Create Your Own Poison

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“Nothing has really happened until it has been described.”
—VIRGINIA WOOLF (1882–1941)

“In an attempt to preserve a viral weapon for military use, the general had secreted away an antibody. Little did he know at the time that the virus, which first spread by physical contact—monkey to monkey and then monkey to human—was about to mutate to an airborne contagion. Now he had no control over the viral effects. Now the whole world would be affected, just like the common cold.”
—ROBIN COOK, OUTBREAK (ROBIN COOK)

Hollywood’s slogan has always been: Don’t just steal it; steal it and make it one step better. In the above example, the author took a version of a hemorrhagic virus (one that caused high fevers and bleeding from every orifice) and made it fit his own purposes, forming one more deadly than ever imagined.

There are so many poisons and diseases out there, one wonders why someone would want to create a fictional means of death—but for authors who need a specific event to happen, or a certain effect, it can be helpful. There are many reasons an author might want to make up a poison. A novel set in the future may need something unheard-of to maintain believability. Perhaps an exceptionally fast-acting poison is needed to move the plot, and the antagonist has no acceptable access to those that truly exist. Often an obscure but distinctive poison can highlight the exceptional knowledge of a superior detective. And sometimes, a fictional poison can simply be more fun. (Or it can serve a practical purpose. If you want to talk about a certain drug or household product negatively, it might be safer to make one up than risk upsetting a pharmaceutical company or manufacturer.)

Take, for example, a Star Trek episode in which they used a generic aging disease—but instead of showing its progression over the course of years, they made the aging happen overnight.

For another project I made an attempt to identify the poison used by Umberto Eco in his masterpiece, The Name of the Rose. After exhaustive checking, it was concluded that Eco had devised a poison to suit his own purposes, since none could be found historically that would have
matched all the characteristics of his poison.

The point of this article is not to tell you how to formulate a real poison or disease, but to create a fictional one. Whatever your reason for doing so, if you are going to create a fictional poison, several factors should be kept in mind at all times:

1. Do the research. Then you can write with authority and credibility.
2. Make it different. Expand on something. It can be interesting to have an agent mimic something else, but there should be something that distinguishes it from what it imitates. This can be a minor detail, providing an opportunity for your detective to show off. Like the poison Bloat in Terry Pratchett’s Pyramids, a blowfish poison that causes human cells to expand by 2,000 times—a process used by the Assassins’ Guild that is both fatal and explosive.
3. Be consistent. Even if the poison is an extremely bizarre toxin from the yellow weed of Mars (as Akpaloli from Clark Ashton Smith’s The Plutonian Drug) that kills immediately with symptoms of a heart attack but that can also be used as a stimulant, and reacts differently in each person it contaminates, it should be consistent in its inconsistency.

The toxicity of the poison depends entirely on what sort of mayhem you have in mind. If you are creating a romantic suspense and want the heroine to slowly waste away until the antidote is discovered, then something moderately toxic will do. If the villain is just trying to scare off the hero, then something that will injure sooner than kill is appropriate. Most poison-oriented mystery stories depend on exposing something deadly to an unwitting victim by air, food, or touch.

**FORMS**

There are many means of administering the poison to a victim. Perhaps a rough pinprick from a photographer’s tripod can open the way for a potent toxin to enter the bloodstream. And there is always the mysterious poisoned blowgun dart, as used in the movie Young Sherlock Holmes, and in spy and jungle stories.

The old interior design maxim that form follows function definitely applies when determining what form the poison should take. (In the case of the aforementioned photographer’s tripod, a liquid, or perhaps grease, would be most effective.)

Decide how the poison or disease will be administered or spread, then make everything else reflect that. Again, it all depends what you want the poison to accomplish. If the poison is to be dropped into the
victim’s scotch and soda, it had better be a tasteless liquid or powder that dissolves easily. Or the drink has to be so sweet (like Long Island iced tea) that it will mask the bitterness. (This is how GHB and other date rape drugs are often slipped to the victim.)

Do you want to kill a whole family and make it look like an accident? If so, then you need an odorless, colorless gas that would be easily administered without causing suspicion. A barbeque is the simple answer here. Charcoal, when burned, creates carbon monoxide, a poisonous gas that will be toxic in an unvented room or house. Gas heaters, stoves, and other appliances can also kill in the same way if not properly vented. (In this case, the symptom of cherry red lips and fingertips will reveal what they died from.) The heater would be blamed and it would look like an accident—but was it?

**SYMPTOMS**

You can be truly creative when it comes to symptoms. When deciding what symptoms your victims should have, however, it is important to remember how the human body works. Knowing how a poison affects the human body, though it is rarely something that will be discussed in the story itself, can make it easier to tell how it will react in any given circumstance, and your knowledge will add to your credibility. Substances that affect smooth muscle operation can affect the breathing and cause respiratory distress and death. Cyanide that is ingested affects the absorption of oxygen into the lungs.

Most ingested or inhaled poisons will cause nausea and vomiting, and perhaps constipation or, more commonly, diarrhea.

Unusual reactions are better avoided when using a fictional poison, unless it has been set up that such things are a possibility, or the reaction is a red herring. Perhaps the detective mentions that someone taking aspirin daily will be immune to the substance.

Or, for more fun, perhaps the substance is deadly to most people but can help those with a given affliction, much as digitalis is good for heart patients. One story had a victim who had been ill for some time, but her family couldn’t wait for her to pass on, and decided to help her by slipping arsenic in her food. To their amazement, she began getting stronger. In frustration, they finally shot her. They discovered later that she was one of those rare people who needed arsenic to live and that she had resisted the physician’s efforts to give her the necessary medication. They had been making her healthier, not sicker.

**SECONDARY SYMPTOMS**
Poisons generally have certain primary effects and secondary symptoms. Corrosion, or caustic action, is chemical destruction of the human tissue, usually by mere contact, as with an acid such as hydrochloric acid, or alkalis such as lye. The action leaves slow-healing burns that often become permanent scar tissue unless the victim dies. Burning pain is usually the initial symptom after swallowing, followed by vomiting, uncontrollable diarrhea, and bloodstained feces. A secondary effect here could be bleeding and systemic infection, which could be the end factor in the death.

Cytotoxicity means cell poisoning. Translated into symptoms, this means destruction and death of the cells. These can be any cells in the body. As previously mentioned, red blood cells are affected by carbon monoxide, which binds and doesn’t let go, and prevents the absorption of oxygen. The body then becomes flushed (red-tinged), with cherry red lips and fingertips, since it’s not getting the oxygen it needs. This mimics oxygen, so that the blood is brighter red than with oxygenated blood, whereas cyanide, which deprives oxygen, results in blue-tinged blood. Everything then shuts down.

Aniline is another example, since the red blood cells are changed into methemoglobin. Kidney cells are affected by salts of mercury, and kidney failure results. Nerve cells are affected by the neurotoxin curare, causes total paralysis and renders the person unable to breathe, thus causing suffocation and death. Skin lesions are also caused by gases, corrosives, or acids.

Some poisons affect the central nervous system. Depressants, such as barbiturates and alcohol, work in this way, interfering with the communications between the brain, heart, lungs, and muscles, slowing them down, leading to coma and paralysis. In severe alcohol poisoning (drinking a bottle of Scotch in five minutes), a person might appear to recover only to die two or three days later from the cerebral edema.

Arsenic, lead, and mercury (and other heavy metals) work by blocking the productions of vital enzymes, which in turn prevent the body from functioning.

These primary effects are specific to the poisons that cause them. Secondary effects can be caused by all or any of the primary effects and vary from individual to individual. These are symptoms relating directly to the vital body functions: respiration, circulation, and excretion. When breathing stops for a period of five minutes or more, the heart usually quits and the brain cells die. When the kidney or liver fails, then the body can’t excrete its wastes—including the poison—and death occurs within a few days, unless extraordinary measures are taken to keep the victim
alive. This might include kidney dialysis or transplants.

When creating your own agent, you can make the poison behave in any reasonable way you want. For example, a myth associated with radiation is that once exposed to radiation, you become radioactive, glow in the dark, and contaminate others. Not true. You can be exposed but not be contaminated. You are contaminated only if the agent is left on or in your being. You are not radioactive, just the material on or in your body is. That is why you strip your clothing off and even abrade your skin with stiff brushes when contaminated. But, in your story, if you give a plausible explanation, you can create a type of radiation that does make a person glow.

**ANTIDOTES**

Any antidotes and treatments used should be consistent with the symptoms and effects of the poison. Keep in mind that very few poisons actually have specific antidotes. Much of the treatment of poisoning revolves around removing the poison from the victim and treating the symptoms. Only a few can be neutralized with an antidote.

Some treatments or antidotes may consist of using antibiotics to kill bacteria, or antitoxins to block the specific effects of botulism, tetanus, and other biotoxins. Everything is treated symptomatically to prolong life. Many antidotes and treatments in of themselves can be deadly when not administered correctly.

Reaction times are also important and create conflict, such as in the 1988 movie *DOA*, in which the victim had twenty-four hours (one week in the 1950 version) to find out who had poisoned him. Some poisons, like the super-deadly gas VX, destroy the nervous system and cause a complete body breakdown in minutes unless the antidote (in this case, atropine) is immediately injected. (This is why the military issues atropine injectors with gas masks.) In *The Rock*, they used VX-2, which was a green liquid that caused the skin of its victims to bubble and melt. The only antidote here had to be administered immediately into the victim’s heart. (There is now a weapon called Binary VX which, when mixed, produces the deadly VX nerve agent.)

Other agents, such as mushroom alkaloids, may take days or weeks to accomplish death with no antidote available.

If you need time to get to the hospital, or for the killer to accomplish his alibi, or the victim to leave a clue of sorts before his death, timing is important. Except in the case of something highly corrosive, it takes several minutes for substances that are swallowed to get into the stomach, and from there to the bloodstream where they create the damage. Even
cyanide, which is extremely fast acting, takes up to fifteen minutes to react after swallowing. Poisons that act immediately are generally inhaled or injected. Skin absorption usually, but not always, has the slowest reaction time; but again, in the case of VX and other nerve agents, which are both liquid and a gas, you will have an immediate reaction.

Generally speaking, the more volatile and unstable the poison, the harder it is to handle, and more dangerous to those who are handling it as well.

NAME YOUR POISON

Once the symptoms and form are determined, you can find a known agent that meets your needs, or a combination of agents. Creating a fictional poison’s name can be a tricky issue. Knowledge of chemistry helps. So does a basic knowledge of anatomy. Simple names are more suitable for natural poisons intended for period stories. Multisyllabic chemical names should not appear in stories set in the 1930s or earlier. Even now, people are more likely to use familiar names such as TNT instead of trinitrotoluene.

If you are working with a virus or bacteria, different naming rules apply. A virus is generally named based on:
1. Where it first originates (Hong Kong flu).
2. The animal that carries it (bird flu).
3. How it affects the human body (like HIV, which affects the immune system, or hepatitis, which affects the liver).

Mutations and variations are indicated by a letter or number after the name (hepatitis A, B, and C). Long names may be abbreviated (like HIV for human immunodeficiency virus). Bacteria, on the other hand, are named by the individual who discovered them, and there are no real rules. They can be named after themselves, friends, children, or foes. Often they will have a Latin name, but it is not necessary.

Reading a chemical list can help. Study how the names are put together, then try breaking them apart and putting different syllables together. If it sounds good, use it. Just remember that a long name can be a real nuisance to type over and over again.

If poisons are supposed to be combination of real chemicals, then it’s important to know how those elements work, since the poison will be an offshoot of them. The movie DOA is an example in which this did not work. The poison used, radium chloride, would make it part radium and part chloride. Any form of radium will most likely cause radiation sickness, which usually includes nausea, vomiting, hair loss, dry skin, diarrhea, internal bleeding, infections, incontinence, dehydration, high
fevers, wasting away, and coma before death. These can occur within twenty-four hours to several weeks, depending on the exposure. Chloride as a solid or chlorine as a gas would probably cause internal burning, strictures in the throat, inability to swallow, and other problems. Nowhere in the movie did the victim exhibit any of these symptoms, or indicate that radiation sickness was part of his disease.

To sum it up—use what you can from life and make up the rest!

A few examples of fictional poisons include:

- Meta-cyanide, from *Dune*: a fatal toxin delivered by the small needle Gom Jabbar.
- Brainwash gas, from *Dune 2*: a nerve gas that temporarily causes units to become loyal to House Ordos.
- Iocaine, from William Goldman’s *The Princess Bride*: a deadly Australian poison that is odorless and tasteless and highly soluble; it is available in powder form, and one can build an immunity to it. It is used by the hero, Westley.
- Smilex, from *Batman*: used by the Joker to kill within minutes, leaving the victim with a frozen grin on his face.
- FEX-M3, from *Star Wars*: a deadly nerve toxin that kills in under ten seconds and is delivered through a dart.
- Sennari, from *Star Wars*: a fast-acting toxin delivered by a Kamino saberdart to eliminate Zam Wesell in Episode II.
- Sandbat venom, from *Star Wars*: the natural venom of a Tatooinan sandbat; used by Tusken Raiders.
- Krayt dragon poison, from *Star Wars*: a deadly toxin from Krayt dragons.
- Malkite themfar, from *Star Wars*: a signature poison used by the Malkite Poisoners, a group of assassins in the Star Wars Expanded Universe.
- Silent Night, from *XXX*: a gaseous nerve agent that can kill millions of people, and only breaks down in deep water.
- 2,4,5 trioxin, from the *Return of the Living Dead* series: a gas that brings the dead back to life as zombies; originally created by the military as an herbicide to use on cannabis plants.