

Embalming: The Negative Effects of Formaldehyde

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Introduction

Introductory Statement: Current embalming standards in North America use high concentrations of formaldehyde for cadaver preservation.

Thesis: Because formaldehyde is toxic to funeral workers and the environment, the procedures for cadaver preservation must reduce or eliminate the use of formaldehyde in embalming.

Summary of main ideas:

- The history of embalming exposes the toxic nature of the procedure.
- Due to its toxicity, many diseases have been directly linked to long-term formaldehyde exposure, which puts those exposed to it at greater risk of health issues.
- Formaldehyde also is harmful to the environment.
- Though formaldehyde has long been a popular method of preserving cadavers, it is no longer necessary because many less harmful alternatives are now available.

Main Idea #1

Claim: The history of embalming exposes the toxic nature of the procedure.

Evidence:

- Shortly after death, body changes begin to happen at a chemical and physical level that causes internal and external changes (Khouri, 2012).
- “The original embalming mixture contained arsenic, a venomous chemical that was known to cause sickness and disease” (Chiappelli & Chiappelli, 2008, p. 26).
- Arsenic was eventually banned from the practice of embalming due to its toxicity, but was replaced with formaldehyde, another lethal chemical (Chiappelli & Chiappelli, 2008).

Significance: Embalming techniques have always used hazardous substances to delay composition. Formaldehyde replaced arsenic as the embalming fluid of choice, but this replacement did not lead to a safer embalming practice, only a different form of toxicity. Although it has been used as a means of preserving cadavers for over a century in North America, the dangers of formaldehyde outweigh its usefulness for delaying decomposition.

Main Idea #2

Claim: Due to its toxicity, many diseases have been directly linked to long-term formaldehyde exposure, which puts those exposed to it at greater risk of health issues.

Evidence:

- “[E]mbalmers are at a significantly greater risk than the general populace of getting cancers of the skin, brain, colon, sinuses, nose, throat and blood, kidney failure, arteriosclerotic heart disease, chromosomal damage and cirrhosis of the liver” (as cited in Chiappelli & Chiappelli, 2008, p. 25).
- Upper respiratory tract irritations are common among embalmers (Khoury, 2012).
- Other common short-term ailments include nasal, eye and skin irritations, bad taste in the mouth, dizziness, headache, nausea and vomiting (Khoury, 2012).

Significance: Excessive exposure to formaldehyde is common among funeral workers, specifically embalmers who handle high amounts of this cancer-causing substance on a daily basis. Due to high exposure levels, embalmers are disproportionately affected by diseases associated with formaldehyde. Even though complications may not be immediate, ongoing exposure can lead to serious health problems later. To minimize this risk and protect the health of funeral industry workers, the use of formaldehyde should be reduced or eliminated.

Main Idea #3

Claim: Formaldehyde also is harmful to the environment.

Evidence:

- In the United States alone, two million people are embalmed every year, leading to approximately seven million gallons of formaldehyde being buried in the ground (Chiappelli & Chiappelli, 2008).
- As Harker (2012) notes, “contemporary funeral practices and cemeteries are ecologically problematic. Digging in a modern cemetery in the United States is much like digging through a toxic waste site” (p. 151).

Significance: The pollutants from the formaldehyde, casket, vault, and fertilizers used in modern burial practices leach into the groundwater over time. This introduces many harmful chemicals into the surrounding areas, which can lead to toxic contamination local ecosystems. The negative effects of formaldehyde on the environment is another reason its use should be restricted or replaced with alternative embalming methods.

Main Idea #4

Claim: Though formaldehyde has long been a popular method of preserving cadavers, it is no longer necessary because many less harmful alternatives are now available.

Evidence:

- Khouri (2012) notes that modified embalming formulas to include minimal amounts of the chemical “yields a high quality preserved cadaver” while reducing the “unwanted ambient hazardous toxic effects of formaldehyde” (p. 32).
- Chiappelli and Chiappelli (2008) found that “freezing is the most viable alternative for preventing decomposition” (p. 26).

- Environmentally conscious burial options such as “using a biodegradable casket without a vault for burial and no embalming fluids in the body” can help protect surrounding ecosystems (Harker, 2012, 154).

Significance: There are a number of alternatives to formaldehyde-based embalming practices that are both efficient and safe for funeral workers and the environment. These alternatives include modifying existing embalming formulas, freezing cadavers, and a variety of “green” burial practices. Greater public awareness and promotion of these alternatives could help reduce dependence on formaldehyde as the industry standard, and thereby protect the health and well-being of everyone involved.

Conclusion

Restatement of argument: New methods of body preservation should be put into place for the safety of funeral workers and the environment.

Significance of main points: The use of formaldehyde for cadaver preservation is unnecessary, as nontoxic options have proven to be just as effective. End-of-life services should adopt new embalming practices or eliminate the process altogether by offering conservation burials, where the environment will not be jeopardized by the mass burial of formaldehyde.

Concluding statement: It is imperative that the funeral industry take responsibility for implementing these much needed changes and, by doing so, the health of the public and the environment will be richer.

References

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