the current influenza virus variant, which changes from year to year. Unfortunately stocks of this vaccine are never available pre-deployment and are often restricted in availability.

3) Tetanus

Tetanus is present in the Antarctic and in the event of a tetanus prone wound being sustained the BASMU medical officer will assess whether any updating of cover is required.

4) Hepatitis A

Certain jobs may increase risk of contact with disease. If there is considered excess risk, BASMU will offer appropriate vaccination. Currently the only additional recommendation is that anyone in regular contact with raw human sewage should have Hepatitis A vaccination. This essentially means the mechanical and electrical technicians, builder and carpenter at Rothera.

(NB. Hepatitis A is given as a live vaccine and careful consideration of need to inoculate is advisable. Occasional contact with raw sewage does not warrant vaccination (in line with Health Protection Agency Guidance)

Anyone else who thinks they may benefit from protection against hepatitis A, because of contact with raw sewage, or travel in endemic areas, should discuss this need with BAS Personnel Section their GP. BASMU doctors have a limited stock of this vaccine for essential personnel only.

5) Hepatitis B

The BAS population in the Antarctic are all potential blood donors and as such are screened to ensure that they do not carry Hepatitis B and pose a risk to others. In UK everyone involved in healthcare who may be at risk of exposure to body fluids, especially blood, is offered vaccination against hepatitis B, and indeed immunisation is a requirement for employment in some occupations. However because of our screened population the risk of exposure in the Antarctic is negligible and so we do not think that everyone needs to be protected.

The exception to this is for those people at KEP who can be expected to help the doctor in a medical emergency involving someone who has not been screened. This group of people will be offered immunisation by the BASMU doctor at KEP using the so called accelerated schedule to provide rapid protection.

6) Tuberculosis

In the UK tuberculosis immunisation (BCG) is now only being offered to potentially high risk groups. Currently most people will have been vaccinated at school and this should be sufficient to cover for travel to high risk areas such as Brazil. In order to try to prevent any significant risk of an outbreak of tuberculosis on a BAS base, BASMU have recommended that:

Anyone wintering in the Antarctic should have a chest Xray (to detect anyone with TB who may not have any symptoms)

Anyone from a high risk group will be screened and BCG recommended as needed.

There is a separate policy regarding TB screening.

PART III

Returning home

For those returning directly by air or, more rarely, BAS ship there are no specific requirements other than an in date Yellow fever certificate as mentioned above.

Staff who decide to return home via South America or Africa, may need additional vaccination. These vary from time to time and it is impossible to give definitive guidance in this document. Advice changes frequently and it is important that up to date information is obtained from the latest Department of Health advice to travellers. This is the individuals responsibility.

The following precautions may be needed, although this list is not exhaustive:

Vaccinations

- For most countries, you should be up to date for tetanus, polio (not essential in South America) and will require hepatitis A immunisation.
- In tropical South America, typhoid and yellow fever immunisation are additionally required.
- For prolonged stays of 4 weeks or more, or for shorter trips to remote rural areas, courses of Hepatitis B and Rabies vaccination should be completed. For travel to major population centres anywhere in South America it is not usually necessary to have these.
- Cholera vaccination is no longer recommended.
- If travelling to some parts of sub-saharan Africa meningitis vaccination may be recommended. This is not needed for South America.

Very occasionally there are outbreaks of plague in Africa and South America. Vaccination is possible but not entirely successful and avoidance of outbreaks, even if it means changing your plans, is certainly safer. Other diseases such as dengue fever, leishmaniasis, schistosomiasis and Chagas disease are prevalent in South America. These are best avoided by protection against all insect bites, and by avoiding contact with potentially contaminated water. Up to date guidance can be obtained from the Department of Health or on the internet.

Malaria

This is probably the most prevalent and dangerous tropical disease that you may encounter in South America or Africa. It is widespread, and different areas have varieties, which require different prophylactic medication. Advice varies from place

to place and year to year so you should check up or speak to the base doctor in good time to allow up to date guidance to be sought.

There is no doubt that prevention of mosquito bites by using insect repellents, long sleeved clothing, and mosquito nets for sleeping is the most effective way to reduce the chances of getting malaria. However no such precautions are completely effective and medication taken for a week before and 4 weeks after going to the endemic areas is advised. BASMU do not carry large stocks of these medications. In the UK they are not available “on the NHS” and you have to pay for a private prescription.

Getting Vaccinations and Malarial Prophylaxis

The Base/Ship doctor does not have stocks of vaccine and antimalarials available. Consultation with your home doctor about your travel plans should take place 2 to 3 months before you travel. Please remember before you leave UK that some of the vaccinations, such as rabies, require more than one dose at set intervals. There may not be time to fully immunise you between you leaving the Antarctic and arriving in South America (unless you wish to spend 4-6 weeks in the Falklands. Wherever possible initial courses of travel vaccinations should be completed prior to leaving UK. If your cover lapses while you are in the Antarctic, and you need a booster, BASMU have come to an agreement with the Falkland Islands Medical Services to enable you to obtain what you need in Stanley on your way north. If the FIMS are given adequate notice (usually 6 weeks) they may be able to arrange to vaccinate other people from the Falklands at the same time, and in those circumstances they will not charge for vaccination. If this is not possible you will be expected to pay, as you would in UK. You will have to pay for antimalarials.

Further Information

There are websites which give very good information for travellers in respect of immunisations and ways to avoid diseases. For general use

www.fitfortravel.scot.nhs.uk is good for country specific advice.

Or. www.hpa.org.uk/infections and www.nathnac.org have some more detailed advice for the doctors.