

# DO DEAD BODIES SIT UP?

*The art of portraying death accurately in your work:  
how to write about dead bodies, embalming, and funerals*

## Slide Guide & Bonus Materials

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## Key Points

- We all have death and funerals in common—use them in your story!
- Introduce conflict, tension, family dynamics, sensory details, and emotional depth
- Characters who are reluctant to let their guard down can be emotionally honest
- Emotions can be complex—grief, anger, relief, guilt, confusion, joy, despair, PTSD
- Funerals = forced proximity, family reunions/group gatherings, awkward conversations
- Eulogies/obituaries = opportunities for a mini-info dump or reveal

## Death and Funerals Can Be Added to ALL Genres

- Classic examples: Ulysses, Beowulf, The Count of Monte Cristo
- Contemporary example: the funerals of Dobby and Dumbledore galvanize Harry Potter
- Comedic effects: Tom Sawyer, Huck Finn, the Stephanie Plum series
- Romance: Megan Montgomery's Last Responders, Stephanie Bond's Body Movers
- From gut wrenching feels to abject horror: the first ten minutes of the movie Up compared to Gage's death and funeral in Pet Sematary
- Mystery/thriller: dead bodies, autopsies, undercover cops/gunfights at funerals
- All cultures throughout time have had their own funeral rituals—explore them!

## Common Myths

**Dead bodies sit up:** no, never. Lay on the floor and try sitting up without using your arms or legs. Can you do it? Probably not. Bodies are limited to slight muscle twitches immediately surrounding the time of death, but cannot organize that many muscle groups and expend that much effort. It's a pervasive urban legend with no tangible evidence beyond hearsay.

**Hair and nails grow after death:** no, they don't. The tissue dehydrates and shrinks a little. When it recedes, it gives the illusion that hair or nails have grown.

**Tall folks get their legs cut off:** no, they don't. That's mutilation of a corpse, both illegal and unethical. Instead, we use creative positioning techniques to fit most tall people in caskets. If necessary, we use an oversize casket.

**Morticians do the autopsies:** no, we don't. Funeral work is separate from medicolegal investigation. Coroners/medical examiners or hospital physicians handle autopsies, not embalmers.

**Funeral directors are vultures with no people skills:** no, we're not. It takes excellent people skills to work with bereaved (and often dysfunctional) families. Consider us to be a combination of wedding planner and grief counselor. We are "helpers" by nature.

**Morticians make tons of money:** unfortunately, no. There's money to be made in owning a mortuary, but the rank-and-file employees make very little compared to the workload and responsibilities. Don't let the suits and Cadillacs fool you. Overhead costs are enormous.

**Every body gets a butt plug:** no, they don't. The plugs help prevent leakage in bodies, but usually, adequate embalming suffices to control leaks. Some embalmers never use them. FYI, the proper name is AV plug (because they go in the "A" or the "V").

## Terminology

Words matter. These terms are fairly synonymous, but it's our job to choose the best ones.

- Body, corpse, cadaver, deceased, decedent, departed, remains, carcass: consider the difference between, "We're about to transport your dearly departed grandmother," and "We're gonna go grab Meemaw's carcass." By the way, "carcass" is typically associated with dead animals. "Remains" can mean an entire body or just parts of it. "Decedent" is associated with legal documents. "Cadaver" implies a scientific context, like a medical specimen for dissection, a donated body for research, cadaver tissue for implantation, or cadaver dogs for recovery. We do not use it in a funeral context.
- Hearse, not hurst. Also called a funeral coach.
- Casket, not coffin (usually). Be aware there's a difference and choose the correct one.
- Pallbearer, not paw bear. This originates from the pall (cloth) draped over a casket.
- Interment, not internment. They're entirely different things.
- Funeral vs memorial service: one has a casketed body present. The other has an urn, portrait, or some other focal point, and can be held anywhere, anytime.
- Morgue vs mortuary: the former is where bodies are stored pending identification, autopsy, or pickup by funeral staff (either at a hospital or coroner/ME's office). The latter is where the body goes for storage and preparation for funeral services (AKA funeral home or funeral parlor).

**Bonus content:** download my free 80 page, 460 term PDF glossary covering death and funerals at [www.LouisePachella.com/glossary](http://www.LouisePachella.com/glossary)

## Terminology: Jobs

Note—licenses and roles vary by location and size of facility

### Mortuary professionals

- Funeral director, embalmer, mortician, undertaker: the FD meets with families and directs the funeral while the embalmer handles body preparation. Some people are licensed to do both. "Mortician" is a vague, catchall term that can apply to multiple

funeral service roles but doesn't imply specific licensing. "Undertaker" is an outdated term that hasn't been in popular use for 100 years or so.

- Supporting positions: funeral home manager, funeral arranger, apprentice/intern, removal driver, pre-need counselor, crematory operator, cemetery grounds crew, and desairologist (that's someone who just does hair and makeup on dead bodies, a trope that doesn't really exist in real life. Embalmers do the hair and makeup). At smaller locations, many of these jobs overlap and are performed by the same person.
- Fun fact: white men have dominated the funeral profession for decades. However, we've been transitioning away from that model. It's estimated that the current graduating classes at mortuary schools are 72% women with an increasing number of minorities. Don't stereotype us as old, white men.

### Medicolegal professionals

- A **coroner** is an elected official and often *unqualified* (seriously, the town shoe salesperson could run for office). A **medical examiner** is a physician trained in forensic pathology. The ME system is more effective, but many counties and states still use the coroner system. Check your location. Also, it's not uncommon for a small-town funeral director to be the coroner.
- Coroners do not perform autopsies unless they're also a qualified forensic pathologist. They outsource autopsies as necessary.
- Supporting positions: investigator, forensic technician, autopsy technician, toxicologist (tests for chemicals and drugs), radiologist (x-rays), odontologist (dental records), entomologist (bugs), anthropologist (skeletal remains), and photographer. Small towns may not have these resources readily available.

### End of life caregivers

- Palliative care: comfort care with or without intent to cure, administered to someone with a serious illness who may live or die.
- Hospice care: comfort care with no intent to cure, administered to someone who has a terminal illness and a life expectancy under six months.
- Death doula: a sort of death midwife, acting as a liaison and guide to the patient and their family. They're not a medical provider, but they fill in the hospice gaps and provide general care. It's currently an unregulated industry. Practitioners range from qualified, experienced people with a background in hospice or counseling to people who paid for a quick online certificate. Watch out for opportunists.
- Hospice is sometimes the name of a place, but a person can be "on hospice" at home, the hospital, or other medical facility.

## **DMORT (Disaster Mortuary Operational Response Teams)**

Specialized teams of funeral professionals, medical examiner staff, and other adjacent professions that respond to mass fatality events (natural disasters, terrorist attacks) with portable morgues, equipment, and supplies to collect and identify the dead. When deployed, they work under local authorities and are treated and paid as temporary federal employees. Their professional licenses are recognized in all states during that time.

### **Not Dead Yet**

Signs of impending death (not sudden/traumatic deaths)

- Loss of appetite (person doesn't suffer from hunger or thirst), drowsiness and fatigue, slowed circulation (mottled skin and cool extremities), confusion, restlessness, kidney failure, inability to control/cessation of bodily functions (bowel, bladder).
- Sensory details: the smell of unwashed body odor, medicinal/disinfectant smells, bodily fluids, home comforts vs clinical setting, beeping machines, ventilator, weeping.
- Cheyne-Stokes respiration: a pattern of deeper, faster breathing followed by a gradual decrease and temporary stop. Disturbing to witness, but not distressing to the patient.
- Agonal breathing: shallow and labored with gasping, grunting, and groaning. Not a desire or hunger for air, but a basic reflex of a dying brain. Grunts and groans are not signs of distress. "Agonal" does not imply "agony."
- Death rattle: the person can't cough or clear their throat, so saliva builds up. Air passes over the pooled secretions and causes a gurgling, wet noise.
- Terminal lucidity: AKA the "rally." The patient suddenly regains consciousness, clarity, and memory. Some people are fooled into thinking it's a sign of recovery.
- Unseen visitors: the patient might have conversations with apparitions.
- Gasps/twitches: electrochemical reactions in the nerves. The body doesn't turn off like a light switch. It's more of a gradual process.
- Lazarus reflex: a rare reflexive movement in brain-dead patients after being removed from life support. They briefly raise their arms, then drop them across their chest like a mummy.

### **Algor, Livor, and Rigor Mortis**

Algor mortis

- AKA temperature change
- The body loses/gains 1-1.5°F (0.5-1°C) per hour until it reaches ambient temperature
- Affected by lots of variables like body size/content, clothing, water, ambient temperature, fluctuations, body changing location

## Livor mortis

- AKA lividity, settling of blood
- Without pressure from the heart pumping, blood seeps out of the circulatory system and into the surrounding tissues
- Gravity pulls the blood down into dependent areas, however the body is positioned
- The skin appears reddish, blueish, purplish (less obvious in darker skin tones), first patchy and then uniform
- Blanching = temporary white spots, like when you press a finger to your skin
- Tight clothing/elastic undergarments can press in and leave white areas
- The blood starts showing ~2 hours, “sets” at ~12 hours (stains tissue, can’t be removed)
- Multiple conflicting stains = someone moved the body after death

## Rigor mortis

- AKA stiffening of muscles
- Body stops producing ATP (adenosine triphosphate), which is the key to unbinding (untensing) the actin and myosin filaments in muscle fibers
- Develops in all muscles simultaneously, but is noticeable in the smallest muscles first (eyelid, face) and the larger muscles last (arms, legs)
- Three phases: developing, set, breaking down
- Is noticeable ~2 hours after death, sets after ~8 hours, lingers 12-24 hours, dissipates by ~36 hours
- The chemical bonds eventually dissolve, relaxing the muscles into “secondary flaccidity”
- The timing of the phases is affected by pre-death exercise or cold temperatures
- Rigor can be relieved by massage, flexing, and manipulation. It’s called “breaking: rigor, but it refers to breaking the chemical bonds rather than bones.

## Time of death

- Algor, livor, and rigor do not pinpoint the time of death (too many variables)
- You can only narrow it down to a 12-hour window or so
- Other tests may be used (potassium release, stomach contents), but they’re complicated and unreliable
- Presence of insects only narrows the time of death to days, not hours
- To determine a time of death more accurately, rely on other evidence like witness accounts, receipts, and video footage

## Unembalmed Bodies

- Bodies are stored in a refrigerated unit (AKA reefer or cooler), 36-39°F, 2-4°C
- It's NOT a freezer because freezing creates damaging ice crystals in the tissue
- Refrigeration drastically slows decomposition but doesn't stop it entirely
- Long-term storage can lead to surface mold on the body
- Bodies often develop a green abdomen from gut bacteria
- Eyes deflate as moisture evaporates
- A body removed from refrigeration will be cold, moist with condensation, and doughy

## Decomposition

### Stages

- Stage 1—Fresh (1-3 days)
- Stage 2—Bloat (4-10 days)
- Stage 3—Active decay (10 days-3 weeks)
- Stage 4—Advanced decay (3 weeks-2 months)
- Stage 5—Dry remains (after 50 days)

These are VERY rough time frames because there are so many variables that contribute to the speed of decomposition. Variables include:

- Ambient temperature and fluctuations
- Humidity or submersion in liquid
- Presence of insects, animal scavengers, extra bacteria
- Clothing/material around the body
- Presence or absence of oxygen
- Cause of death
- Body size, fat to muscle ratio, body contents and conditions

What you see in each stage (**graphic descriptions ahead!**)

- Stage 1 (fresh)—the body cools, stiffens, and blood pools. Enzymes and bacteria reign unchecked and begin breaking things down.
- Stage 2 (bloat)—bacteria multiply, producing a stinky gas which causes the body to swell. The increased internal pressure forces fluids out of orifices. The skin darkens, discolors, and ruptures. The abdomen turns green because of the high concentration of bacteria within the intestines. Marbling appears on the skin, which is like a dark purple tree root-shaped tracing of the blood in vessels beneath. Bugs create new openings into the body, giving access to more bacteria. The outer layer of skin develops blisters filled with foul smelling liquid (blebs), which rupture and cause the skin to slide off. The eyes and tongue swell and protrude.

- Stage 3 (active decay)—most of the body’s mass is lost during this time as liquids are released and insects consume tissue. The liquid can be frothy as gas and liquid mix. The body blackens and becomes nearly impossible to confirm the identity visually.
- Stage 4 (advanced decay)—a complete breakdown of soft tissues, skin, and muscle. The bones, cartilage, and hair remain until different bugs (like beetles) chew on the tougher material. The bones separate from each other.
- Stage 5 (dry remains, aka skeletonization)—the skeletal remains, sometimes with bits of hair, teeth, and dried skin. As the bones dry, they get brittle and lighter in color.

Flukes of decomposition (fairly rare)

- Adipocere—aka grave wax, soap mummy, saponification. The body becomes encased in a waxy, soap-like material, which stops regular decomposition. It’s typically associated with warm, moist environments as anaerobic bacteria breaks down the body fat and transforms it into a whitish-grayish soap-like material with a sweetish rancid smell. It’s soft and greasy at the beginning, then hardens into a brittle, brownish, crumbly coating.
- Mummification—a body exposed to a hot, dry environment basically turns into jerky.
- Bog bodies—the opposite of mummification. These bodies are essentially pickled because of the unique biochemical properties found in cool, wet peat bogs. The bodies are preserved but appear deeply tanned, squished, and rubbery (calcium leaches from the bones). They decompose rapidly once exposed to normal environments. Fun fact: one 5000+ year old bog body still had identifiable raspberries in her stomach.

**Bonus Content:** see non-gory illustrations and descriptions of the decomposition process at <https://illuminatingcurios.com/forensics>

## Autopsies

AKA postmortem, which can be used as an adjective (“the injuries were postmortem”) or a noun (“let’s begin the postmortem”). A necropsy is an autopsy of an animal.

Who gets an autopsy?

- Deaths that are sudden, unusual, unnatural, unattended, unexplained, or violent. Even some of these deaths avoid autopsies if the cause is apparent or the deceased had been seen for certain health conditions within 20 days of the death. Counties with high death rates may do a token or external examination, while their neighboring county would absolutely conduct an autopsy for that same person. Check your jurisdiction.

Who performs the autopsy?

- A medical examiner/forensic pathologist. A coroner does not perform the autopsy unless they’re also qualified as a forensic pathologist. A physician in a hospital can conduct an autopsy if it will not be performed by the coroner/ME’s office.



## What are autopsies for?

- To identify the cause of death
- To determine the chain of events (did the heart attack cause the car crash OR did the car crash cause the accident)
- To collect reports and evidence in criminal cases
- Public health reasons (contagions)
- To identify genetic problems for the family's future reference
- To confirm a hospital's diagnosis/further their knowledge on the case
- Teaching/learning purposes (medical school autopsies)

## Cause vs manner vs mechanism of death

- Cause of death— what were the actions/events/circumstances that led to death?
  - Examples: gunshot wound, blunt force trauma, cancer
- Manner of death—why did the person die?
  - Classed as either natural, accidental, homicide (this does not imply guilt; it could be self-defense or state sanctioned execution), suicide, undetermined (no final cause of death could be confirmed, pending/deferred (final results are on hold while toxicology tests and other investigations are performed))
- Mechanism of death—how exactly did the body stop working?
  - Examples: exsanguination, organ failure, cardiac arrest, brain death
  - Note: cardiac arrest is not a CAUSE of death. Something else CAUSED the heart to stop beating. It needs more supporting causes to create a logical chain of events (the person died of cardiac arrest due to exsanguination due to perforating injury to the aorta due to gunshot wound).

## Autopsy process

This is a general overview. Exact methods and order differ by location.

- Identification—must be a scientifically accepted method (fingerprints, dental records). A visual or tattoo identification is a preliminary clue, but must be corroborated.
- Photos—the body is photographed in its original state before autopsy.
- X-Rays—mainly for bodies that are traumatized or have gunshot wounds.
- Miscellaneous exams—these as-needed tests range from dental exams (identification by an odontologist), skeletal exams (if there are only bones, they're studied by a forensic anthropologist), collection and examination of insects (entomologist), and blood and tissue tests (toxicologist). Note: toxicology tests are usually delayed in backlogs, with results often taking ~6 months or longer. Don't let CSI on TV fool you.
- External exam—the clothing and personal property are removed and set aside to either be returned to the family or kept as evidence. The body is inspected for abnormalities, injuries, and other physical characteristics. Swabs, scrapings, and clippings are collected as necessary.

- Internal exam—an autopsy may be full or partial (the torso, head, or both). A Y-shaped incision is made on the torso. The ribs are snipped or sawed, and the breastplate is removed. The internal organs are removed, weighed, and dissected. Small samples may be collected and kept for later. An incision is made through the scalp from ear to ear, but going over the top of the head through the hair. No cuts are made on the forehead. The scalp is peeled forward, exposing the skull. A Stryker saw cuts the skull via vibration, and the top (calvarium) is removed like the top of a jack o’ lantern. The brain is removed, weighed, and dissected. Occasionally, the brain, eyes, or bones are kept for further study, but most often, everything goes back into the body. The jumbled-up organs (viscera) are placed into a plastic bag (including the brain) and the bag is placed inside the thoracic (chest) cavity. The breastplate is laid on top of the bag and the skin is sutured closed. The calvarium (skull top) goes back in the head, the skin is flipped back into position, then it, too, is sutured closed. Autopsy stitches are done quickly and efficiently, not prettily. Embalmers are just going to remove and redo them later.
- The body is wrapped in plastic or placed into a body bag, moved into refrigeration, and held until the chosen mortuary sends a removal driver to pick it up.

#### Second autopsy

- Another autopsy may be performed later: if the family isn’t satisfied with the answers, if there’s a concern about malpractice or negligent investigation, or if additional evidence comes to light later on prompting a new investigation
- Families can hire a company to perform an independent autopsy, but they’re expensive

#### Religious concerns

- Some religions disapprove of autopsies and may petition against them
- Coroners/MEs can usually override a family’s wishes if it’s a public health or criminal matter
- Provisions are often made to accommodate religions: autopsies are completed as quickly as possible, they’re performed by someone of the same gender when possible, and they’re sometimes kept separate from other bodies in the refrigerator. Autopsies can be overseen by a rabbi, and efforts are made to return anything with blood on it (towels, gauze) to include with the body for burial.

### **Sensory Check: Autopsy Suite**

When you’re setting your scene, consider whether you’re in a big city or small town. Make sure it’s appropriately reflected in the available technology, number of staff, whether there are specialists onsite, and if the caseload is small or overwhelming.

### What you see

- Autopsy stations, similar to operating rooms
- Stainless steel surfaces, cabinets, and tools
- Bright lights
- Bare skin, blood and bone, yellow fat
- Organs glistening, white spiderweb-like connective tissue

### What you hear

- Air filtration/exhaust fans
- Running water
- Clank of metal tools on metal surfaces
- Scrape of scalpel, buzzing bone saw
- Voices dictating observations to a microphone

### What you taste (maybe not literally, but you get the feeling in your mouth)

- Decomposition
- Charring, accelerant chemicals
- Note: food and drinks are prohibited in areas with bodies. Most of us death care folks are physically capable of eating in the presence of a gross dead body (we have iron stomachs), but are conscious of cross contamination and universal precautions.

### What you touch

- Personal protective equipment (AKA PPE), like surgical garb and gloves
- Metal tools
- Heavy organs, light fluffy lungs, slippery intestines
- Maggots
- Debris scooped up with the body (like from car crashes)
- Splintered bones
- Fluids of varying viscosities

### What you smell

- Blood (metallic, coppery), body odor, poop, dirt, body gases
- Decomposition
- Cooked/charred meat, accelerant chemicals
- Disinfectants
- NO Vicks VapoRub—Vicks is more of a mental barrier. It actually stimulates the olfactory system without allowing you to acclimate to the smell. Newbies afraid of vomiting will often try using it. It's good for teasing the new person.

## Bonus Content About Autopsies

- Book—Forensics for Fiction: Autopsies by Geoff Symon (he also has similar books explaining crime scenes and blood spatter). Find it on Amazon at [www.amazon.com/Autopsies-Forensics-Fiction-Geoff-Symon/dp/1945043156](http://www.amazon.com/Autopsies-Forensics-Fiction-Geoff-Symon/dp/1945043156)
- Video tour—Cobb County Medical Examiner’s Office (13-minute facility tour and explanations, not gory or graphic) [www.youtube.com/watch?v=DTMdFAzFgx4](http://www.youtube.com/watch?v=DTMdFAzFgx4)
- Photo gallery—Photos of the new CCME facility (not gory or graphic) [www.batson-cook.com/portfolio/cobb-county-medical-examiners-office](http://www.batson-cook.com/portfolio/cobb-county-medical-examiners-office)
- Interactive virtual autopsy—See a non-gory illustrated example of the autopsy process <https://australian.museum/learn/teachers/learning/virtual-autopsy/>
- Virtual autopsy challenge—Read case information and see actual photos of dissected organs (not bodies) to see if you can correctly determine the cause of death. Note: the website technology looks a little ancient, but it works! <https://www.le.ac.uk/pa/teach/va/howto.html>

## Embalming

Note: embalming laws vary by location. It’s not always mandatory.

What embalming is

- A method of temporarily preserving bodies by injecting their circulatory systems with chemicals. The chemicals bind with proteins and “fix” or firm the tissue. Embalming fluid pushes the blood out of the system, which ends up going down the drain (same as your toilet). The body is effectively sanitized inside and out, halting decomposition.
- Embalming also includes restoration of the deceased’s appearance. Eyes and mouths are closed, hygiene and grooming are performed, and problems are addressed.

Why we embalm

- To pause the decomposition process while the family completes arrangements and holds funeral services (note: embalming can also be done before cremation)
- To restore the natural appearance, minimizing evidence of illness and trauma
- To sanitize the body and allow us to manage leaks and other yucky problems
- To allow easier application of cosmetics (the skin is firm and dry)
- To satisfy shipping requirements (there are workarounds for people who refuse embalming, but it’s the most practical option)

Embalming doesn’t last forever

- An embalmed body can last anywhere from weeks to a century
- It depends on many variables: embalmer’s skill, fluid strength, body conditions, type of casket and vault, ground conditions, temperature, moisture, insect presence

What an embalmed body is like

- Cool (room temperature, not icy)
- Firm (depends on fluid strength)
- Stiff (not rock hard; still moveable and can be manipulated)
- Dry (doesn't "sweat" like a body pulled out from refrigeration)
- Often paler than in life and can be a range of colors (pink, gray, yellow, green) depending on the fluids used and conditions within the body
- Sometimes smells faintly of chemicals or germicidal soap

### **Embalming Room AKA Prep Room or Lab**

- Somewhat similar to an autopsy suite
- Stainless steel or porcelain tables with a drain at the foot end
- Stainless steel surgical instruments
- A variety of rainbow-colored embalming fluids in translucent plastic bottles
- Supplemental powders, sprays, and gels
- Mortuary cosmetics (specially formulated for dead skin)
- Over-the-counter cosmetics and hair care products
- Hardware tools and supplies for reconstruction
- Sheets, towels, different types of cotton
- Biohazard medical waste trash cans and sharps containers

**Bonus Content:** See non-gory photos of various embalming room set-ups at <https://duncanstuarttodd.com/idea-gallery/> and download my illustrated guide of embalming room instruments and supplies at [www.louispachella.com/bonuscontent](http://www.louispachella.com/bonuscontent)

### **Embalming Process**

This briefly explains how embalming is performed. I can talk about the details for days if you're interested!

- Embalming an average body can take about 2-3 hours, including all of the pre and post embalming duties. An autopsied case can take twice as long. A case with serious complications or a need for significant restoration can take longer. I've spent 18+ (nonconsecutive) hours working on one body!
- Set the body on the embalming table (nude, but with strategically placed towels for modesty and respect), perform an initial disinfection, and analyze the body's needs
- Close the eyes and mouth (you can ask me how)
- Mix up a solution and begin injecting it into an artery

- Monitor for distribution and swelling while performing basic grooming (plucking, shaving, etc.) and massaging the body to help break up rigor and vascular blockages (it looks a bit like they're experiencing a spa day)
- Suction bodily fluids from the torso/abdomen with a hollow, sword-like tool called a trocar. Use the trocar to inject embalming fluid into the torso/abdomen.
- Seal incisions, then bathe the body, wash and condition the hair, dry everything, and apply moisturizer to the hands and face
- Perform restoration on people withered by illness or reconstruction of major trauma (more details are available on request)
- Slightly different/additional care is taken on autopsied bodies and organ donors to prevent odors and leakage. Note: bone and tissue donors create a lot of extra work for embalmers, but it's worth it. If you're considering including donation in your story, consider the impression you leave with readers: is it positive or negative?
- Embalmers have different processes and preferences, but many will embalm the body on one day then leave it in the prep room for one or more days to "set." We will wait until the day of the viewing before dressing them and applying cosmetics.
- The body is dressed in the clothing of their family's choice, sometimes with plastic garments beneath to protect them if there's a risk of leakage
- Hair is styled and cosmetics are applied; there are lots of tips/tricks, smoke/mirrors
- The body is placed into the casket, either by hand or using a mortuary lift

### **Challenging Body Conditions**

- Jaundice—AKA icterus, a yellow discoloration of the skin and eyes usually associated with liver problems. Yellow bodies sometimes turn green after embalming as the formaldehyde converts the bilirubin to biliverdin.
- Edema—an accumulation of fluids in tissues and body cavities causing swelling, dimples, and leakage. Can be all over the body (anasarca) or limited to certain body parts.
- Hydrocele—edema specifically in sac-like structures like the scrotum, creating a basketball-like body part that doesn't fit easily into pants.
- Purge—things that come out of orifices due to internal pressure or manipulation. Stomach purge can be stomach contents or blood (known as coffee ground purge because of the resemblance). Lung purge is frothy and can be bloody. Brain purge is a white semi-solid. Anal purge looks exactly how you assume it would look. Bodies can also purge embalming fluid if there's a short circuit in the circulatory system.
- Skin slip—AKA desquamation. The outer layer of skin peels off. It's like peeling off a bad sunburn, but moist like raw chicken skin. It happens with fragile elderly skin or with decomposition. It frequently results from popped blebs (blisters filled with putrefactive gas or fluid).

- Tissue gas—an embalmer’s worst nightmare. It’s a condition that’s contagious amongst dead bodies. Clostridium perfringens bacteria causes a rapid buildup of gas within the tissues. It feels and sounds like Rice Krispies, and it makes the body swell and decompose very quickly.
- Necrosis—decomposition on a living person, usually from gangrene, diabetes, or bedsores.
- Carbon monoxide poisoning—causes a cherry red discoloration of the skin. The blood is bright red, and so are areas with livor mortis.
- Medical interventions—bodies arrive at the mortuary with IVs, tracheostomy tubes, staples, stitches, pumps, drains, casts, and halo braces. These must be removed, then the area treated and sealed. Some items are difficult to remove because prep rooms don’t have the specialized tools that hospitals use.
- Decomp—a body that arrives in a state of decomposition, ranging from the early stages to advanced. Some bodies can be treated and viewed while others cannot.
- Floater—the colloquial term for a body found in water. Decomposition gases make them float face down, and they’re vulnerable to predation from water creatures.
- Charring—a badly burned body is hard, black, and frozen into the position it died in. It may still be pink on the inside rather than being charred the whole way through.
- Dismemberment—a body can be in pieces, sometimes from an accident, trauma, homicide, or animal scavenging. Embalmers can reattach the pieces if the body isn’t badly decomposed.
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## **Sensory Check: Embalming/Prep Room**

When you’re setting your scene, consider whether you’re in a big city or small town. Is there one embalming station or more? Is everything in one room, or is there a separate room for dressing, applying cosmetics, and hairstyling? Is there a small room to the side for families or religious groups to perform ritual washings? Note: an embalming room can be in a basement (like in a Victorian style building run by a multi-generation funeral family), but it’s more likely to be all on one level in newer facilities. Either way, they’re brightly lit and clean.

What you see

- Stainless steel or white porcelain embalming tables (one or more) with a drain hole
- Countertops and cupboards
- A rolling cart with stainless steel surgical instruments laying on a towel
- Bare skin, blood, jelly-like blood clots, sometimes maggots
- Plastic bottles lined up in cupboards, filled with a rainbow of colored embalming fluids
- Embalming machine (there are multiple different styles available)
- Hoses for water, suction, and embalming fluid

### What you hear

- Ventilation/exhaust fans
- Running water
- The hum of the embalming machine
- Suction
- Music (embalmers are usually allowed to listen to something)
- The embalmer chatting with the body
- Voices or music from the chapel being piped in through an overhead speaker
- Farts (yes, dead bodies can fart audibly)

### What you taste (maybe not literally, but you get the feeling in your mouth)

- Decomposition
- Embalming chemicals stinging/burning from too-close exposure
- Note: food and drinks are prohibited in areas with bodies. Most of us death care folks are physically capable of eating in the presence of a gross dead body (we have iron stomachs), but are conscious of cross contamination and universal precautions.

### What you touch

- Personal protective equipment (AKA PPE), like surgical garb and gloves
- Metal tools
- Dragging a razor over stubble
- Slippery, soapy skin massage
- Scalpel slicing through skin
- Trocar stabbing through internal organs
- Suture needle poking through skin and pulling string through
- Fluffy cotton, towels, sheets

### What you smell

- Variety of chemicals: fruity or potent embalming fluid, solvents, adhesives, acetone, superglue, cleaning chemicals (FYI ammonia neutralizes spilled formaldehyde while bleach reacts and creates noxious gases)
- Nursing home funk, body odor, unwashed bodies
- Blood (metallic, coppery), body odor, poop, dirt, body gases
- Decomposition
- Hair care and beauty products
- For babies, baby shampoo and baby powder



## Caskets vs Coffins

Many people use the words synonymously, but there's technically a difference.

### Caskets

- Rectangular, 4-sided
- Domed, hinged lid
- Typically half couch (the lid opens in two sections)
- Primarily seen in the USA

### Coffins, AKA toe pinchers

- Tapered hexagon, 6-sided
- Flat, removable lid
- Full couch (the lid is in one piece)
- Primarily used in Europe and other countries outside of the USA
- Associated with classic vampires

The shapes are different because Americans wanted to move away from the human shaped boxes toward a bed-like container. Full couch caskets are available in parts of the USA but are rare in most places. Half couch caskets display the body in a particular direction: as we approach to view, the deceased's head is to our left and their feet to our right. This is because most of us are right-handed, and this puts us in the most comfortable position to touch the person while looking at their face. Reversed caskets can be custom ordered if there's a need (like if the right side of the deceased's face is too traumatized). We don't simply flip them around in a regular casket because the foot end is often "unfinished" (not as decorative, and doesn't have the fabric pieces that drape over the edges).

Caskets have lots of personalization options and features, depending on the price tier. Some have beds that raise, lower, and tilt for optimal viewing. Many have a memory tube screwed into the foot end, on which a rolled-up paper lists the pertinent details of the occupant. Some have a secret drawer built in for mementos. The decorative corner pieces and the fabric panels inside the lid can be swapped with ones that reflect the deceased's vocation, hobbies, or religion. Caskets can be painted or "wrapped" with custom designs. Some families allow guests to write messages on the casket in Sharpie or cover it with stickers.

### Specialty Caskets and Containers

- Oversize—these caskets are available in sizes that increase by 2" wide and 3" long
- Infant/child—there are a range of sizes, the smallest ones sometimes being a casket/burial vault combination
- Orthodox—Jewish caskets are made entirely of wood, using dowels instead of metal, and no animal derived glues. They're not built on the Sabbath. They have holes drilled into the bottom to facilitate the body's quick return to the earth. They're often very

plain, unfinished, have very basic or no lining, and often include a Star of David for the lid.

- Cremation container—these range from combustible boxes with a casket-like appearance, to basic pressed wood or fiberboard rectangles, to plain cardboard boxes
- Rental casket—a wooden, casket-shaped shell surrounding a cardboard box disguised by a typical fabric interior. A person can have a viewing or funeral with this nice-looking casket, then at the conclusion, the cardboard box is slid out the foot end and cremated. A new cardboard and fabric liner is inserted into the wooden shell. This skirts the laws prohibiting the reuse of caskets and allows people an economical alternative to buying and cremating a pricy wooden casket.
- Transportation containers—a range of cardboard, wood, and metal boxes that surround a body or casket during shipping

**Bonus Content:** See full explanations and photos of all of these types of caskets and containers at <https://www.louisepachella.com/blog/casketscoffins>

## Funeral Set Up

When you're setting your scene, is it in a church? The mortuary's chapel? The mortuary's visitation room? At the graveside in the cemetery? Or will it progress from one location to another? If it's a memorial service (no casket, just an urn, portrait, or nothing), you can set it anywhere (the beach, a community center, someone's home, a bowling alley, Starbucks).

Details to consider

- The focal point can be a casket, urn, portrait, or something creative
- The stand that a casket rests on is either a church truck (a wheeled metal stand that folds up like an accordion) or a bier/catafalque (a wheeled wooden stand, usually ornate or decorative)
- Each religion has different funeral equipment and accessories: candles, incense, holy water, altars, kneeling rails, crosses or crucifixes or menorahs standing behind the casket
- The first pews or seats are reserved for close family and pallbearers
- An open casket funeral in a mortuary will often use colored lightbulbs to enhance the deceased's complexion
- Some churches don't allow the caskets to be open or will allow a brief viewing in a side room before closing the casket for the funeral
- The flower arrangement that drapes over the lid of the casket is called a casket spray and is usually selected by the next of kin and ordered by the mortuary
- Other flower arrangements (standing sprays, baskets, and vases) are arranged by size, with the ones from close family placed nearer the casket

- Some religions (like Judaism) either don't allow or prefer not to have flowers
- The foyer or entry area usually contains a guest book for people to sign, plus memorabilia, easels with photo collages, and other personalization
- Memorial folders or prayer cards are handed to guests on entry, usually by the funeral director
- The family can choose generic background music or select something special
- A photo slideshow may play on loop on flat screen TVs
- Military honors may be performed (ask me for more details)

## **Religion and Culture**

When you're setting your scene, consider your location (east coast practices are often different from the west coast), the family's ethnicity (there's a difference between Japanese Buddhist, Vietnamese Buddhist, Laotian Buddhist, etc.), the degree of conservatism (orthodox, conservative, or reform determines how traditional the service must be), the preferences of the family vs the demands of their spiritual leader, and class or economic status.

Religious preferences and customs (these are broad examples — research specifics)

- Autopsies: preferably not for Jewish or Muslim
- Embalming: traditionally not for Jewish, Muslim, or Hindu
- Viewing: traditionally not for Jewish or Muslim (perhaps a quick identification by close family members, but not a public viewing)
- Cremation: traditionally not for Jewish, Muslim, or Catholic (but the Catholic church has reversed their prohibition and may allow it, plus some reform Jewish people cremate)
- Burial in 24 hours: preferred/required by Jewish and Muslim (and Hindus cremate ASAP)
- Jewish men of a particular lineage cannot be near a body or at the grave
- Flowers: not for Jewish funerals, may be sent to Muslim families after the burial
- Holy days: Jewish people aren't buried on holidays or the Sabbath (Saturday), Christian/Catholic funerals aren't practical on Sundays or certain holidays
- Ritual washing/preparation by same gender: Jewish and Muslim, and it's iffy whether Muslim women are even permitted to attend the funeral
- Mourning clothes: many cultures wear black, but others specifically wear white (also, check if it's formal, conservative attire, religious garments, or a special dress code)
- Burial garments: can be regular clothes, sheets, shrouds, prayer shawls
- Mourning period: varies by culture and relationship (also check if the culture expresses their grief in a quiet, reserved fashion, or if they're loud and almost performative)

# Body Disposal

(How to legally get rid of a body)

## Burial

- Graves can be single or double depth (think bunk beds for caskets)
- Most cemeteries require the use of a concrete box around the casket (these support the weight of the earth, preventing it from crushing the casket and sinking in the grave)
- Caskets and vaults are lowered into the grave either by heavy machinery or a lowering device (a metal frame around the grave with straps that support and lower the casket)
- Graveside funeral services (AKA committal services) usually have 6-10 folding chairs with fuzzy covers, a canopy overhead, and sometimes a portable lectern with a microphone and speaker system
- Some cemeteries allow families to witness the lowering of the casket and/or the filling of the grave (this is largely a cultural and religious preference)
- Families are often given the opportunity to shovel a token amount of earth into the grave or drop in a flower taken from one of the nearby arrangements
- There may or may not be a mound of earth nearby (sometimes it's under an artificial grass cover, and other times it's trucked in after the family leaves)
- Backhoes are often used to fill in graves and may idle at a distance (they're shut off during the graveside service)
- Mausoleums are the where caskets are put in crypts in the wall. Niches are smaller spaces for urns, and those are in columbariums. Both columbariums and mausoleums can be located indoors or outdoors. Scissor lifts are used to lift caskets to crypts that are high up. Caskets don't really "explode" in mausoleum crypts. Gases from decomposition may cause the casket to "burp," but ventilation and drainage built into the mausoleum prevents anything gross from becoming noticeable.

## Cremation

- There's no "cream" in cremation, and professionals avoid the terms "cremains" and "ashes" (it's bone fragments, not ash)
- A crematorium is the entire building, whereas a crematory is specifically the cremation area within the building. The space inside a crematory machine is a chamber or retort.
- Crematories operate between ~1800-2000°F and are powered by natural gas, propane, or diesel
- An average cremation takes ~2-3 hours, but a heavy wooden casket can take ~8-12 hours to fully cremate
- Larger/obese bodies must be cremated slowly and carefully to prevent black smoke and grease fires that burn the building down (many crematories have weight limits)
- Pacemakers must be removed prior to cremation because their batteries explode, but other implants (screws, rods, plates, and breast implants) can stay in

- After the body is cremated, the bones cool inside the chamber for a short period, then they're raked into a metal pan for further cooling. After that, the large bone chunks and fragments go into an industrial blender (cremulator) to process them finely enough to fit into an urn. Before blending, metal pieces (surgical implants and casket hardware) are removed and disposed of.
- Cremated remains weigh approximately 4-9 lbs. and feel heavier than most people expect (because it's bone, not ash). The body yields about 1 cubic inch of cremated remains per 1 pound of pre-cremation body weight (a 150 lb. person = 150 cubic inches of cremated remains).
- Cremation is not the end: consider the final place of disposition. Will the cremated remains go home with a loved one, be buried, scattered, or turned into something else?

#### Green options (eco-friendly)

- Alkaline hydrolysis (AKA water cremation) is now legal in some areas. The short version: a person is placed in a pressurized chamber with a mixture of water and alkali. The temperature is raised but doesn't boil. After the whirlpool spa-type process, clean bones are all that's left. They're treated like cremated remains and returned to the family. It's much more eco-friendly than flame cremation.
- Natural burial: the body is not embalmed, and it gets shrouded/swaddled in cloth and/or placed into a biodegradable casket. It's buried without a concrete vault in a special cemetery that looks more like a sparsely wooded nature preserve. They typically don't allow headstones.
- Human composting: another process that's now legal in a few areas. The unembalmed body is laid in a stainless-steel vessel with straw, alfalfa, and wood chips. Over a span of 6-8 weeks, the body breaks down completely. The family can choose to take the resulting soil home (about a pickup truck bed's worth) or keep a token amount and donate the rest to land conservation projects. It can be used to fertilize trees and plants.
- Body Farm: there are a few locations that accept donated bodies in order to conduct research on decomposition. Bodies are placed in a variety of scenarios and left to rot while under observation. Once decomposition is complete, the cleaned bones are kept in a box at the research facility. Note: donating your body to regular medical science is not a final method of disposition, since it must be either cremated or buried once the study is complete.
- Some green options exist or are in development but aren't widely accepted. Some are simply gimmicks. Promession is a potential method of freeze-drying bodies, vibrating them into tiny pieces, then leaving them to decompose. Mushroom suits allegedly help nature consume bodies rapidly, but they're at best, useless and overpriced and at worst, harmful to the local environment. Tree pods (for full bodies) were originally an art exhibit and will probably never be practical for public use. Tree pods for cremated remains are counterproductive because cremated remains don't provide the right nutrition for growing trees.

## Unusual options

- Full body burial at sea: this is actually very doable, and you don't need to be a member of the Navy to qualify. There are certain rules about where caskets can be dropped into the ocean, and requirements about drilled holes and added ballast.
- Viking funeral pyre: this popular trope is not historically accurate or practical. It's not legal, and even if it were, the flames wouldn't burn hot enough to consume the body fully before extinguishing or sinking the boat. Charred bits of body would wash up on shore. Alternatively, cremated remains can potentially be set adrift on a tiny boat and symbolically set alight.
- Tibetan sky burial: a cultural practice available in parts of the world that are too rocky for ground burial and have insufficient wood for cremation. Bodies are carried to special areas and laid on flat rocks. Body breakers slice into the body, drawing vultures. After the vultures eat the flesh, the body breakers pulverize the bones and mix them with other foods, then give them back to the vultures.

**Bonus Content:** Read a detailed explanation and see photos of alkaline hydrolysis (water cremation) at

<https://www.louisepachella.com/blog/funeralfacts/alkalinehydrolysis>

## Sensory Check: Cemetery

When you're setting your scene, consider whether you're in a big city or small town. Is it a tiny, historic cemetery with old upright headstones and overgrown graves, or an enormous and highly manicured modern cemetery with flat markers? What is the weather and temperature for your time and location?

### What you see

- A canopy to give shade to the immediate family
- A variable number of folding chairs, usually with soft, fuzzy covers on them
- A gleaming metal contraption with straps, framing the open grave (the lowering device)
- The concrete vault, either off to the side or down in the grave. If it's in the grave, the lid may be positioned nearby, attached to a rolling device.
- A heap of earth, either bare dirt clods or a mound draped with artificial grass
- Upright gravestones/monuments and/or flat markers, flower vases
- Scatterings of vibrant flower arrangements, heaps of withered old flowers
- Seasonal decorations on nearby graves
- Clouds, rain, sunshine, gray sky, blue sky, fog
- Conservative black clothing
- A hearse parked in the distance
- A rolling cart to help transport the casket to the grave without pallbearers

### What you hear

- The rumble of the backhoe
- The scrape of shoveled earth and the clatter of dirt clods on the casket/vault lid
- Bagpipes, or a bugle playing Taps (ask me about electronic bugles!)
- A clergy person speaking
- The creak of the lowering device
- Muted sobbing, loud wailing
- Birds
- Distant traffic, airplanes
- Echoes in the marble mausoleum

### What you taste (maybe not literally, but you get the feeling in your mouth)

- Salty tears
- Cool water (either bottled or in a dispenser, courtesy of the cemetery)
- Clean air

### What you touch

- Tissues, fuzzy chair covers
- Sunshine, grass, a handful of earth, flowers
- Hugs
- Wood or metal casket, concrete vault, marble or bronze gravestones

### What you smell

- Freshly mown grass, earth, flowers, breeze, rain
- Perfume of guests
- Oiled machinery
- Incense

## **Sensory Check: Crematory**

When you're setting your scene, consider whether it's a nicely decorated public portion of the crematory (for families to witness the start), or is it the non-public work areas (more industrial, less pretty).

### What you see

- Stainless steel machinery
- Extra-long, blackened tools, like rakes and wire-bristled brushes
- Dust, despite constant cleaning
- Beige heat resistant refractory bricks inside the cremation chamber
- Flames (when the chamber door is opened mid-cremation to check the progression)
- Charred, partially consumed bodies (again, when the chamber opened mid-cremation)

- Silver heat resistant protective gear
- Recycle bin of charred metal (implants and casket hardware removed after cremation)

#### What you hear

- Roar of machinery
- Scrape/clank of tools against brick or other metal tools
- Industrial vacuum
- Industrial blender (cremulator)
- Large cooling fans
- Cycling of machinery, blowers, and afterburners

#### What you taste (maybe not literally, but you get the feeling in your mouth)

- Smoke
- Hot bricks
- Dust

#### What you touch

- Warmth through silver heat resistant protective gear
- Extreme ambient heat
- Sweat
- Warm tools
- Grit, dust
- Heavy cremated remains
- Textures of urns (wood, metal, ceramic, marble)

#### What you smell

- Smoke
- Hot bricks
- Dust
- Burned pork
- Sometimes very good smells (BBQ)
- Sometimes very bad smells (burning hair and poop)

## Disinterment/Exhumation

- Technically, a **disinterment** means to remove the sealed concrete vault from the grave and either move it to a new grave or rebury it deeper in the same grave. **Exhumation** means to go a step further and remove the body from the casket.
- Reasons: police investigation (second autopsy, new evidence of foul play, improvements in testing technology, DNA testing, collection of forensic evidence), relocation (body is in the wrong grave, family wants to ship to a cemetery close to where they're moving,



family wants to cremate and then resell the grave), or to make a single depth grave into a double depth grave

- Permission is usually granted by the next of kin, the cemetery, the property owner, and the county
- Witnesses: usually the cemetery crew, embalmer, sometimes the police/coroner/ME, environmental health officer, and occasionally the family
- Concrete vaults often break and caskets are often rusty or dilapidated if enough time has passed, so they must be replaced before reburial
- Water often encroaches into the grave and casket, leading to stinky, dirty brown fluid pouring out as the vault is lifted from the grave
- Stinky, dirty, soupy vaults and caskets are NOT transported in the \$100,000 Cadillac hearse! Unmarked vans with easily hosed out cargo bays are used instead.

## **Trouble! How to Cause Problems for Your Characters**

These scenarios range from tragic to comedic and are distilled from actual things my colleagues and I have witnessed in real life. Special request: kindly refrain from villainizing the entire funeral profession. It's a noble calling, but it's high stress and low paying. Most staff deserve respect, though a few individuals may be incompetent or shady (like any business). Forget the stereotypes and tropes, and try something new. What message are you sending readers about funerals and grief?

Again, these are all TRUE stories...

- Mismatched pallbearers: pairing people that are too tall and too short, leading to injuries or a dropped casket
- Urn is too small to fit the cremated remains; grave has been dug too small for the casket
- Missing equipment: you arrive at church without the folding cart for the casket to rest on (it's normally kept in a compartment in the hearse); you drive long distance to pick up a body and there's no cot/gurney in the back of your van; you can't find the key (Allen wrench hex tool) that unlocks the casket
- Hearse issues: flat tire, ran out of gas, car crash
- Autopsy opposition: if someone doesn't want their loved one autopsied, it can create time delays and messy court battles; can be attempted by a killer concealing murder
- Casket issues: someone leans on the casket too hard and tips it over; the family tries to close the lid and irreparably damages the hinges
- Next of kin issues: the family won't agree on services or burial/cremation, leading to screaming matches, physical fights, and vindictive court battles
- Noise during funeral: a guest's phone rings with a distinctive or inappropriate ring tone; the deceased has a ringing phone in their pocket (could be done intentionally); the deceased's pacemaker sounds its audible low-battery alarm

- Flight issues: the family misses their flight; the body misses its flight; the body is sent from Southern California to the airport's hub in Atlanta, Georgia, then back to Northern California
- Grave issues: someone jumps or falls in; the wrong grave is used; the right grave is used but there's already a mystery body in it
- Medical issues: extreme grief or weather conditions cause someone to pass out; someone has a heart attack at the funeral; someone actually dies at a funeral; someone goes to a mortuary or cemetery and dies by suicide (note: choose your wording carefully -- we no longer say "commit" suicide)
- Rigor mortis issues: a body dies sitting up or positioned in an odd way, then temporarily stiffens into that position (a popular spot to die is wedged between the toilet, sink, and bathtub; known as the triangle of doom)
- Relationship issues: the wife and the girlfriend both show up; there's an entire secret family; an estranged family member attends without invitation
- Obituary wars: arguing family members post highly skewed, alternate versions of the obituary; family members are deliberately excluded from the obituary; the family writes an extremely negative obituary for their abuser
- Harmful funeral tributes: dove release gone bad (the person holding the bird squeezes it too tightly and kills it, the dove gets snatched midair by a hawk); balloon release gone bad (tangled in power lines, causing an outage or fire); butterfly release gone bad (most of the butterflies arrive dead or are too lethargic to fly, people are unaware that the envelopes on their seats contain live butterflies and they sit on them); lantern release gone bad (causes a wild fire)
- Clothing issues: high heels sink into soft cemetery ground; pants/skirt rips as you bend over the grave/lift the casket; family forgets to bring underwear/ pants for the body
- Items in the casket: someone places a "questionable" or illegal item in the casket; someone steals from the casket; someone reads a private note left in the casket
- Service issues: the wrong music is played; the clergy or eulogizer is terrible (narcissistic, long winded, gets name wrong, reveals embarrassing information)
- The mortuary's removal van or hearse is stolen (with a body in it)
- Bodies are misidentified and inadvertently switched
- A gang seeking retribution shows up and starts a gun fight
- You grab the arm of the body to help move it, and their skin comes off in your hand
- The wind changes direction while you're scattering cremated remains
- Basically anything to do with decomposition, bodily fluids, gases, and maggots

## Happy Endings

- Funeral guests provide missing information, validation, unknown stories
- An opportunity to discover a long lost relative
- Funerals are unexpected reunions, bringing families together
- An opportunity to plant a sentimental note or significant item in the casket
- Freedom from an abusive relationship and a chance for reinvention
- A fun surprise pre-planned by the deceased (a video message, a confession, money/inheritance, everyone receives a treat or goodie that the deceased was known for, an activity that brings everyone laughter and joy)
- The protagonist runs into their crush at the funeral and receives support
- The protagonist runs into a cute stranger visiting a nearby grave
- Signs or messages from beyond, actual or perceived
- An opportunity for a huge family meal at the reception
- Will reveal/estate resolution
- Opportunity to meet organ recipients and share a special, bittersweet bond
- Closure, motivation, inspiration for what to do next

### **Bonus Content: Extra sources for details and inspiration**

What happens when people die on vacation?

<https://www.louisepachella.com/blog/deathtakesaholidaypart1>

How people (especially LGBTQIA) can protect their funeral rights from “family”

<https://www.louisepachella.com/blog/rightsvsrites>

Plus size postmortem care

<https://www.louisepachella.com/blog/plussizepostmortemcare>

Harmful funeral tributes (like doves and balloons), plus alternatives

<https://www.louisepachella.com/blog/harmfulfuneraltributes>

Organ, bone, skin, and tissue donation (plus misconceptions)

<https://www.louisepachella.com/blog/seasonofgiving>

The ultimate resource for kids and grief (a massive guide plus lots of links)

<https://www.louisepachella.com/blog/kidsandgrief>

A grief resource site I highly recommend (for both research and personal use)

<https://whatsyourgrief.com/>

Helpful Facebook groups in adjacent fields: “*Cops and Writers*” and “*Trauma Fiction*”

An assortment of books tangentially related to funerals (as tagged by Goodreads users)

<https://www.goodreads.com/list/tag/funeral>

Learn more about organ donation (and register!) at <https://www.organdonor.gov/> and <https://www.donatelife.net/>

## Compiled Bonus Content from Earlier Pages

Download my free 80-page death and funeral glossary PDF at [www.LouisePachella.com/glossary](http://www.LouisePachella.com/glossary)

See non-gory illustrations and descriptions of the decomposition process at <https://illuminatingcurios.com/forensics>

Book—Forensics for Fiction: Autopsies by Geoff Symon (he also has similar books explaining crime scenes and blood spatter). Find it on Amazon at [www.amazon.com/Autopsies-Forensics-Fiction-Geoff-Symon/dp/1945043156](http://www.amazon.com/Autopsies-Forensics-Fiction-Geoff-Symon/dp/1945043156)

Video tour—Cobb County Medical Examiner’s Office (13-minute tour and explanations, not gory or graphic) [www.YouTube.com/watch?v=DTMdFAzFgx4](http://www.YouTube.com/watch?v=DTMdFAzFgx4)

Photo gallery—Photos of the new CCME facility (not gory or graphic) [www.batson-cook.com/portfolio/cobb-county-medical-examiners-office](http://www.batson-cook.com/portfolio/cobb-county-medical-examiners-office)

Interactive virtual autopsy—See a non-gory illustrated example of the autopsy process <https://australian.museum/learn/teachers/learning/virtual-autopsy/>

Virtual autopsy challenge—Read case information and see actual photos of dissected organs (not bodies) to see if you can correctly determine the cause of death. Note: the website technology looks a little ancient, but it works! <https://www.le.ac.uk/pa/teach/va/howto.html>

See non-gory photos of various embalming room set-ups at <https://duncanstuarttodd.com/idea-gallery/>

Download my illustrated guide of embalming room instruments and supplies at [www.louisepachella.com/bonuscontent](http://www.louisepachella.com/bonuscontent)

See full explanations and photos of caskets and containers at <https://www.louisepachella.com/blog/casketscoffins>

Read a detailed explanation and see photos of alkaline hydrolysis (water cremation) at <https://www.louisepachella.com/blog/funeralfacts/alkalinehydrolysis>

**Still have questions? Want more detail? Email me at**  
**[hello@hisandhearsepress.com](mailto:hello@hisandhearsepress.com)**



## Addendum: Historical Fiction Notes

Here are the additions and alterations to my original presentation, focused on historical fiction

### Job Titles Over Time

Mortuary professionals:

- Embalming existed in the Middle Ages and Renaissance, but it was rare (even for royalty) due to the high costs
- Instead, bodies were washed, sometimes anointed, and dressed without preservation
- Laying out the dead was women's work, as it was a natural extension of tending to birth and illness. It was improper for men to see naked women or children, and a woman's gentle touch and compassion comforted the families.
- Some were referred to as "shrouding women"
- Men were tasked with constructing and transporting the coffin, plus grave digging
- This was the norm until the US Civil War
- Embalming became the ideal solution for transporting dead soldiers home, and its popularity was further cemented after the embalming of Abraham Lincoln
- The Civil War embalmers were medical men/surgeons (most medical schools refused to admit women)
- The surgeons trained others on the battlefield, and after the war, they assumed the role of teachers and chemical manufacturers
- The trade of embalming was claimed by the undertakers who, until now, were merely furniture builders and livery owners (horse and cart)
- The undertakers wanted to be considered "professional men," so they embraced their new embalming skills and expanded their funeral offerings
- Women were essentially shut out from their former duties laying out the dead as men decided they were too delicate for dead bodies and the sight of blood
- A few women still established themselves as embalmers, but many were relegated to the background as "lady attendants" or "lady assistants." Despite being called upon to handle the bodies of women and children (remember that sense of propriety?), it was unseemly for women to advertise themselves as embalmers.
- The term "mortician" was created in 1895, and today is a catchall term that can apply to multiple funeral service roles without implying specific licensing
- Organizations began using the term "funeral director" in 1905

Medicolegal professionals:

- Coroners have existed since the 11<sup>th</sup> century, but they didn't do a great job
- As elected officials, they were prone to bribes and corruption
- Most were unqualified to perform autopsies, so they hired that part out to doctors or did a superficial investigation

- The coroner system was so inherently flawed that a medical examiner system was introduced in 1877. Qualified forensic pathologists replaced elected officials.
- Unfortunately there was a lot of opposition, so the overall shift to the ME system has been slow. Even today, some jurisdictions use the inefficient coroner system.
- Double check your time period and county of death to determine the correct system

## **Are They Dead Now? Tests for Death**

One sign alone isn't conclusive, but they more or less confirm death when taken together

Common tests by laypeople:

- Feathers or hand mirrors detect breath
- A tight bandage on the arm reveals circulation; look for swelling and discoloration before the bandage, but none after
- An ear to the chest detects a heartbeat or respiration
- A cup of water on the chest will ripple or move with respiration
- Cutting or burning the skin will bleed, blister, or heal if alive
- Shining a bright light in the eyes causes living pupils to dilate/contract

Expert tests by doctors:

- Stethoscopes to listen to heart/lungs (invented in 1816)
- Ophthalmoscopes detect blood circulating in tiny capillaries in the retina (1851)
- Injections (hypodermic or intravascular) will disperse throughout the body or show reactions if alive; fluorescein gives the body a greenish tint, ammonia will inflame and redden the skin if alive or remain yellow if deceased
- Pinching and releasing a fold of flesh with artery forceps reveals whether the skin settles and furrow marks disappear
- Muscles in rigor mortis do not respond to electrical stimulation
- The presence of algor mortis, livor mortis, and rigor mortis are pretty definitive
- Dead eyes sink in their sockets; the eyeballs flatten and appear dull/cloudy
- Signs of putrefaction are a... dead giveaway

## **Unembalmed Bodies and Refrigeration**

- Refrigeration sort of existed in the 1800s and consisted of ice-chilled air within rail cars, portable casket-like cases, and even a state-of-the-art refrigeration system in the Paris Morgue in 1882
- Bodies were not (and are not) frozen in normal circumstances. Modern refrigerators are set 36-39°F to prevent damaging ice crystals in the tissue. Exception: during winter in some areas, bodies could not be buried in frozen ground. They were kept in temporary receiving vaults or other cold storage. Those bodies may have frozen.

- Portable cooling boards (perforated wooden platforms) were brought into homes by undertakers. Shrouding women often used planks of wood or doors removed from hinges and supported by chairs.
- Ice was placed beneath to cool the body, and the room was kept as chilly as possible
- Bodies were washed, dressed, even autopsied and embalmed at home
- Holes or cane lattice allowed water and bodily fluids to drain
- If the coffin wasn't available in time, cooling boards could be draped and used for the formal viewing

## Embalming

### When:

- Embalming throughout time has ranged from superficial anointing with spices and perfumed unguents to surgical evisceration and internal application of chemicals
- Embalming in Ancient Egypt included removal of organs and internal application of natron, herbs, cedar oils, tree-derived resins, incense and gums, pitch, and tar
- Embalming in the Middle Ages included evisceration, immersion of the body in alcohol, insertion of preservative herbs into flesh, and wrapping the body in tarred or waxed sheets
- Renaissance embalming had to be more refined to facilitate medical dissection. Fluids were injected into hollow structures and hardened the body.
- Leonardo Da Vinci was said to have preserved his cadavers with turpentine, camphor, oil of lavender, vermilion, wine, rosin, sodium nitrate, and potassium nitrate
- Some cultures immersed bodies in honey, like Alexander the Great
- Others pickled bodies in vinegar, wine, or spirits. Horatio Nelson was preserved in a cask of brandy while his ship sailed home.
- Civil War embalmers tried various combinations of arsenic, creosote, mercury, turpentine and different forms of alcohol
- In the 1890s, formaldehyde replaced arsenic

### Tools:

- When embalming was performed on the Civil War battlefield or in people's homes, embalmers used hand operated bulb syringes or vacuum pumps to create a system of pressure or suction
- Gravity flasks were jars suspended on poles with hoses running down into an artery; the higher the jar, the more pressure was produced
- Embalmers also brought a valise full of surgical tools, concentrated fluids, large empty bottles for mixing or for blood drainage, a chin rest to secure the jaw closed, thread, cotton, sponges, assorted grooming implements, and other sundries. They also brought materials for restoration, like plaster of Paris, wax, powders, and paints.

- A trocar is an important embalming tool. It's a long hollow needle, almost like a sword, used to puncture internal organs, allowing fluids and gases to be removed. It's then used to deliver embalming fluid into those hollow spaces.
- Electric embalming machines appeared sometime between 1920-1940

## **Caskets vs Coffins**

- Caskets are rectangular with a domed, hinged lid that opens halfway
- Coffins are tapered hexagons with flat, one-piece removable lids
- We use caskets in the US today, while coffins are used for Europeans and vampires
- Coffins are sometimes referred to as toe pinchers
- Before the 1700s, coffins were only for the wealthy. Poorer people were buried in shrouds or winding sheets directly in the ground.
- 16th century winding sheets were simple sheets gathered at the head and feet and tied in knots
- By the 17th century, shrouds had evolved to expose the face and had slightly tailored pieces for men and women
- The end of the 17th century saw open backed long shirts with draw strings at the wrists and neck
- In 1700, a change to English law allowed everyone to be buried in coffins, and this remained the standard until the Civil War
- With the post-war shift toward embalming and different funeralization options, undertakers in the US offered caskets instead of coffins
- By the turn of the 20th century, caskets had virtually replaced coffins
- Metal caskets have been available since 1850 but were too heavy and expensive
- Mass production of metal caskets began in 1918 but didn't catch on until the 1950s

## **Victorian Mourning Customs**

The Victorian era showcased some of our most elaborate funeral traditions. Death was common, and Queen Victoria became the model of mourning after the death of her husband.

- After a death, many superstitions were observed. Clocks were stopped at the time of death. Mirrors were draped and photographs were turned facedown. Curtains were closed.
- Wreaths or badges were hung on the door to indicate a house in mourning, and the colors of ribbons showed whether the deceased was young, old, or middle aged. Passersby knew not to ring the bell and children played elsewhere.
- Women were expected to wear clothing and long veils made of black crepe, also known as widow's weeds. Fun fact: the black dyes used were toxic and caused health problems.
- There were strict rules about wearing only dull black jewelry and using accessories edged in black. Even their stationery had to be edged in black.



- After a prescribed period of deep mourning, women were permitted to wear shades of gray or violet.
- Men and children had slightly less rigorous fashion expectations.
- Postmortem photography became popular, as it was typically too expensive to take regular family photos. Sometimes a child never had an opportunity to be photographed until their untimely death, so the family posed together in their finest clothes and propped up or held the dead family member for the picture. Photographers sometimes painted eyes on their closed lids.
- Funerals and viewings took place inside the home rather than at mortuaries or funeral parlors
- Flowers served two purposes: flowers had certain meanings based on the type, and they also helped mask unpleasant odors
- Mourners walked behind horse-drawn carriages in grand processions to the new park-like cemeteries which replaced small churchyards and family plots at the homestead
- Mementos were popular: things like cross stitch samplers, dried funeral flowers, and jewelry or wreaths made from the deceased's hair
- These customs fell out of favor after the death of Queen Victoria and the loss of so many WWI soldiers buried overseas

## **Bonus Content: Research Rabbit Hole!**

Don't blame me if you spend countless hours following these links

Death in Early America: Embalming (plus lots more info and photos)

<https://clements.umich.edu/exhibit/death-in-early-america/embalming/>

The Evolution of the Funeral Home and the Occupation of Funeral Director

<https://omnilogos.com/evolution-of-funeral-home-and-occupation-of-funeral-director/>

Exhuming Women's Premarket Duties in the Care of the Dead (aka Shrouding Women)

<https://www.jstor.org/stable/189870>

Historical Embalming

<https://www.britannica.com/topic/embalming>

Human Body Preservation – Old and New Techniques

<https://www.ncbi.nlm.nih.gov/pmc/articles/PMC3931544/>

Trends in the Development of Embalming Methods (including historical methods)

<https://ispub.com/IJAM/7/2/3694>

A Brief History of the Literature on Postmortem Changes to the 19th Century (Decomp)

<https://www.ncbi.nlm.nih.gov/pmc/articles/PMC6474507/>

From Coffins to Caskets: an American History

<https://www.coffinworks.org/from-coffins-to-caskets-an-american-history/>

A Brief History of Caskets

<https://www.northwoodscasket.com/northwoodscasket/2011/03/brief-history-of-caskets.html>

The Evolution of the English Shroud

<http://www.archive.coffinworks.org/uncategorised/the-evolution-of-the-english-shroud-from-single-sheet-to-draw-strings-and-sleeves/>

The Victorian Funeral

<http://www.mkheritage.co.uk/bfhng/docs/Jul10%20The%20Victorian%20Funeral.htm>

Victorian Mourning Etiquette

<https://tinkercottagemuseum.wordpress.com/2014/09/30/the-etiquette-of-mourning/>

Preparing the Victorian Home for a Funeral

<https://blog.billiongraves.com/preparing-the-victorian-home-for-a-funeral/>

Intriguing Funeral Customs of the Victorian Era

<https://www.funeralbasics.org/8-intriguing-funeral-customs-victorian-era/>

**Still have questions? Want more detail? Email me at**  
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