

# New Study Funded by NIJ Research Grant to Focus on Opioid Addiction's Effects on Bones

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The National Institute of Justice (NIJ) provided a two-year grant of \$370,153 to fund a new study that focuses on the effects of opioid addiction on bone structure. Forensic anthropologists will study how the substances impact the bone structures on a microscopic level. This is expected to help provide more accurate estimations regarding age-at-death.

Bones can serve as a living record of a person's life because it constantly changes based on physical activity, diet, and a number of other factors. Forensic anthropologists are tasked with deciphering clues from bones, and their study of skeletal remains can help in the identification of unknown individuals.

Forensic anthropologists work to assess the age, sex, height, ancestry, and other unique features of a skeleton to find important clues regarding the person's identity. The more they know about bone structure, the easier it is for them to [help solve cases](#).

Dr. Janna Andronowski and her team of forensic anthropologists from the University of Akron's Department of Biology received a two-year grant from the NIJ. The team will use innovative 3D X-ray imaging technology to learn more about how opioids impact the microscopic bone structures used to estimate age-at-death.

With the current opioid epidemic, the need for such study becomes more apparent. The study of bone adaptation, aging, and disease are going to be the center of the study.

Andronowski and her lab will research the effects of opioids on bone remodeling. Currently, the opioid crisis is one of the country's costliest and fastest-growing epidemics. More and more people are dying from an opioid-related overdose, and many more are [developing dependence and addiction](#).

Doctors have started to limit their opioid prescriptions while more addiction treatment centers have opened.

"Deaths related to opioid addiction have become far too common in America, and the misuse and addiction to opioids is a serious public health crisis," Andronowski says. "The effects of disease on human bones can impact age-at-death estimates, and prolonged drug use is no exception."

This new study is necessary because in certain cases, a victim may have been in their twenties at the time of death, but the impact of long-term opioid addiction on their bones could tag them as being in their fifties or older. Now that there is an opioid epidemic, these special cases may increase in number, and it could hinder investigations.

The effects of long-term opioid use on bones are critical because many of the skeletal remains examined by forensic anthropologists come from marginalized individuals with a history of substance abuse and overall poor health.

Andronowski has previously worked with the Forensic Anthropology Unit at the Office of Chief Medical Examiner in New York City. "Current evidence suggests that opioids upset the balance of bone remodeling towards more destruction and less formation of bone," Andronowski says. "Thus, current microscopic methods developed on healthy cases may not be useful in the assessment of such individuals, resulting in severely compromised age-at-death estimates."

The study could improve the applicability of histological age-estimation methods and scientific standards within the field of forensic anthropology. "The ultimate goal of this work is to discover the true impact of opioid abuse on bone microstructure and prepare new guidelines for routine microscopic analysis."

If someone in the family is struggling with opioid addiction, it is important to seek help. Click the link to see [Albuquerque's top rehab placement programs](#).

A combination of medical detox and behavioral therapy can go a long way in the fight against drug abuse. But because every individual is affected by addiction differently, a comprehensive program tailored to their specific needs is necessary. Look for a nearby [addiction treatment facility](#) today and find out how drug treatment programs work.

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