



Netherlands Forensic Institute
Ministry of Security and Justice

Information for next of kin

Forensic autopsy at the
Netherlands Forensic Institute

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You have received this brochure because a family member or another person known to you has died. The Public Prosecutor has given instructions for an autopsy to be carried out on the deceased. This leads to such questions as: "Why does an autopsy have to be carried out?" and "What exactly is an autopsy? What does it exactly entail?"

The circumstances, in which grief or other emotions dominate, sometimes make it difficult to ask such questions, despite them being important. This brochure can provide answers to these questions.

1 Forensic autopsy

An autopsy is intended to find an explanation for the death: What happened, and can this event be the cause of death? A forensic autopsy entails both an internal and external examination of a deceased person. This takes place by order of a legal authority, such as a public prosecutor, in connection with a criminal investigation. The investigation lasts approximately four hours and is carried out by a forensic pathologist at the Netherlands Forensic Institute (NFI) in cooperation with a forensic photographer and one or two technical assistants. Police officials are also present at an autopsy and formally assign the deceased to the pathologist for autopsy purposes.

Forensic pathologist

A legal autopsy is always performed by a forensic pathologist. A pathologist is a physician who, after obtaining a degree in Medicine, has completed five more years of education to obtain a degree in Clinical Pathology. The pathologist is then trained internally by the NFI into forensic pathologist.

A pathologist is an expert in the field of recognizing anomalies associated with illness in either shape or functioning of the body's organs, tissues or cells. In addition, a forensic pathologist is specialised in the identification and interpretation of, for example, evidence of violence.

2 Decision to perform an autopsy

There are various situations in which a legal autopsy is carried out. Sometimes the death may be unexplained, whereby the municipal coroner is unable to provide an explanation of natural death and advises a legal autopsy. Sometimes it is clear beforehand that the death was due to unnatural causes and a legal autopsy is started immediately.

The aim of an examination is to obtain as much information as possible - based on the current state of affairs - to draw conclusions. This is also important for the court if a judgement has to be made during any legal proceedings ('on the basis of legal and convincing evidence').

On the basis of the findings of the forensic physician and/or the police, the public prosecutor may or may not decide to have an autopsy performed. In contrast to a clinical autopsy in hospital, no permission is required from the family. Neither can family members impose conditions, such as determining what exactly has to be examined. The Burial and Cremation Act (Wet op de Lijkbezorging) describes in detail when an autopsy has to be performed. The Act also stipulates that the body has to be buried or cremated within five days.

As quickly as possible

If the public prosecutor decides to initiate an autopsy, the body is confiscated. After the NFI has received the instruction to carry out an autopsy, the autopsy is performed as quickly as possible, including at the weekend. The shorter the 'confiscation' lasts, the less the process of saying farewell to the deceased and making funeral arrangements is disrupted. An undertaker transports the body to the NFI or another agreed location. The autopsy takes place in an autopsy room of the NFI or sometimes in a hospital.

3 The examination

External examination

Before the pathologist starts the autopsy, he carries out a thorough external examination. This involves paying attention to injuries, scars and other external distinguishing features. The external examination is not only recorded in writing, but also photographically. Samples are also taken for additional examinations, such as toxicological and microbiological examination. The internal examination can start after the external examination has been completed.

In the case of crimes, the external examination sometimes takes place in cooperation with other NFI experts such as a forensic physician, a gunshot residue expert or an expert on traces.

Internal examination

The internal examination is a detailed examination whereby all the victim's organs are examined. The technical assistants remove all the organs from the body, after which the pathologist carefully inspects them and examines them for diseased abnormalities and damage. A report is also made of the internal examination and photos taken of abnormalities.

Small pieces of almost all organs are stored in boxes for more detailed microscopic examination by the pathologist. This is important because not all abnormalities can be identified with the naked eye.

Samples of bodily fluids (such as blood and urine) and tissues (such as liver tissue and brain tissue) are saved for possible toxicological examination. Material is saved from all deceased persons for possible (comparative) DNA examination: usually blood and hair. If necessary, additional samples are secured, such as brain fluid, for microbiological examination. After the internal examination all organs are put back into the body. The body is closed to be handed over to police officials. The public prosecutor then usually decides that the body can be released to the family.

Storing of tissue and organs

There are circumstances whereby one or more organs are stored for longer for further examination. These are not put back into the body after autopsy. This usually concerns the brain, when abnormalities were seen or suspected. The brain is examined by a neuro-pathologist, a pathologist who is specialised in the examination of brain tissue. Sometimes it is suspected that a child is having a congenital heart abnormality. In that case the heart is retained for additional examination.

If a DNA examination has been carried out and the DNA profile of the deceased is included in the DNA database because the case has not yet been solved, the DNA profile and the cell material from which the DNA profile has been acquired are stored for a number of years. The length of time they are retained depends on the nature of the crime.

The storage period for other bodily material also depends on the period of limitation of the crime. The public prosecutor can extend the storage period if, for example, a reappraisal is required. Microscopic preparations are always retained. The bodily material that was removed and kept for examination can - if the family wishes - be returned to the surviving dependants for burial or cremation. The family needs to submit a written request to this effect to the team leader of the Front Desk of the NFI (PO Box 24044, 2490 AA The Hague, The Netherlands).

For correct processing, this request must state the name, date of birth and date of death of the deceased. The NFI then asks permission from the public prosecutor to transfer the material. Once the permission has been received, a transport company will contact the family to make an arrangement about the date of the burial or cremation. The transport company then arranges the transfer with the NFI.

The costs for the transfer and the transport to the graveyard or crematorium are reimbursed by the NFI to a maximum amount. The costs for the burial or cremation are paid for by the family.

If the family does not ask for the bodily material to be returned before the end of the retention period, these tissues and organs will be cremated in a regional crematorium, at the end of the retention period, in accordance with NFI protocols.

Respectful

The examination is performed in a respectful manner and in a way that as little evidence of the examination is visible. In the case of a dressed deceased placed on a bier, evidence of the autopsy will, in principle, be almost invisible. After an autopsy the body can be ritually washed in the usual manner.

4 Results of an autopsy

Sometimes an autopsy will clearly show what has happened and what not. In some cases a completely natural cause of death will be found. The autopsy findings then exonerate the suspects of any blame. It may be that the NFI is unable to find an explanation for the death. Suppose that someone who functioned normally and was healthy is suddenly found dead. If, in such a situation, the forensic pathologist is unable to find a cause, the conclusion after the autopsy will be 'unexplained death'.

Provisional and final autopsy report

After the autopsy the pathologist immediately draws up a provisional autopsy report. This report is submitted to the principal (the public prosecutor or examining magistrate) via the responsible police official. The writing of the final autopsy findings usually requires the results of additional examinations, such as microscopic and toxicological examinations. These additional examinations can take some time. As soon as the results are known, the pathologist sends the final autopsy report to the public prosecutor or examining magistrate.

5 Autopsy in the case of children

Generally speaking the procedure in the case of children is the same as for adults. In the case of babies and children it is essential to examine evidence of child abuse, congenital deformities, metabolic disorders and predispositions for disorders, and to map out the child's growth. That is why more kinds of examinations are performed in the case of children than in the case of adults:

- X-ray to detect broken bones
- examinations for infectious diseases
- biochemical examination for metabolic disorders
- eye examination for retinal bleeding
- examination of brain and spinal marrow

Prior to the autopsy, X-rays have to reveal whether there are any broken bones. Some cases of child abuse lead to broken bones which can be detected by standard X-rays or CT scans. In order to exclude the possibility that a child has died of meningitis or another infectious disease, examinations are carried out in the hospital laboratory for viruses and bacteria. This can take several weeks. If a child dies suddenly and unexpectedly, the cause may be a (hereditary) metabolic disorder. This can be assessed by a biochemical examination, which is a very complicated and exceptional examination. It is carried out in a specialised laboratory and it may be months before the results are available. Nevertheless it is extremely important to perform this examination, because it can reveal the difference between a 'natural death' and 'unexplained death'.

In the case of small children, including babies, an examination will be carried out for retinal bleeding if there are contusions under the hard cerebral membrane of the brain. Retina bleeding can, for example, occur if a baby or young toddler is violently shaken. During the examinations the eyeballs are removed and examined by an eye pathologist. The eye sockets are filled with prostheses so that examination is hardly noticeable to the family. All the results of the examinations are processed in the final autopsy report. If during the examination into the cause of death of a baby or child a disease or diseased abnormality is found, the pathologist will inform the parents concerned accordingly. This is usually done via the GP or paediatrician.

6 If you would like more information

You can ask the public prosecutor for a copy of the autopsy report. Due to the fact that an autopsy report is a medical report and can sometimes contain confrontational details, it is advisable to issue a written authorisation to your GP. You can then discuss the autopsy report together with your GP. Questions regarding what has happened to the clothing or jewellery can be submitted to the police and/or the public prosecutor. If, after having read this brochure, you have particular questions about the autopsy report, you can submit them via the public prosecutor to the Netherlands Forensic Institute.

For more information about legal autopsies in the case of children you can contact the following associations:

- Association of Cooperating Parent and Patient Organisations (Vereniging Samenwerkende Ouder- en Patiëntenorganisaties) (VSOP), telephone number +31 (0)35 603 40 40 or e-mail vsop@vsop.nl.
- Association of Parents of a murdered child (Vereniging van Ouders van een Vermoord Kind), telephone number +31 (0)6 51 50 96 20.
- Association of Parents of a deceased child (Vereniging van Ouders van een Overleden Kind), telephone number +31 (0)900 202 27 23 or internet www.vook.nl.

For more information consult the website of the Netherlands Forensic Institute www.forensicinstitute.nl.



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