



AMERICAN SOCIETY OF SAFETY PROFESSIONALS NORTH FLORIDA CHAPTER

DECEMBER 2018 NEWSLETTER

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Earliest Recorded Lead Exposure is Found in 250,000-Year-Old Neanderthal Teeth

Using evidence found in teeth from two Neanderthals from southeastern France,

researchers from the Department of Environmental Medicine and Public Health at the Icahn School of Medicine at Mount Sinai report the earliest evidence of lead exposure in an extinct human-like species from 250,000 years ago.

This study is the first to report lead exposure in Neanderthal and is the first to use teeth to reconstruct climate during and timing of key developmental events including weaning and nursing duration -- key determinants of population growth.

The international research team of biological anthropologists, archaeologists, earth scientists, and environmental exposure experts measured barium, lead and oxygen in the teeth for evidence of nursing, weaning, chemical exposure, and climate variations across the growth rings in the teeth. Elemental analysis of the teeth

revealed short-term exposure to lead during cooler seasons, possibly from ingestion of contaminated food or water, or inhalation from fires containing lead.

During fetal and childhood development, a new tooth layer is formed every day. As each of these 'growth rings' forms, some of the many chemicals circulating in the body are captured in each layer, which provides a chronological record of exposure.

The research team used lasers to sample these layers and reconstruct the past exposures along incremental markings, similar to using growth rings on a tree to determine the tree's growth history. This evidence allowed the team to relate the individuals' development to ancient seasons, revealing that one Neanderthal was born in the spring, and that both Neanderthal children were



more likely to be sick during colder periods.

The findings are consistent with mammals' pattern of bearing offspring during periods of increased food availability. The nursing duration of 2.5 years in one individual is similar to the average age of weaning in preindustrial human populations. The researchers note they can't make broad generalizations about Neanderthals due to the small study size, but that their research methods offer a new approach to answering questions about long extinct species.

Traditionally, people thought lead exposure occurred in populations only after industrialization, but these results show it happened prehistorically, before lead had been widely released into the environment," said one of the study's lead authors, Christine Austin, PhD, Assistant Professor in the Department of Environmental Medicine and Public Health at the Icahn

School of Medicine at Mount Sinai.

"Our team plans to analyze more teeth from our ancestors and investigate how lead exposures may have affected their health and how that may relate to how our bodies respond to lead today."

"Dietary patterns in our early life have far reaching consequences for our health, and by understanding how breastfeeding evolved we can help guide the current population on what is good breastfeeding practice," said Manish Arora PhD, BDS, MPH, Professor and Vice Chairman Department of Environmental Medicine and Public Health at the Icahn School of Medicine.

"Our research team is working on applying these techniques in contemporary populations to study how breastfeeding alters health trajectories including those of neurodevelopment, cardiac health and other high priority health outcomes."

"This study reports a major breakthrough in the reconstruction of ancient

climates, a significant factor in human evolution, as temperature and precipitation cycles influenced the landscapes and food resources our ancestors relied on," said the study's lead author Tanya Smith, PhD, Associate Professor at Griffith University.

Other key authors on the study include Daniel Green of the Forsyth Institute and Renaud Joannes-Boyau of Southern Cross University in Australia. Other institutions involved in this study include New York University, Harvard University, Australian National University, and Institut de Paléontologie Humaine in France.

Science Daily

Online Edition

October 31, 2018

[Science Daily](#)

Confined Spaces: We Have a Failure to Communicate

Given the horrendous, unacceptable statistics on confined space deaths, rescuers should always know



about atmospheric conditions before entering and attempting rescue. It's imperative. Additionally, attendants should know about the entrants' readings in real time. In today's electronic age, this is easily accomplished.

A quote from the 1967 film "Cool Hand Luke" perfectly sums up the problems that we all face with confined spaces: "What we've got here is failure to communicate."

Approximately 60 percent of all deaths in a confined space occur to rescuers. Mainly, this is because the men and women inside the space can't communicate about the dangers within.

According to a National Institute for Occupational Safety and Health (NIOSH) study, the majority (more than 55 percent) of these deaths are caused by atmospheric hazards. People routinely die because they don't know that the atmosphere they are about to walk into is filled with deadly concentrations of gas.

The best way to erase atmospheric-related confined

space deaths is through proper use of gas detection and leveraging technology to communicate those hazards to all would-be rescuers.

Four Key Failures

Failure #1:

No real-time Peer to Peer gas hazard communication:

Historically, gas detection devices have been very good at alerting the person who is wearing or holding the device of the hazards. However, they have been terrible at letting anyone else in the work group know about these hazards. Given the grim statistics on confined space deaths, rescuers should always know about those atmospheric conditions before entering and attempting rescue. And the attendant should always know about the entrants' readings in real time.

With relatively recent advances in wireless communication in gas detection devices, many of the worst hazards to entrants and attendants can be eliminated. Peer to peer gas detection communication, for example,

is an effective way to let those who would be in immediate danger know of the hazard so that they can make the best decisions in real time.

Additionally, technologies now exist that allow for communication between personal and area monitors so that users can easily place these monitors in spaces and communicate gas information without a person having to be in the atmosphere to begin with.

Failure #2:

Not abiding by the 2 by 2 rule:

Before entering a confined space, one should always test each level, or strata, of the atmosphere; it's a must. However, how one should go about that is one of the most commonly misunderstood items when it comes to proper gas detector use. And unfortunately, many people think that they can drop a line of tubing into a space, wait a few seconds, then immediately determine that space is safe.

Enter the 2 by 2 Rule. It was established to have simple, clear guidance to be



able to determine whether a space is safe. The rule states that it takes a base of two minutes of sampling time PLUS two seconds for every one foot of tubing length being used.

Here is a common scenario: If sampling a ten-foot vertical confined space with a 20 foot length of tubing attached, how long would that take to do the first sample? It would take two minutes and 40 seconds. This number is the standard two minutes, plus two seconds per each one foot length of tubing. In other words, (2 minutes) + (2 seconds x 20 feet of tubing). And keep in mind, this is per strata. You should never use one reading from one level of to represent the entire space. All levels must be sampled and tested.

**Failure #3:
Lowering monitors down on strings or ropes:**

Attaching a key piece of safety equipment to a string or rope and then lowering it into the confined space is not the best methodology to test the atmosphere. Properly using a monitor with a pump (either

integral or attached) is by far the best way to see the real-time readings and accurately sample the space. Otherwise, you are unable to properly see the gas readings in real time or prevent the monitor from unnecessary damage. Even worse, you could risk a life by attempting to rescue a monitor that was accidentally dropped into the space.

**Failure #4:
Lack of continuously monitoring:**

Just because the atmosphere was determined safe before you entered, assuming you used the 2 by 2 Rule, it doesn't mean that atmosphere is now static and won't change. Often, the work being performed in these spaces is constantly changing the environment to disrupt old components and introduce new ones. The only way to determine that the atmosphere is always safe is to continuously monitor it.

We must realize that just because a blower was put into the space to ventilate it, it does not mean that the air

being blown in is clean, especially when it is near an exhaust outlet. And, it does not mean that the air flow is sufficient in terms of CFM and can mitigate any and all hazards.

Practice the Scenario of an Atmospheric Incident

Having read this article, please use your knowledge, experience, and this information to take the time to review your confined space program. Then go through the scenario of an atmospheric incident. Put yourself in the shoes of the person who is about to enter a fatal atmosphere. Did he or she merely check a box during training and not learn everything that was presented? And consider whether or not the person has and uses the proper entry habits.

Then, put yourself in the shoes of their coworkers whose minds would be racing to help save them if there was a mishap. Do they have all of the information they need



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about this environment in real time?

In conclusion, we don't have to accept failures to communicate as the norm. We can leverage the latest technology and best practices to eliminate confined space deaths on the job. Lives depend on it.

Occupational Health and Safety

Online Edition

October 21, 2018

[OHS Online](#)

CDC Says U.S. Life Expectancy Down as More Americans Die Younger Due to Suicide and Drug Overdose

Suicides and drug overdoses pushed up U.S. deaths last year and drove a continuing decline in how long Americans are expected to live.

Overall, there were more than 2.8 million U.S. deaths in 2017, or nearly 70,000 more

than [the previous year](#), the Centers for Disease Control and Prevention said Thursday. It was the most deaths in a single year since the government began counting more than a century ago.

The increase partly reflects the nation's growing and aging population. But it's deaths in younger age groups, particularly middle-aged people, that have had the largest impact on calculations of life expectancy, experts said.

"These sobering statistics are a wake-up call that we are losing too many Americans, too early and too often, to conditions that are preventable," Dr. Robert Redfield, the CDC's director, said in a statement.

In 2016, the U.S. ranked 43rd in the world in [life expectancy](#), with an average lifespan of 78.7 years. By 2040, Americans' life expectancy is forecast to increase, but only by 1.1 years to 79.8. This

causes the U.S. to plummet in rank to 64th.

The [suicide death rate last year was the highest](#) it's been in at least 50 years, according to U.S. government records. There were more than 47,000 suicides, up from a little under 45,000 the year before.

A general decline

For decades, U.S. life expectancy was on the upswing, rising a few months nearly every year. Now it's trending the other way: It fell in 2015, stayed level in 2016, and declined again last year, the CDC said.

The nation is in the longest period of a generally declining life expectancy since the late 1910s, when World War I and the worst flu pandemic in modern history combined to kill nearly 1 million Americans. Life expectancy in 1918 was 39 years old.

Aside from that, "we've never really seen anything like



this," said Robert Anderson, who oversees CDC death

In the nation's 10 leading causes of death, only the cancer death rate fell in 2017. Meanwhile, there were increases in seven others - suicide, stroke, diabetes, Alzheimer's, flu/pneumonia, chronic lower respiratory diseases and unintentional injuries.

An underlying factor is that the death rate for [heart disease -- the nation's No. 1 killer](#) -- has stopped falling. In years past, declines in heart disease deaths were enough to offset increases in some other kinds of death, but no longer, Anderson said.

What's driving it?

CDC officials did not speculate about what's behind declining life expectancy, but Dr. William Dietz, a disease prevention expert at George Washington University, sees a sense of hopelessness. Financial struggles, a [widening income gap and divisive politics](#) are all casting a pall over many Americans, he suggested. "I really do believe

that people are increasingly hopeless, and that that leads to drug use, it leads potentially to suicide," he said.

Drug overdose deaths also continued to climb, surpassing 70,000 last year, in the midst of the deadliest drug overdose epidemic in U.S. history. The death rate rose ten percent from the previous year, which is smaller than the 21 percent jump seen between 2016 and 2017.

That's not quite a cause for celebration, said Dr. John Rowe, a professor of health policy and aging at Columbia University. "Maybe it's starting to slow down, but it hasn't turned around yet," Rowe said. "I think it will take several years."

Accidental drug overdoses account for more than a third of the unintentional injury deaths, and intentional drug overdoses account for about a tenth of the suicides, said Dr. Holly Hedegaard, a CDC injury researcher.

Other findings

The CDC figures are based mainly on a review of 2017

death certificates. The life expectancy figure is based on current death trends and other factors.

The agency also said:

- A baby born last year in the U.S. is expected to live about 78 years and 7 months, on average. An American born in 2015 or 2016 was expected to live about a month longer, and one born in 2014 about two months longer than that.
- The suicide rate was 14 deaths per 100,000 people. That's the highest since at least 1975.
- The percentage of suicides due to drug overdose has been inching downward.
- Deaths from flu and pneumonia rose by about six percent. The 2017-2018 flu season was one of the worst in more than a decade, and some of the deaths from early in that season appeared in the new death dates.
- West Virginia was once again the state with the highest rate of drug



overdose deaths. The CDC did not release state rates for suicides.

- Death rates for heroin, methadone and prescription opioid painkillers were flat. But deaths from the powerful painkiller fentanyl and its close opioid cousins continued to soar in 2017. The CDC did not discuss 2017 gun deaths in their most-recent report, but earlier CDC reports noted increase rates of suicide by gun and also by suffocation or hanging.

CBS News

Online Edition

November 29, 2018

[CBS News](#)

OSHA NEWS

New Area Director for Jacksonville Area Office



Mrs. Michelle Gonzalez

The new Jacksonville Area Director, Mrs. Michelle Gonzalez, has been with OSHA for eight and one-half years. She previously served in the Jacksonville Area Office as an Industrial Hygienist for four years and Assistant Area Director for four years. Prior to working for OSHA, she worked as a Lead Senior Industrial Hygiene with Johnson & Johnson and IPR Pharmaceuticals. Mrs. Gonzalez earned a Bachelor of Science Degree in Environmental Sciences and a Master of Science in Industrial

Hygiene, Public Health from the University of Puerto Rico.

U.S. Department of Labor Issues Final Rule on Crane Operator Certification Requirements

The U.S. Department of Labor's Occupational Safety and Health Administration (OSHA) published a final rule that clarifies certification requirements for crane operators, and maintains the employer's duty to ensure that crane operators can safely operate the equipment. The final rule will maintain safety and health protections for workers while reducing compliance burdens.

Under the final rule, employers are required to train operators as needed to perform assigned crane activities, evaluate them, and document successful completion of the evaluations. Employers who have evaluated operators prior to December 9, 2018 will not have to conduct those evaluations again, but will only have to document



when those evaluations were completed.

The rule also requires crane operators to be certified or licensed and receive ongoing training as necessary to operate new equipment. Operators can be certified based on the crane's type and capacity, or type only, which ensures that more accredited testing organizations are eligible to meet OSHA's certification program requirements. The final rule revises a 2010 requirement that crane operator certification must specify the rated lifting capacity of cranes for which the operator is certified. Compliant certifications that were already issued by type and capacity are still acceptable under this final rule.

The final rule, with the exception of the evaluation and documentation requirements, will become effective on Dec. 9, 2018. The evaluation and documentation requirements will become effective on February 7, 2019.

Under the Occupational Safety and Health Act of 1970, employers are responsible for providing safe and healthful workplaces for their employees. OSHA's role is to help ensure these conditions for America's working men and women by setting and enforcing standards, and providing training, education and assistance. For more information, visit www.osha.gov.

OSHA Trade Release

Online Edition

November 7, 2018

OSHA.gov

Job Market Links

[ASSP](#)

[BCSP General Safety Jobs](#)

[BCSP Construction Safety Jobs](#)

[BCSP Industrial Hygiene Jobs](#)

[EHS Careers](#)

ASSP Chapter Links

Find us on the web at:

[ASSP NFL](#)

Find us on Facebook at:

[ASSP NFL](#)

Local Chapter Officers and Chairs

Elected Officers

- President - Steve Brown
- President Elect - Bob Dooley
- Secretary - Steve Wilson
- Treasurer - Yaniv Zagagi
- Delegate - Dave Bedsole

Appointed Chairs

- Membership Chair - Eric Gray
- Newsletter Chair – Bob Dooley
- Nominations Chair – Dan Hemsall
- Past President - Dan Hemsall
- Program Chair - Tom Drygas
- Social Chair – Ravyn Tyler
- Social Media Chair - Vernon Adams
- SPY Awards Chair – Open



Local Chapter Information

The North Florida Chapter of the American Society of Safety Professionals, formerly the American Society of Safety Engineers, was chartered in 1952 and currently has more than 165 members.

Professional meetings are held nine times per year in the Jacksonville area. Meeting notices are distributed and RSVP's are returned by email. If you are a member of ASSP and are not receiving notices by email, please email the [Chapter Secretary](#).

Help Wanted – We Need Leadership Volunteers

Local Chapter elections are coming soon, and volunteers are needed to support the various functions of the chapter. If you are interested and able to devote time to the local chapter, please contact

[Dan Hempsall](#) (Nominations Chair) or [Steve Brown](#) (President) for details. We believe that you will enjoy the experience and comradery and we most-certainly appreciate your help.

To attend any meeting, please RSVP to the [Chapter Secretary](#).

Local Chapter Meeting Schedule

- December 2018 – No Meeting
- January 16, 2019 - Zoo Safety
- February 20, 2019 - Fire Academy
- March 20, 2019 - Annual OSHA Update
- April 17, 2019 KAMAN Aerospace Facility Tour
- April – Worker's Memorial Date and Time TBA
- May 15, 2019 - Construction Safety Topic

Additional details to be announced as meeting dates become closer.