



# POST MORTEM EXAMINATION

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# THE AUTOPSY TELLS US EVERYTHING

- John Pierce





## TO DO

1. Introduction
2. Purpose of Autopsy
3. Types of Autopsy
4. History
5. Procedure
6. Examination



# WHAT IS POST MORTEM?



- ✓ Post mortem is a scientific examination of a dead body
- ✓ a.k.a. autopsy, necropsy, thanatopsy, sectiocadavers, obduction or autopsia cadaverum
- ✓ An autopsy may be restricted to a specific organ or region of the body.
- ✓ Autopsies are performed to determine the cause of death, for legal purposes, and for education and research.



## ETYMOLOGY

- The term "**Post mortem**" is derived from Lt word meaning **after death**. It was first recorded from 1850.
- The term "**Autopsy**" is derived from Greek word *autos* means oneself and *opsis* means to view/to see. It has been used since around the 17th century.
- It means "to look at one's self" or sometimes "seeing with one's own eyes."



## PURPOSE OF AUTOPSY

1. Cause of death
2. Mode of death
3. Manner of death
4. Identity
5. Injuries/ Poison/ weapon
6. Force of injury/trauma
7. Time of death
8. Place of death
9. Newborns



## TYPES OF AUTOPSY

1. Academic/ Anatomical Autopsy
2. Pathological/ Clinical/hospital Autopsy
3. Medico legal/Forensic/coroner's Autopsy
4. Psychological Autopsy
5. Virtual/Digital Autopsy
6. Endoscopic Autopsy

The post mortem should be carried out by the registered and authorized medical practitioner, preferably with training in forensic medicine.



# MEDICO LEGAL AUTOPSY

VS CLINICAL



## MEDICO LEGAL AUTOPSY



**Purpose:** to determine mode, manner, cause of death and answer questions of interest of legal system

**Consent:** from police/magistrate is required

**Purpose:** to gain more insight into pathological processes and determine what factors contributed to a patient's death.

**Consent:** from family of the deceased person



## CLINICAL AUTOPSY



## HISTORY

Around 3000 BC, [ancient Egyptians](#) were one amongst the primary civilizations to practice the evisceration of humans in the religious practice of [mummification](#).

In 44 BC, Autistics was the first to examine Julius Caesar's body, after his assassination, he determined which of the 23 stab wound was fatal. It was the wound of the chest

- In the mid-19<sup>th</sup> century, [Carl von Rokitansky](#) and colleagues at the [Second Vienna Medical School](#) began to undertake dissections as a way to enhance diagnostic medicine.

- The 19th-century medical researcher [Rudolf Virchow](#), established and published specific autopsy protocols (one such protocol still bears his name). He additionally developed the concept of pathological processes.

- During the twentieth century, the [Scotland Yard](#) created the Office of the Forensic Pathologist, a medical examiner trained in medicine, charged with investigating the cause of all unnatural deaths, as well as



Dissection, 19<sup>th</sup> century US

Source: Wikipedia



# PROCEDURE



## 1. Authorization:

- It should be conducted only when there is an official order authorizing the autopsy, from the police or Magistrate.
- All registered medical practitioners in government service can conduct the examination.
- No unauthorized person should be present at the autopsy.
- The medico-legal autopsy should be conducted in an authorized centre. The body should never be embalmed before autopsy.
- It should be performed as soon as possible after receiving the requisition, without undue delay.
- The autopsy should be conducted in daylight
- Sometimes, if the body is received in the mortuary at night, it is preserved at 4°C after a preliminary examination is done to note external appearances, body temperature, extent of postmortem staining and rigor mortis.

## 2. Identification:

- A policeman or any other authorized person and 2 relatives should establish the identify the dead body, in front of the autopsy surgeon.



## PROCEDURE

### 3. Chain of evidence:

- It's fully essential to preserve the chain of evidence by identifying the body and maintaining absolute control of specimens removed at autopsy.

### 4. List of articles:

- A list is formed of all the articles removed from the body, e.g. clothes, jewelry, bullets, etc. They're labeled, sealed, within the report and handed over to the police constable after obtaining a receipt.

### 5. Visit to the scene of crime:

- **If a visit to the scene of crime** can be arranged, it is well worth undertaking in certain cases, such as murder, poisoning, traffic accidents, firearm injuries and sexual offences.



# EXAMINATION

## I. EXTERNAL

- ✓ Clothing descriptions
- ✓ Height, weight, age, sex of deceased
- ✓ General features
- ✓ Check hands
- ✓ Skin color/ PM staining
- ✓ Eyes
- ✓ Temperature by palpating abdomen
- ✓ Injury

## II. INTERNAL

- This includes dissection & examination of three major body cavities and their contents.
  - ❑ Cranial Cavity
  - ❑ Thoracic Cavity
  - ❑ Abdominal Cavity
- It is convenient to start the examination with the cavity chiefly affected. The choice as to which part of the body is to be opened first- skull/body cavities is left to the dissector.
  - **In suspected head injury**-> Skull open first then thorax and abdomen.
  - **In suspected asphyxial deaths**-> Skull and abdomen are opened first followed by dissection of neck.
  - **In all other cases**-> thorax and abdomen are opened first and then skull.



## SKIN INCISION

Skin incisions are of three types:

**i. I-shaped incision**

- extending from the chin straight down to the symphysis pubis and avoiding the umbilicus
- Most common

**ii. Y-shaped incision**

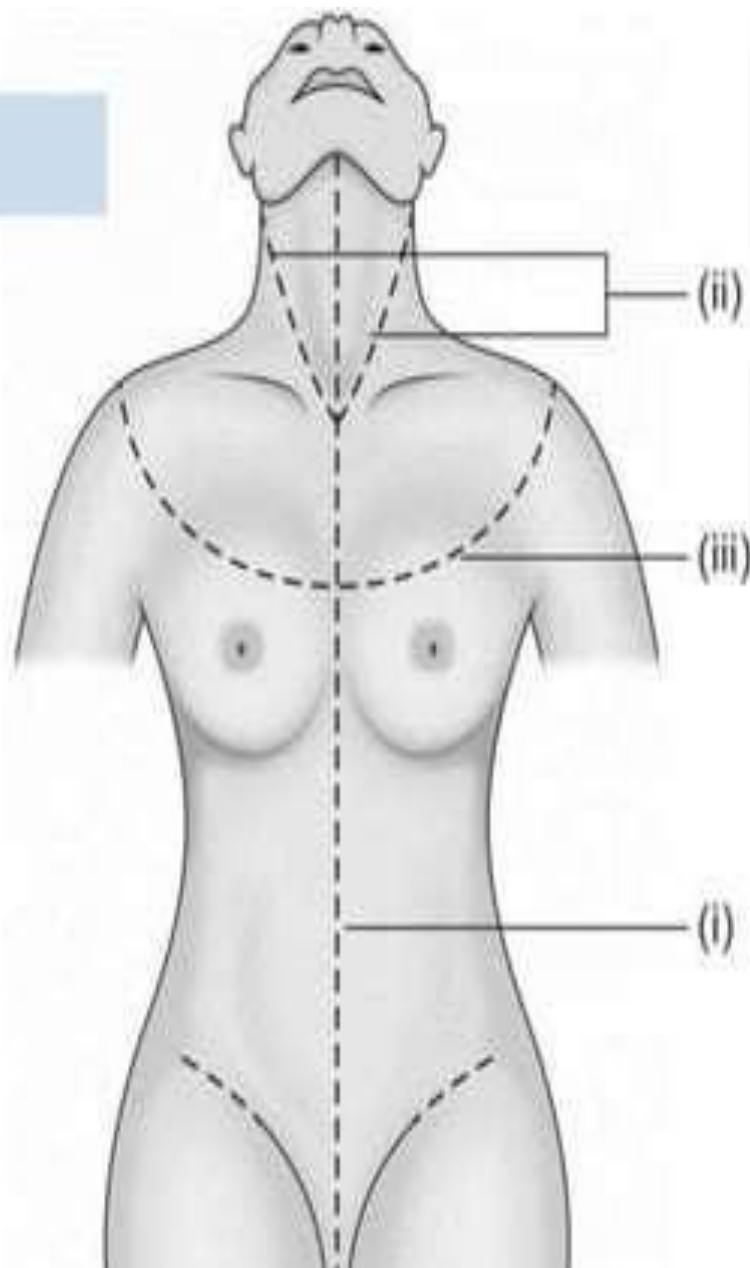
- starts from two mastoid processes move medially to meet at the level of xiphisternum, from where it goes downwards exactly as I- shaped incision
- Uses in cases of neck trauma

**iii. Modified Y-shaped incision**

- Starts from below both anterior axillary folds, goes below the breasts, meets at xiphoid process and moves down to symphysis pubis.
- Used in females



# SKIN INCISION





# THANK YOU!



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