



Environmental Conditions at Bagram Airfield Information for Health Care Providers (HCPs)



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A Collaborative Effort of NEHC, AFIOH and USACHPPM

Summary of key messages

- High dust/ particulate matter (PM 10) and noise levels at Bagram Airfield are the hazards of most concern.
- Conditions at Bagram Airfield should not cause any long-term health effects.
- Ongoing environmental monitoring and protective measures are in place to ensure that health risks are minimized.

Introduction

In November 2001, American and Allied troops began working at Bagram Airfield in support of Operation Enduring Freedom. It is at the site of an old airfield once occupied by the Soviet Union during their conflict in Afghanistan, and has since been abandoned. Initially, conditions were quite harsh, but progressive environmental protection measures have been and continue to be put in place. It is still an active site supporting Operation Enduring Freedom, so thousands of service members (mostly Army and Air Force, but some Marines) from various Guard, Reserve, and active duty units have worked here, or are scheduled to go there soon. Some people who worked there are concerned that the environmental conditions may have affected their health. Personnel serving the installation and trained in preventive and occupational and environmental medicine (OEM) and health (OEH) usually address many of these potential exposures on a daily basis in theater. You may need to consider consultation with similar expertise to address concerns with service members who have served at Bagram and since returned home. This information sheet provides background information and answers to some of the more common questions.

What are conditions like at Bagram Airfield?

As its name implies, the site was and continues to be used as an airfield. It was environmentally damaged extensively during the Soviet occupation in the 1980s. Conditions are usually harshest when a site is first occupied; but at Bagram Airfield, improvements to the living and working conditions have been and are constantly being made. Although most areas have been cleared, extensive debris from destroyed aircraft and buildings litter the area. Numerous explosions, attacks, and plane crashes during the Soviet occupation could have caused or worsened any existing contamination, and have also resulted in extensive unexploded ordnance (UXO) in the area.

What kind of environmental assessment was done at Bagram and what was found?

At any new site, an occupational and environmental baseline survey is a required part of the health risk

assessment process (Department of Defense Instruction 6490.3). Two environmental assessments have been performed at Bagram Airfield (Nov 01, July 02). Although these efforts were somewhat limited because of the presence of extensive UXOs and mined areas that had not been cleared, they improved by the second survey, and provided good information regarding environmental conditions at the site. These assessments involved:

- Collecting and analyzing samples of soil, air, and water for the presence of radioactivity, metals and various organic compounds, such as cleaning solvents, PCBs and pesticides;
- Sampling paint, tiles and other bulk or unknown materials; and
- Surveying for radiofrequency radiation and noise.

Results indicate that high dust (particulate matter or PM 10) and noise levels are the hazards of most concern. Asbestos-containing tiles and insulation were noted on the ground or around some pipes, but were not in a form that would go into the air easily. Based on sampling data, the air did not contain asbestos fibers. One small radioactive source was found in one old aircraft and this was disposed of properly, but would not have posed a health hazard to personnel there. Bulk samples of unknown materials in the metals shop area were considered hazardous (contained acids and metals), and were marked "off limits" until proper disposal. Old motor oil was found near abandoned generators, and has since been properly disposed. Sampling results show that there are no other soil, air, water, radioactivity, radiofrequency radiation, or lead-based paint concerns. As stated, dust levels in the air are generally high at Bagram, as they are across the entire region, and will vary with the season and weather.

What protective steps have been taken to minimize potential exposures that might affect health or safety at Bagram Airfield?

Since Nov 01, various recommendations have been made to prevent exposures that might affect health or safety, in addition to the usual preventive controls and processes that are part of any deployment. Specific actions that have been taken to ensure Force Health Protection at Bagram Airfield include:

- Minimizing dust levels by applying water, gravel or paving on dust-prone areas;
- Using proper protective equipment (respirators, gloves, etc) when cleaning up buildings and debris (especially in formerly industrial areas);

- Cleaning and disposing of debris, including asbestos shingles (which requires proper protective gear and training);
- Avoiding any future contamination by handling chemicals currently in use very carefully (spill control, etc);
- Directing personnel to avoid areas marked off-limits;
- Remaining indoors/protected during dust storms;
- Directing personnel to avoid any obviously stained soil until it can be investigated;
- Constructing noise barriers near loud sources; those who work in known high-noise areas attend regular noise protection training, and wear appropriate protective gear;
- Monitor the air quality.

How would Bagram Airfield and regional exposures affect health?

The most common complaints from personnel who have served here likely include those related to the more primitive living conditions; sanitation procedures used in this region of the world; and extensive dust and noise. In addition, some have voiced concern about potential exposures and odors, such as from the disposal or burning of waste/garbage, destroying of unexploded ordnance, and the presence of rodents/insects or infectious diseases. Although it is not likely that time spent at Bagram Airfield would result in any long-term health effects, some people may experience more physical symptoms than others.

Dust is an irritant that bothers some people more than others. Symptoms such as coughing, sneezing, sinus and respiratory irritation, nasal drainage (“drip”), and sore throat are common during peak periods. People with asthma or allergies may notice their usual symptoms worsen, or they may need more medicine than usual. These effects usually go away quickly after the local weather improves. Permanent health effects are uncommon. Older adults with cardiovascular or respiratory disease might also be especially susceptible. Irritated eyes and skin are also common in areas with blowing sand. Although asbestos was found, any health risk from it is very small because asbestos was not detected in the air and therefore would not be inhaled. Trained workers wearing appropriate protective gear removed and disposed of the asbestos tiles/ insulation to further limit potential exposure to others.

Besides respiratory complaints, the other common medical problems of personnel stationed to a new or more primitive area such as Afghanistan usually involve the gastrointestinal (GI) tract and the skin. Personnel are exposed to new food and water supplies (including some which are labeled as “nonpotable”, but service members may use anyway, e.g. to brush their teeth), as well as lower levels of sanitation (e.g. primitive latrines or port-a-johns, fewer hand-washing facilities, unfamiliar garbage disposal processes). Add to that the physical and mental stresses that personnel face, and it is not unusual that GI symptoms can be very common. Skin complaints can also be linked to

the lower sanitation levels (e.g. fewer showers, less access to laundry facilities), new and different exposures (e.g. locally produced products, laundry detergent and soap, etc), the harsher, drier weather conditions, etc. These can lead to new or worsen existing allergic or irritating rashes or skin conditions.

Infectious diseases in the area are also a threat, which is why all Service Members receive appropriate vaccines or preventive medications (e.g., to prevent malaria), personal protective equipment, and education about the steps they can take to protect their health prior to deploying. However, service members may have concerns about the potential side effects of these very vaccines and medications. In addition to the more usual causes for upper respiratory, GI and skin symptoms and fever that a soldier might also get in the States, there are some causes found in the local Afghanistan area that are not common in the U.S. (such as malaria or leishmaniasis). Also, tuberculosis is a much bigger threat. Insects and rodents can carry disease, so pest control methods were put in place early on at Bagram Airfield to try to minimize the spread of disease.

Some people may experience depression, anxiety, or unexplained physical symptoms (fatigue, subjective memory and concentration problems, chronic pain, or an irritable bowel). Such symptoms can appear for many reasons and most commonly occur in people without any known exposure to environmental contaminants. Any new information about Bagram Airfield exposures or associated health effects will be disseminated via websites (see final section of this sheet), updated fact sheets, and briefings by site preventive medicine personnel.

What should I expect from returning Bagram Airfield personnel?

Service members may ask about any of the above topics or others that we don’t know about yet. Some may believe they were exposed to dangerous chemicals and that they haven’t been told the truth. They may have symptoms that they think are the result of these exposures, or they may feel well now, but report concerns regarding their future health.

Available indications are that the protective risk control measures in place since November 2001 remain effective. However, rumors and conflicting reports can circulate, and your reassurances may not lessen their level of concern. Note specifically that they have been told in post-deployment briefings to see their HCPs for any unusual symptoms, skin rashes or ulcerations, etc. Some diseases, such as leishmaniasis, can have a longer incubation period and so may not be picked up in theater.

What should I do in the clinic?

Listen actively, show that you care about them and their concerns, and promise to do your best to help them. Avoid any temptation to contradict them. The post-deployment health clinical practice guideline on the DHCC website

provides much useful information on evaluating and treating redeploying service members.

A complete and thorough history and focused physical examination is always appropriate. Along with these, the clinician should use good clinical judgment, particularly when the cause and/or diagnosis of a medical complaint is not clear. For deployed and redeploying soldiers, also confirm that those vaccinations or other preventive measures that service members should have received predeployment or used during deployment and post-deployment are/ were administered and used as directed.

Be sure to book extra time for these patients and spend more time than usual gaining their perspective regarding possible Bagram Airfield exposures and other health concerns. Similarly, take more time than you normally would to explain all options and follow-up plans. Follow-up evaluations and clinical continuity are essential to the care of any patients, but especially redeploying personnel. There are current opportunities for follow-up of National Guard, Reserve and discharged troops (veterans) that should be explored, as appropriate. See VA website listed at the end.

Document exposure and health concerns in the medical record. If indicated and available, explore whether any potential exposures have been documented where the service member was deployed. This information may be available in the medical record or through the CHPPM secure website (see final section). The CHPPM website also houses many fact sheets for the HCP and the service member regarding potential exposures and their health effects, which would be helpful to provide. Always give these individuals the benefit of the doubt in your clinical conclusions, documentation efforts, administrative determinations, and education efforts. Consider referral(s) as indicated.

Are there special evaluations I should do?

Let your clinical suspicion, based on the history and complete physical, direct your testing. Under the circumstances, you may have a lower clinical threshold for ordering labs and clinical consultations. Work with the patient to determine the best course of action. However, exhaustive (so-called

“no stone unturned”) evaluations that try to “rule out” every remote possibility are inappropriate, often lead to false positive findings that can increase patient concern, and could have other harmful effects of their own. Some people may ask for or demand specific tests they have heard about and again, good clinical judgment should guide the HCP.

Can mental health consultation help?

Consultation to mental health is encouraged under appropriate clinical circumstances, since psychological conditions are among the most common of clinical conditions, are often disabling, and treatment is typically effective. However, mental health consultation deserves special attention because it is almost always threatening to the patient. It often signals to the patient that you think their problem is “psychogenic” or “imaginary.” In addition, the patient may feel that the military is trying to shift blame away from itself and onto the patient. See the post-deployment CPG for more information on clinical and risk communication guidance (see DHCC website address in final section). When dealing with military-related illness and exposure concerns, never force a patient into psychiatric care unless you think the situation is emergent or life threatening (e.g., involves suicidal or violent ideation).

What can your deployed/redeploying patients do to protect their health?

It is important to remember that the most common causes of poor health are preventable. Never miss the opportunity to reemphasize the importance of maintaining a healthy lifestyle (avoid tobacco, exercise regularly, follow a nutritious diet, drive safely, play smart, and drink alcohol in moderation, if at all). Additionally, individuals should remain alert to work, home, and recreational environments, correcting hazards within their control and reporting unsafe conditions to appropriate officials.

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Where can I get more information?

U.S. Center for Health Promotion and Preventive Medicine (USACHPPM)

Phone: 1-800-222-9698

<http://chppm-www.apgea.army.mil>

Deployment environmental sampling and risk assessment:
410-436-7282/ 6096

General medical information: 410-436-2578

Air Force Institute for Occupational Health (AFIOH)

Phone: 1-888-232-ESOH (3764)

<http://starview.brooks.af.mil/afioh/>

General medical information: 210-536-1788

Navy Environmental Health Center (NEHC)

Phone: 757-953-0700

<http://www-nehc.med.navy.mil>

General medical information: 757-953-0778

Deployment Health Clinical Center (DHCC)

Phone: 866-559-1627

<http://www.pdhealth.mil/>

Department of Veterans Affairs

<http://www.va.gov/environagents>