

Medication Side-Effects: Heat, Cold and Sun Sensitivity

FAME Advice for Archaeological Practitioners

The FAME Health and Safety Guides are produced by the FAME Health and Safety Working Group to provide advice to its members to foster safe systems of work for development-led archaeological practice. They are not designed to replace existing, detailed guidance available from the HSE and other bodies, and must always be used in conjunction with that guidance, clearly referenced in each guide, where applicable.

FAME Health and Safety Guide 3: Medication Side-Effects: Heat, Cold and Sun Sensitivity

Version 3, updated November 2024.

V2 changes: Minor change of formatting, adding of links to other guides and further details about requirements to disclose medical conditions/medications and how they are unlikely to be applicable to archaeology.

V3 changes: Expanded to include cold sensitivity. Added more guide links.

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1 Introduction

This guide aims to raise awareness and promote preventive measures around sun, cold and heat sensitivity problems resulting from use of medications, so we can ensure the health and safety of archaeological professionals. However, it does not replace medical advice, which should always be sourced directly from a medical professional, and this information is provided without any representations or warranties, express or implied.

Some medications can make it harder for people to regulate their body temperature and thus increase the risk of overheating. Or, the opposite issue, developing cold intolerance. Additionally, some medications can cause photosensitivity, also known as ‘sun allergy’, a condition where the skin becomes extremely sensitive to ultraviolet light.

Photosensitivity makes it easier to get sunburned and/or to develop heat rashes. While photosensitivity is a rarer side-effect of medications, cold intolerance and overheating occurs often enough to be listed as a potential side effect of many medications. Moreover, occurrences of these side-effects can appear to be random, with some people going decades without experiencing an issue and then suddenly having a heat/cold/sun sensitivity issue.

For archaeologists, there is an elevated risk of these adverse reactions given the nature of some of our work – outdoors during hot and cold weather. However, heat sensitivity is still a concern for those working indoors in the United Kingdom and Ireland, as many buildings do not have climate controls. Moreover, certain clothing and intense physical work can lead to overheating even in cold weather.

2 Legal

This guide contains a list of common medications that have heat and sun sensitivity side-effects. Some of these medications are ones that almost all archaeologists will use e.g. ibuprofen for aches and pains. However, it also includes medications for sensitive medical conditions that a person may not want to disclose to an employer, or colleague.

The laws in the United Kingdom and Ireland are the same on the following points. Employees, normally, have **no obligation to disclose**

information about their health. There may be scenarios where requiring the disclosure of medical conditions/medications is legal e.g. if someone is driving or operating heavy machinery and a medical condition/medication could make it unsafe for them to do so. However, most archaeological work is unlikely to involve such potentially dangerous work and many of conditions treated by the medications and/or side effects of the medications, listed in this guide, are unlikely to affect an archaeologist's ability to under such work.

Employers

As part of a **Duty of Care**, employers should remind staff that if they are taking prescribed or over-the-counter medication that there may be adverse effects and the employee should seek medical advice on this.

Employees

Employees are not required to disclosure medical issues to employers that will not comprise their ability to safely work. However, be aware there is no protection for false reporting i.e. specifically saying you do, or do not have a medical condition when the opposite is true, and doing so could lead to dismissal. If you do not want to disclosure an issue on a medical questionnaire, you can leave any, or all, answers blank.

The onus is on the employee to be aware of the medications they are taking and any potential side effects they might have.

3 How to use this Guide

Employers should always assume that they **do not** have full knowledge of their employees' medical conditions and should regularly raise awareness of these issues with their employees i.e. share this guide with them. Most archaeologists are unlikely to be aware of these risks, or may have started a new medication and/or may not remember the risk associated with a specific medication; the lists in this guide are lengthy.

3.1 Heat - Not Just a Summer Risk

While it is logical to review these lists during hot weather, the risks are year-round. Undertaking vigorous physical work, as is common in

archaeology, in a situation that might require a boiler suit/fire retardant (i.e. non-breathable) PPE, can easily lead to overheating, regardless of the air temperature.

4 Preventions

If an individual identifies that they are taking a medication with heat/sun sensitivity/cold intolerance side effects they should contact a medical professional for further advice and to discuss the options that will best match their needs. This may involve notifying their employer so that they can then make reasonable adjustments for everyone's safety, or no action at all – some of these side effects are rare. Moreover, following good principles of safe working, in hot and cold weather, benefit all staff, not just those who are taking medication, and should be followed regardless:

- wear a hat and sunscreen, reapplying it throughout the day and, if possible, avoid direct sunlight and working outside in peak sunlight hours;
- drink lots of water and wear breathable clothes;
- do not undertake lone working in hot conditions;
- if you, or a colleague, start to have any of these symptoms of heat stroke/overheating stop work and seek help:
 - confusion, agitation, slurred speech, irritability;
 - skin feels hot to the touch;
 - nausea and vomiting;
 - flushed skin;
 - rapid breathing;
 - racing heart rate;
 - headache.
- For cold weather - wear proper clothing and keep those areas that are most sensitive covered up to prevent cold exposure.

Do not self-prescribe any solution. Do not abruptly stop taking any medication, especially any prescription medication, **without consulting a medical professional first**. Stopping can cause more harm than good.

5 Medications

It is not practical to list every medication, especially considering that some companies use different ‘branding’ names for the same medications. These lists contain the high-level categories and brief descriptions to help people identify if they might be taking a type of drug that can have heat/sun related side effects. Use this list as a guide to identify when to check the labels and consult with medical professionals to see if the specific medication you are taking puts you at increased risk, as not every medication in these categories increases heat/sun sensitivity risks. **This list is not a substitute for professional advice, please contact a medical professional for further advice.**

5.1 Heat Sensitivity

1. **Beta-Blockers:** medications that block the effects of adrenaline and are commonly used to treat conditions like high blood pressure and heart disease.
2. **Anticholinergic Medications:** block the action of acetylcholine, a neurotransmitter involved in various bodily functions.
3. **Stimulants:** stimulant medications are commonly prescribed for attention-deficit/hyperactivity disorder (ADHD) and narcolepsy.
4. **Antiretroviral Medications:** used to manage HIV infection and prevent the progression of AIDS.
5. **Antidepressants:** used to manage various forms of depression and other mental health conditions such as obsessive-compulsive disorder (OCD), generalised anxiety disorder and post-traumatic stress disorder (PTSD).
6. **Antipsychotics:** prescribed to treat conditions such as schizophrenia, bipolar disorder, and certain behavioural disorders.
7. **Antihistamines:** antihistamines are medicines often used to relieve symptoms of allergies, such as hay fever, hives,

conjunctivitis and reactions to insect bites or stings. They are also sometimes used to prevent motion sickness, to treat feeling sick (nausea) or being sick (vomiting), and as a short-term treatment for insomnia.

5.2 Sun Sensitivity

1. **Non-Steroidal Anti-Inflammatory Drugs (NSAIDs):** NSAIDs are medicines that are widely used to relieve pain, reduce inflammation, and bring down a high temperature. Some NSAIDs, such as ibuprofen and naproxen, are very commonly used and can be obtained over the counter.
2. **Antibiotics:** ciprofloxacin, doxycycline, levofloxacin, ofloxacin, tetracycline and trimethoprim can cause sun sensitivity. Also, sulfonamides, a class of antibiotics used to treat various bacterial infections, such as urinary tract infections or respiratory infections.
3. **Retinoids:** derivatives of vitamin A and are primarily used to treat acne, psoriasis, and certain skin conditions.
4. **Antifungal Medications:** used to treat fungal infections, such as athlete's foot, ringworm, or yeast infections.
5. **Cholesterol Lowering Drugs (Statins):** cholesterol-lowering drugs, known as statins, are used to manage high cholesterol levels and reduce the risk of cardiovascular diseases.
6. **Oral Contraceptives and Estrogens:** i.e. birth control pills, hormones used to treat menopause symptoms and low testosterone.
7. **Phenothiazines:** a class of medications used to treat psychiatric disorders such as schizophrenia or severe anxiety.
8. **Psoralens:** medications used in combination with ultraviolet (UV) light therapy to treat certain skin conditions like psoriasis, vitiligo, or eczema.
9. **Sulfonylureas:** a class of oral medications used to manage type 2 diabetes by stimulating insulin production.
10. **Acne Medications:** certain acne medications, especially those containing retinoids or benzoyl peroxide.

11. **Anticancer Drugs (Chemotherapy):** certain chemotherapy drugs used in cancer treatment, such as fluorouracil (5-FU) or vinblastine, can heighten skin sensitivity to sunlight.

5.3 Cold Intolerance

1. **Beta-blockers:** Used to treat heart disease.
2. **Chemotherapy drugs:** Used to treat cancer.
3. **Oral Contraceptives and Estrogens:** i.e. birth control pills, hormones used to treat menopause symptoms and low testosterone.
4. **Immunosuppressants:** Used to prevent organ transplant rejection and treat certain autoimmune diseases.
5. **Interferons:** Used to treat cancer and certain chronic viral infections.
6. **Statin drugs:** Used to lower cholesterol.

6 Non-medication compounds

There are some non-medicinal compounds found in medications or other products that can cause sun sensitivity.

1. **Alpha-Hydroxy Acids:** alpha-hydroxy acids (AHAs) are commonly found in skincare products due to their exfoliating and rejuvenating properties.
2. **Coal Tar and Derivatives:** coal tar is a viscous, dark liquid derived from coal and is employed in various medications and topical treatments for conditions like psoriasis, eczema, and dandruff:
 - Anthralin (Anthraquinone) - a synthetic derivative of coal tar utilized in the treatment of psoriasis, aiding in the reduction of skin cell growth and inflammation.
 - Tar Shampoos - contain coal tar or coal tar derivatives and are used to address conditions such as dandruff, seborrheic dermatitis, and scalp psoriasis.
 - Medicated Soaps and Bath Products - may contain coal tar or coal tar derivatives, serving as treatments for various skin conditions like psoriasis and eczema.

7 Further reading

Photosensitivity - NHS

<https://www.southtees.nhs.uk/resources/photosensitivity/>

The Sun and Your Medicine

<https://www.fda.gov/drugs/special-features/sun-and-your-medicine>

Medications and other Agents that Increase Sensitivity to Light

<https://www.dhs.wisconsin.gov/radiation/medications.htm>

FAME Health and Safety Guides

[Construction \(Design and Management\) Regulations 2015 \(2020\)](#)

[Safe Working Around Utilities \(UK\) \(2021\)](#)

[Near-Miss Reporting \(2022\)](#)

[Safe Working for Archaeologists as part of UK Construction Projects \(2024\)](#)