GLOSSARY

Ancient DNA (aDNA): genetic information about disease and the individual can be extracted from a variety of body tissues (e.g. calculus, tooth, bone).

Collagen: protein that can be extracted from a variety of body tissues.

Human remains: the skeletonised and soft-tissue remains of a human body.

Human tissue: bone, teeth/tooth, hair, nails, muscle or other soft-tissue.

Sample (wet/dry): a portion of body tissue.

ETHICAL CONSIDERATIONS

- Human remains should always be treated with dignity and respect.
- Recognise that these are the remains of past people, and are a finite resource for aDNA and other destructive sampling technologies.
- Recognise that the excavation, curation and research of human remains is informed by the concerns of descendant groups, cultures of origins, contemporary society, modern religious and humanist philosophies, and medical ethics.

STORAGE

General principles:

- Human remains should have a dedicated storage area (depending on the size of the collection) where they are secure, with an appropriate access policy.
- Separate the remains of an individual into their own container whenever possible. Bag human remains and place them in boxes with padded bases and packing materials. Specially-designed storage boxes for skeletons are available.
- Because human remains should be stored separately, make sure documentation is robust to prevent disassociation between human remains and any artefacts they were recovered with.

Specific guidance:

Soft-tissue/mummified remains/samples (i.e. collagen, aDNA):

- Wet samples: frozen in new freezer-proof labelled vials/containers. They may be temporarily stored in new plastic vials/containers using dry-ice.
- Dry hair samples: new labelled vials or acid-free paper envelopes, stored in labelled conservation-grade containers, away from direct sunlight in a stable environment.
- Dry collagen: new labelled plastic/glass vials in a stable environment at room temperature, out of direct sunlight.
- Soft-tissue samples: may be frozen in new freeze-proof labelled containers; dry tissue in labelled conservation-grade containers. Both should be kept in a stable environment out of direct sunlight.
- aDNA samples: kept frozen at -80°C for long-term survival; -20 °C is tolerable for less than a year.
HUMAN REMAINS

Skeletonised human remains:

- Should be stored in a secure area with controlled access, away from public view.
- Containers should be inert and acid-free, and large enough to contain the remains without causing further damage.
- If multiple boxes are used for a single individual, these should be numbered 1/3 etc., and shelved together.
- Human remains should be packed in clear strong plastic bags (500 gauge thickness) according to body area (e.g. right hand bones).
- Cremations can be placed in sealable non-perforated plastic bags (500 gauge thickness) or containers.

- The larger and heavier human remains (e.g. leg bones) should be packed at the bottom, with lighter and more delicate remains on top (e.g. ribs).
- Packing and bags should not move around within the box.
- Pathological or fragile remains will require additional packing.
- Durable shelving (i.e. metal) should be used, and not overloaded.
- Boxes should never be in direct contact with the floor.
- Where appropriate, descendants (as per DCMS 2005, 26–27) should be consulted to ensure that storage considers their wishes.
- Newspaper should not be used, bubble-wrap should only be used as a temporary, interim measure.
LABELLING AND MARKING

Most skeletal remains can be given surface marking.

- Use a layer of Paraloid B72, then ink, then a layer of Paraloid B72 to seal.
- Label bags or boxes if items are too small or friable to mark.

Marking is standard practice for British remains, but you should seek advice as to whether this is appropriate for human remains of individuals from other cultures. You can access advice from the Museum Ethnographers Group (MEG), an ACE recognised Subject Specialist Network.

Before object marking human remains:

- Undertake a documentation check to ensure that the information is correct before remains are marked.
- Ensure that marking is clear and legible.
- Mummified/preserved soft-tissue: avoid direct labelling/marking.
- Skeletonised human bone: indelible marker pen or Indian ink written on a barrier of HMG Paraloid B-72.
- Avoid marking across anatomical landmarks or pathology.

ENVIRONMENTAL DATA

- Temperature: 16–20°C maximum.
- Humidity: 45% +/- 5% [over 65% high risk for mould].
- Illuminance: 300 lux maximum.
- UV Radiation: 0–10 microwatts per lumen ideal. 75 microwatts per lumen maximum.

If the recommended temperature and humidity levels are unachievable, stability should be a primary consideration.

INDICATORS OF DECAY

- Disintegration causing fine powdering.
- Pests (e.g. rodents).
- Human remains are vulnerable to water, damp and mould.
- If associated with other materials (e.g. soft-tissue, consolidants or non-organics) then their decay can affect skeletonised remains.
- Inspect for: cracking and flaking of the outer layer (i.e. cortex), and fragmentation.
- Inspect previous remedial conservation/repairs for degradation.
- Remains affected by fungus, mould or pests should be isolated from other collections.

WHERE YOU WILL COME ACROSS HUMAN REMAINS

- In archaeological excavation archives (skeletons or cremations).
- In Ancient Egyptian or American collections (mummified remains).
- In World Culture collections.
- In composite objects (e.g. hair, carved bone artefacts).
**HANDLING**

- Lay out human remains on a clean protected and padded surface, such as bubble wrap or Plastazote covered in acid-free tissue.
- Be aware that the risk of disassociation is high when moving and studying skeletons, make sure handling and labelling protocols are robust.
- Nitrile gloves are not necessary, but hands should be clear and jewellery should be removed before handling. Where remains are dusty or where there are additional health and safety considerations, wear nitrile gloves and an appropriate facemask if necessary.
- Fragile items should be supported by Plastazote/microfoam, or a bean bag made from polypropylene pellets.


**LOOK OUT FOR**

Mummified remains may contain preserved human tissue, as well as other materials. Seek specialist advice for storage and handling.

In addition, be aware of:

- Compromised environmental conditions.
- Degradation of the human remains (i.e. cracking).

**HEALTH AND SAFETY**

- Breakage or missing remains.
- Mixing of skeletal elements between individuals.
- Undocumented destructive sampling.

- Viewing and/or handling remains with soft-tissue can lead to post-traumatic stress disorder.
- Archaeological skeletal remains have little to no risk of infection. Only in rare cases, contaminated or recent burial sites may produce risks of specific biological or toxic hazards. Seek specialist advice.
- Potential sources: items soaked in body liqor (e.g. coffin mattresses), horse hair pillows, sealed lead coffins, and lead items.
- Potential hazards relating to human remains collections may be associated with: historical pest/fungicide treatment which may include arsenic, or organic pesticides, historical estimation of cranial capacity using mercury, remains from lead coffins which often contain high levels of lead or mould which may produce harmful spores.
- Risk Assessments should be undertaken for handling collections that may pose specific hazards, and appropriate control measures (e.g. glove and respiratory protection use) implemented where necessary.
HUMAN REMAINS

SOURCES OF FURTHER INFORMATION

There are a number of Subject Specialist Networks who can provide support:

Association of Curators for Collections from Egypt and Sudan (ACCES)

Human Remains Subject Specialist Network

Museum Ethnographers Group (MEG)


British Association for Biological Anthropology and Osteoarchaeology (2019) Codes of Ethics, Practice and Digital Imaging.

Collections Trust – Guidance and Resources on Restitution and Repatriation.

Department for Culture, Media and Sport (DCMS) (2005) Guidance for the Care of Human Remains in Museums.


SOURCES OF FURTHER INFORMATION (continued)

