



Post mortem examination – an explanation for families

There are a number of medical processes that may be used to investigate a death. Only 10% to 20% of deaths are reported to a Coroner and just less than 50% of these deaths require a traditional autopsy. The Coroner is not a medical practitioner but a lawyer whose role is to investigate particular deaths that parliament has determined need an independent legal investigation.

This information sheet is for families whose loved one has died and who may wish to understand more about post-mortem examinations and the types of investigation that may be required to determine how someone has died.

What is an autopsy?

An autopsy is a medical procedure that is carried out to find out as much information as possible about why your family member has died. It is conducted by a medical specialist known as a forensic pathologist to determine a range of information regarding a death. If a pathologist recommends an autopsy as part of the medico-legal investigation of a death, this recommendation will be discussed with the nominated Senior Next of Kin. In the end it is the decision of the Coroner as to what level of investigation will be undertaken and the Senior Next of Kin will be consulted regarding whatever the Coroner decides.

A pathologist may recommend an autopsy to determine:

- The identity of the deceased person
- When a person died, the nature and extent of any disease they suffered from recently, or may have suffered in the past
- The nature and extent of any injury
- The circumstances that surround how they died
- The cause of their death
- Information on natural disease or injury that has the capacity to contribute to preventing the death of another member or the community in related circumstances.

An autopsy can inform your family medical practitioner about the effects of medical treatment that have been provided, and it can also assist police in assembling the evidence required for criminal proceedings, if relevant.

The different types of post mortem examination

Prior to conducting a physical examination of the body, the preliminary stage of the medico-legal death investigation involves:

- The review of medical records
- Statements and/or circumstantial information
- Reports surrounding the death
- Review of a post-mortem CT scan.

This background information allows the pathologist to construct a list of possible pathologies, including disease and injuries, may be present in the body and responsible.

This preliminary information allows a pathologist to focus on the important issues that may be in doubt about what happened to the deceased.

Preliminary stage and Inspection and report

The physical examination of the body starts with a detailed external examination of the body, which is very similar to the external examination of a living patient. Scars and artificial marks such as tattoos are described, and these can assist with confirmation of identity.

Many internal diseases in the body are associated with changes that can appear in the skin, so that a detailed external examination of the body can be of considerable importance in focusing the subsequent internal examination.

An external examination may also include a CT scan that provides a detailed internal image and photographs, and limited toxicology testing to identify medications and illicit drugs. The panel that is able to be performed at this stage is limited and not exhaustive. The pathologist may also request further testing.

Following the completion of the preliminary examination, the pathologist will what a reasonable cause of death might be and come to a medical opinion as to whether a partial or full autopsy is required, or if a reasonable cause of death can be provided with the currently available information. The pathologist then provides the Coroner with this information/opinion. The Coroner then takes this information into account, along with legal aspects of the investigation process and any known wishes of families in coming to their decision of as to whether or not to direct an autopsy to be performed.

The Coroners decision to have an autopsy performed is communicated to the Senior Next of Kin, by the Coronial Admissions staff and you may either accept this decision or ask for a reconsideration of the coronial decision. You will have the opportunity to ask questions or to express concerns and it is important that your questions are answered before you decide what to do.

Autopsy

A pathologist conducts a full external and internal examination of the body. The internal examination is a surgical procedure that takes place in a mortuary environment using instruments that are the same as normal surgical instruments.

The full internal examination requires the pathologist to carefully removes the internal organs and the brain and examine them thoroughly before returning them to the body.

As well as visually inspecting the individual organs, small samples of tissue (biopsies) are taken for histology, (examination under the microscope). Some pathological examinations may also require small tissue samples to be taken for analysis or the involvement of other pathology specialists such as neuropathologists, toxicologists or pediatric pathologists. In a limited number of circumstances there may be a request from the pathologist and coroner for retention of an organ to allow for further examination. In circumstances where this is required the family is consulted and appropriate arrangements made for respectfully dealing with the organ following the more detailed examination.

Partial Autopsy

A partial autopsy involves the pathologist conducting a full external examination but limiting the internal examination to specific areas or organs. A partial internal examination includes the pathologist carefully removing these specific internal organs and examining them before directly returning them to the body.

Advantages of autopsy

- An autopsy provides one of the best ways to establish the cause of death. It can provide valuable information to courts in both criminal and civil (compensation) matters and assist treating doctors who may need the results of an autopsy to be able to treat family members who may be at risk of suffering from similar medical conditions
- In the absence of an autopsy, in some cases there may be medico-legal questions in relation to criminal matters or civil claims for compensation that are unable to be adequately addressed.

Disadvantages of autopsy

- An autopsy is not always able to provide a specific or unequivocal cause of death. However, the report of a full autopsy is able to provide a detailed record of the medical examination and the findings.
- A full and detailed examination may delay funeral plans for some families who require a rapid interment or cremation.
- An autopsy involves incisions and suture lines. In most circumstances the sutures will not be visible after your relative is dressed and an autopsy does not prevent embalming taking place or inhibit the viewing of the deceased as part of funeral arrangements.

Collection of samples during autopsy

During an autopsy, body fluids and tissues may be collected for specialist toxicological or histological analysis.

Toxicology testing is designed to indicate the presence or absence of particular drugs, poisons or chemicals. This analysis may be very significant in reconstructing how the death occurred, and in many cases, may reveal the cause of death.

Depending on the types of drugs or poisons that maybe involved, it can take many weeks for the analysis of these fluids and tissues to be completed. In some cases, rapid toxicological analysis of blood samples can be performed and in certain cases this rapid analysis is a critical component of the preliminary examination.

Tissue biopsies are also collected for examination under the microscope (histology) to help determine the cause of death and the nature and extent of any disease or injury that may be relevant to the cause of death.

The Autopsy Report

The completion and review of all of the scientific and medical tests can take from 12 to 20 weeks, depending on the complexity of testing required. An autopsy report is then completed by the pathologist that contains the results of the autopsy findings together with the results of any specialist tests that have been undertaken.