



FORENSIC SCIENCE

Roles in the field of Forensic Science

WILEY

LET'S
TALK
ABOUT
THE
READING!

Suffolk County Medical Examiner's Office (& Crime Lab)

"The Office of the Suffolk County Medical Examiner is a Division of the Department of Health Services. The 85,000 square foot facility is physically located in Hauppauge in the North County Complex off of Veterans Memorial Highway. The Division is comprised of the Pathology, Toxicology, and Crime Laboratory Sections." SCME

& Yes, we live in Suffolk County

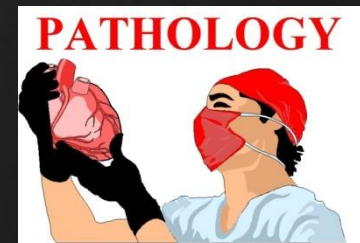
& Case load for one day

In Suffolk, there is a chief M.E. and 4 M.E.s

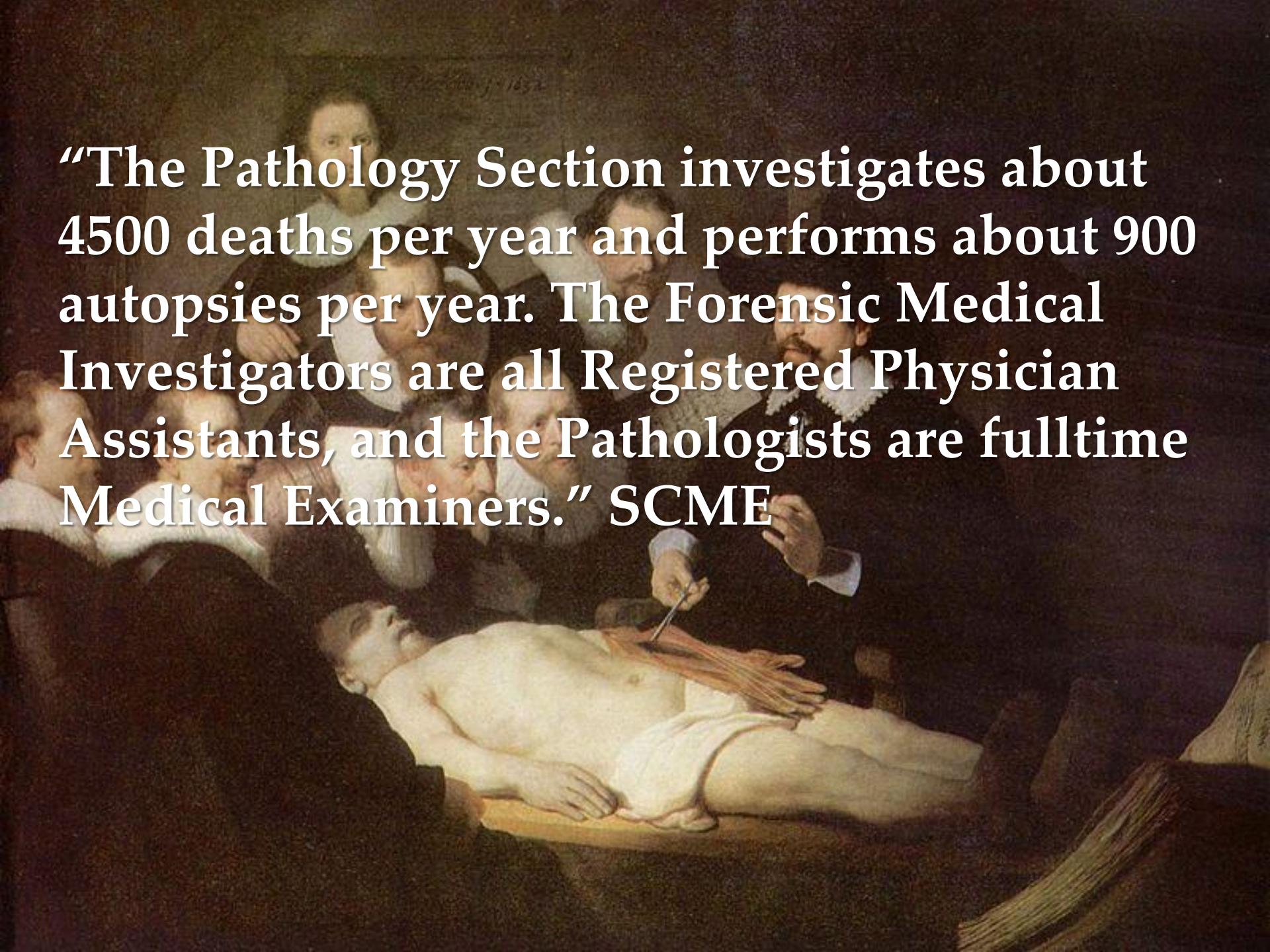


Pathology

The medical specialty that deals with disease and the bodily changes caused by disease



“The Pathology Section investigates about 4500 deaths per year and performs about 900 autopsies per year. The Forensic Medical Investigators are all Registered Physician Assistants, and the Pathologists are fulltime Medical Examiners.” SCME



Medical Examiner

Who
is this
M.E.?

- Is a licensed physician
 - Graduation from medical school
 - Completion of residency in pathology
 - Fellowship in forensic pathology

The above training requires about 9 years to finish. For example, if you graduate with an undergraduate degree at 22, you should be finishing the above training by age 31.

LIVE

PEOPLE IN THE NEWS

He has been involved as an expert in forensic pathology in many cases of international interest including:

- The remains of Tsar Nicholas of Russia and his family
- The Claus Von Bulow murder trial
- Expert witness for the defense in the O.J. Simpson trial
- Re-autopsy of Medgar Evers, Civil Rights leader
- Re-examination of the Lindberg Kidnapping and murder
- Autopsies of the victims of TWA Flight 800

Dr. Baden is the host of **HBO's Autopsy** series and is featured on many of the crime talk shows.



Dr. Michael M. Baden is a renowned pathologist and was the Chief Medical Examiner in NY City and for Suffolk County.

Dr. Baden was on the panel that investigated the assassinations of president John F. Kennedy and Dr. Martin Luther King, Jr.

REMINDING THEM IT'S ILL

▲ 85.96
12,638.51

Functions of the M.E.

& Time of Death

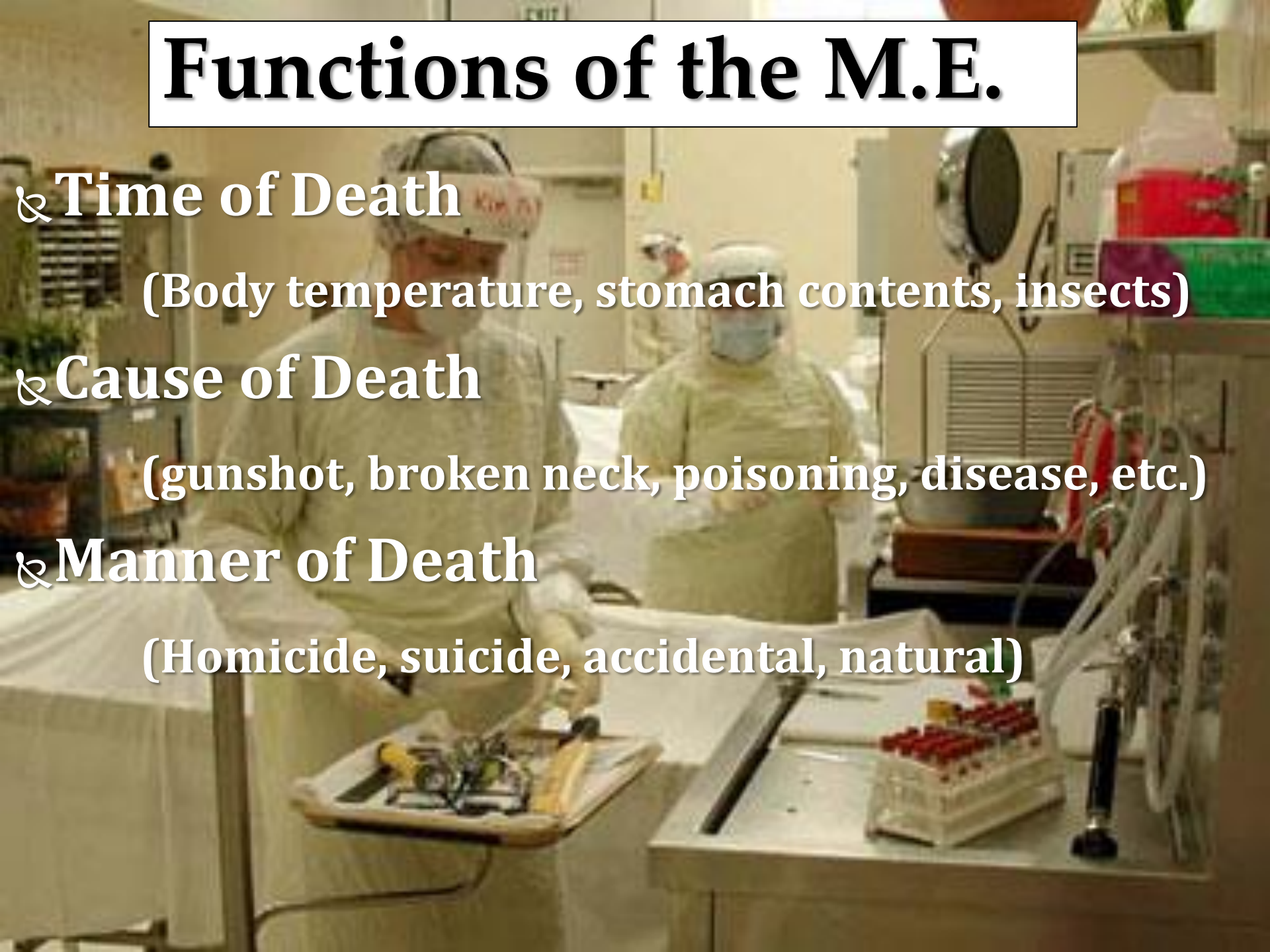
(Body temperature, stomach contents, insects)

& Cause of Death

(gunshot, broken neck, poisoning, disease, etc.)

& Manner of Death

(Homicide, suicide, accidental, natural)

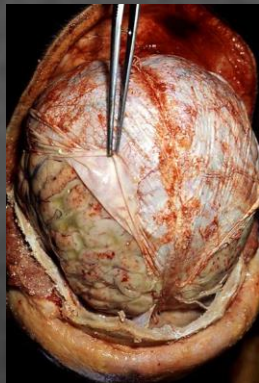


Reportable Cases

All Sudden Deaths!

“By law, the Medical Examiner must be notified of any death which occurs suddenly and unexpectedly while the victim is in apparent good health, or whenever there is a suspicion that the death may be unnatural. Also reportable are deaths which occur in the workplace, and cases of public health interest (e.g. suspected but undiagnosed possible tuberculosis, meningococemia, anthrax, tularemia, etc.).” SCME

What might this be used for?



TOOLS
OF
THE
TRADE



entero-
tome



Hagedorn needle



skull chisel



rib cutters



scalpel



toothed forceps



scissors

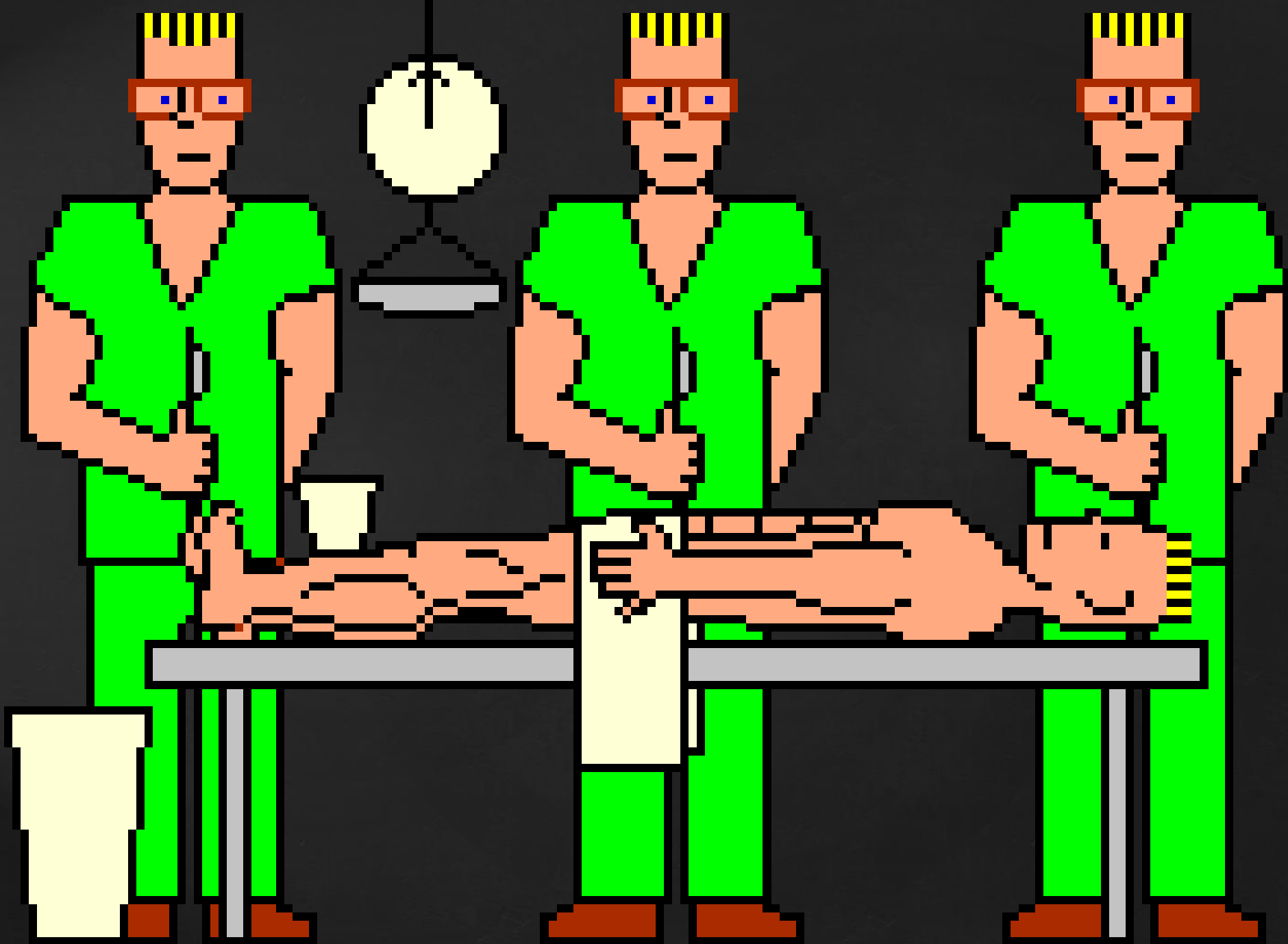


bone saw

Autopsy

The body is now a piece of evidence.

- M.E. examines the body externally and internally (usually 1 to 1.5 hours)





10 myths about the medical examiner's office

(courtesy of S.C. Chief Medical Examiner)

- 1) Medical examiner is a coroner
- 2) All deaths in Suffolk are reported
- 3) Only violent deaths are investigated
- 4) All bodies that come in are autopsied
(4,537-→1,000)
- 5) Each medical examiner gets assigned 1
body per week

10 myths about the medical examiner's office

(courtesy of S.C. Chief Medical Examiner)

- ⌘6) Each medical examiner has 1 assistant
- ⌘7) Our “patients” do not talk to us
- ⌘8) Examination of the body tells you everything you need to know
- ⌘9) Autopsy interferes with viewing at the wake and will cause a delay
- ⌘10) M.E.s are emotionally imbalanced, demoralized, and depressed a lot

Coroner vs. Medical Examiner

Coroner

- ❑ Elected official
- ❑ May not have medical background
- ❑ Can call on a specialist

Medical Examiner

- ❑ Specialist (Licensed Pathologist)
- ❑ Appointed

Forensic Science Specialties

Forensic Pathology:

- ⌘ Pathology is a specialty area of medicine
- ⌘ Pathology is the study of diseases and the bodily changes caused by the diseases
- ⌘ Forensic pathologists determine the cause of death (the medical reason why a person died; e.g. asphyxiation)
- ⌘ Forensic pathologists determine the manner of death (the circumstances causing death; e.g. homicide)



Forensic Entomology

- Entomology is a branch of biology devoted to the study of insects
- Forensic entomologists use insects as investigative aids
- By examining insects, larvae or pupae associated with a corpse, knowing the life cycle of insects, and by using the existing environmental factors, forensic entomologists can estimate the time of death

Forensic Science Specialties

Forensic Odontology:

- ⌘ Odontology is the study of the physiology, anatomy, and pathology of teeth
- ⌘ Forensic odontologists perform two types of analyses involving the human dentition
 - ⌘ Identify human remains by comparing premortem and postmortem dental X-rays
 - ⌘ Bite mark comparisons (crime scene marks to known bite marks)



PLEASE BRUSH YOUR TEETH

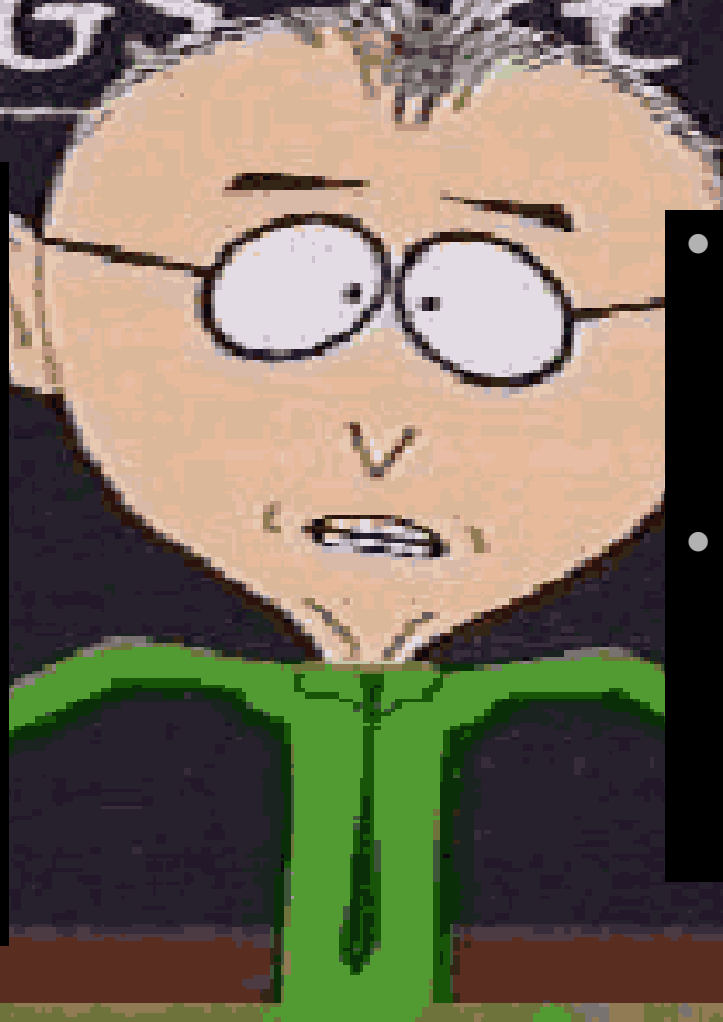


Forensic Science Specialties

DRUGS ARE BAD

Forensic Toxicology:

- ⌘ Forensic toxicology is the study of the effects of extraneous materials such as poisons and drugs in the body
- ⌘ Forensic toxicologists must determine both the presence and the amounts of extraneous materials in the body



- Assist the medical examiners in determining the cause of death
- May be involved in the determination of ethanol levels in blood and breath samples

DRUGS ARE BAD

Forensic Science Specialties

Forensic Serology

& analysis of bodily fluids



Fingerprints

& analysis of friction ridge patterns



Forensic Science Specialties

Firearms Analysis

gun & bullet
comparisons,
Gunshot Residue (GSR)



Forensic Science Specialties

Forensic Computer Science:

- ⌘ Use information located on computers and other electronic devices as investigative aids
- ⌘ Find hidden or deleted information to determine if internet based crimes have been committed

