AMERICAN SOCIETY OF
SAFETY PROFESSIONALS
North Florida Chapter

ASSP NORTHEAST FLORIDA CHAPTER NEWSLETTER – MARCH 2019

In This Issue

Social threat learning influences our decisions

It is easy to be exposed to unpleasant and threatening information with accidents, terrorist attacks and natural disasters appearing on TV, digital news sources and social media on a regular basis. Previous research has shown that individuals who have long exposure to news reports of a terrorist attack can develop psychological problems as serious as those afflicting people who experienced it first-hand. However, just how our actual behavior is affected by such indirect learning of danger has remained unknown.

This has now been laboratory tested in a study conducted by researchers at Karolinska Institutet, University of Amsterdam and University of Zurich. The study has shown that threat learning via video or orally can affect human behavior just as strongly as personal experience.

In the study, three groups of participants, totaling 120 individuals, initially learned which of two neutral images was considered dangerous. The first group learned through direct experience of an electric shock, the second by watching a film of someone receiving electric shock when looking at the image, and the third by being given oral instructions on which image to associate with an electric shock. In other words, the participants in the social learning groups (observation and oral instruction) suffered no actual physical discomfort.

The participants were then asked to repeatedly choose between the two images. Their choice could result in them receiving an electric shock, their task being, obviously, to receive as few shocks as possible.

For half of the participants, the choice of image that was considered dangerous during the first part of the experiment entailed the highest risk of electric shock. This meant that their previous learning was relevant to their decisions. For the other half, the choice of image that was not "dangerous" in the initial stage entailed the highest risk of shock. This meant that

their previous learning was wrong.

What the researchers found was indirect social learning (watching a film and oral information) had just as strong an effect on the participants' decisions as learning by first-hand experience. Participants who had learned that a certain image was considered dangerous continued to avoid it, even though their choice resulted more often in an electric shock.

"The study suggests that these social ways of obtaining information can strongly influence our decision-making, even to our own detriment," says lead author Björn Lindström, researcher at Amsterdam University and the Department of Clinical Neuroscience, Karolinska Institutet.

"The results can help us understand why people behave irrationally," says research group leader Andreas Olsson, senior lecturer at the Department of Clinical Neuroscience, Karolinska Institutet. "They indicate that it can depend on something we've learnt by watching a video clip or listening to a rumor that's misleading for the environment in which we find ourselves."

The researchers also used computational models to show that the two types of social learning influence behavior through different learning mechanisms, possibly reflecting differences in underlying brain systems. Brain activity was not, however, measured in the study.

Science Daily
Online Edition
February 14, 2019
Science Daily

Anchorage Testing for Fall Protection Devices – Are You Doing Harm?

OSHA's revised walking and working surface regulations, which took effect in January of 2017, includes specific language regarding testing anchorages used in support of window cleaning and facade maintenance equipment.

OSHA [1910.27(b)(1)(i)] states: Before any rope descent system is used, the building owner must inform the employer, in writing that the building owner has identified, tested, certified, and maintained each anchorage so it is capable of supporting at least 5,000 pounds (268 kg), in any direction, for each employee attached.

There has been much talk on how to verify a window washing anchor that can support a 5,000 pound load. Some have contended that the anchor requires pull testing to 5,000 pounds, while others have argued that by the time the 5,000 pound pull test is complete, the anchor may sustain permanent damage that renders it unfit for use.

If you read 1910.27(b)(1)(i) closely, you'll note that OSHA doesn't specifically specify pull testing as the means of proving a window washing anchor is capable of supporting at least a 5,000 pound load in any direction. Window washing anchors DO need to be pull tested as part of the certification process, but your fall protection company should also consider the materials and manufacturing processes, workmanship, anchor point geometry, and how the anchor connects to existing structure.

The calculations made to model or validate the strength of a given anchor point (think of activities other than actual pull testing the anchor) are sometimes referred to as "proof testing." If an anchor "fails" during proof testing phase, it doesn't make sense to go to the time and expense to perform a pull test.

What's more, during a pull test/strength test, care must be exercised to spot signs of "inelastic structural behavior, often indicated by permanent deformations when the load is released."

Now comes the tricky part. It is possible for an anchor to exhibit signs of permanent deformation during pull testing, but said damage does not mean that the anchor didn't meet the strength requirements outlined in 1910.27(b)(1)(i). With that said, an anchor with permanent deformation DOES require replacement. Ultimately, the company performing the testing needs to use a combination of proof and strength testing, and pull testing must be performed with great care in order to avoid permanent damage to the anchor.

The bottom line is that the rope decent anchors in your facility need to be inspected, tested, and certified to comply with new OSHA window washing anchor regulations. However, before you pick a company to inspect your anchors, remember to ask them about the specifics of their testing protocol. If a potential vendor mentions nothing more than pull testing to 5,000 pounds, chances are good that you should consider getting a second opinion from another company on how to certify your anchor points.

Diversified Fall Protection – Tech Talk Blog
Online Edition
2019
Diversified Fall Protection

Using One Germ to Fight Another When Today's Antibiotics Fail

Bacteria lodged deep in Ella Balasa's lungs were impervious to most antibiotics. At the age of 26, gasping for breath, she sought out a dramatic experiment — deliberately inhaling a virus culled from sewage to attack her superbug.

"I'm really running out of options," said Ms. Balasa, who traveled from her Richmond, Virginia, home to Yale University for the last-resort

treatment. "I know it might not have an effect. But I am very hopeful."

Pitting one germ against another may sound radical, but it's a sign of a growing global crisis. Increasingly, people are dying of infections that once were easy to treat. This is because many common bugs have evolved to withstand multiple antibiotics. Some, dubbed "nightmare bacteria," are untreatable.

Now scientists are racing to find novel alternatives to traditional antibiotics, a hunt that is uncovering unusual ways to counter infection, in unusual places.

One possible treatment tricks bacteria out of a nutrient they need to survive. Others rev up the immune system to better fend off germs.

And viruses called bacteriophages (phages) — discovered a century ago but largely shelved in the West when easier-to-use antibiotics came along — are being tried in a handful of emergency cases.

"People's frustration with antibiotic resistance boiled over," said Yale biologist Benjamin Chan, who travels the world collecting phages and receives calls from desperate patients asking to try them. "We're more appreciative of the fact that we need alternatives."

As nature's bacterial predator, each phage variety targets a different bacterial strain. Originally used to treat dysentery in the early 20th century, today Chan looks in places like ditches, ponds, and, yes, sewage treatment plants for types that attack a variety of human infections.

"The best places are often really dirty places, because we're dirty animals," he said. Chan saw hope for Ms. Balasa in a lab dish covered in brownish bacterial goo. Ms. Balasa has a genetic disease called cystic fibrosis that scars her lungs and traps bacteria inside, including a superbug named Pseudomonas aeruginosa.

A daily dose of inhaled antibiotics kept the infection in check until last fall, when the drugs quit working. A last-ditch IV antibiotic wasn't helping much either.

Chan grew a sample of Balasa's bacteria from her phlegm. Then came the key test: He dripped several pseudomonas-targeting phages into the grimy dish — and clear circles began appearing as the viruses consumed the bugs around them. But, would what worked in the lab really help Balasa's lungs?

Bugs Are Outpacing Drugs

At least 23,000 Americans die every year as a direct result of an antibiotic-resistant infection, and many more die from related complications. This is according to a 2013 report from the Centers for Disease Control and Prevention; other research has estimated the toll could be seven times higher.

And while there are no good counts in much of the world, one often-cited British

report proclaims that unless solutions are found, by 2050 up to 10 million people globally could be dying from drug-resistant infections. This is slightly more than die from cancer today.

Yet few new antibiotics make it to market, and many major drug companies have ended antibiotic research, seeing little profit in medicines that germs will soon outsmart. A recent report found just 11 traditional antibiotics being studied to treat any of the World Health Organization's list of worst bugs, with no guarantee they'll work.

And while many people are at risk, those getting surgery or chemotherapy, for example, are even more so. Per Dr. Anthony Fauci, infectious diseases chief at the National Institutes of Health, "antibiotic resistance is a problem essentially for everyone" He continues by saying, "Over the next several years, all indicators seem to point to the fact that this is going to get worse and worse."

Looking for Bugs' Weak Spots

According to Dr. Pradeep Singh of the University of Washington, finding alternatives will mean "figuring out what the vulnerabilities of infecting bacteria are." He adds that we also need to know what they need to cause an infection. Dr. Pradeep's colleague, Dr. Christopher Goss, zeroed in on iron, a nutrient vital for bacterial growth. As it turns out, bugs can't always tell the difference between iron and a chemically similar metal, gallium. Gallium doesn't nourish and knocks other systems out of whack, Dr. Goss said.

For two small studies, the researchers recruited cystic fibrosis patients who had antibiotic-resistant pseudomonas in their lungs but weren't openly sick. The patients received a five-day infusion of a gallium-based drug. Over the next few weeks, their lung function improved, enough so that next-step studies are being planned.

"It just seems like a proactive way of destroying bacteria," said study participant Tre LaRosa, 24, of Cincinnati. His sister died of cystic fibrosis, and while his own CF is under control, he worries that one day a resistant infection will flare. "I can't do anything to prevent that. Antibiotic resistance I think is one of the least talked about and most significant concerns."

Spurring the Immune System

Dr. Fauci envisions doctors one day vaccinating people a few weeks before something such as a planned knee replacement to guard against catching a staph infection in the hospital.

Sixteen experimental vaccines are in development to target various infections, according to a recent presentation to a presidential advisory council on resistant germs. Particularly promising, Dr. Fauci says, are lab-engineered "monoclonal

antibodies" designed to home in on specific bugs. In one set of studies, researchers are giving experimental antibodies to ventilator patients who have bacteria building up that could trigger pneumonia.

Harnessing Viruses for the Best Attack

In Virginia, Ella Balasa learned of another cystic fibrosis patient helped by Yale University's phage experiments and asked to try it, hoping to postpone the last option for cystic fibrosis, a lung transplant.

Phages work quite differently than traditional antibiotics do. Like a parasite, the virus infiltrates bacterial cells and uses them to copy itself, killing the bug as those copies pop out and search for more bacteria. Once the infection's gone, the virus dies out. And because each phage only recognizes certain bacteria, it shouldn't kill off "good bugs" in the digestive tract like antibiotics do.

Bacteria evolve to escape phages just like they escape antibiotics, but they generally make trade-offs to do so — such as losing some of their antibiotic resistance, said Yale evolutionary biologist Paul Turner. For example, some phages recognize bacteria by a pump on their surface that deflects antibiotics. As the phages kill those bugs, the bacteria rapidly evolve to get rid of that surface pump — meaning survivors should be susceptible to antibiotics again.

"It's reviving an arsenal of drugs that are no longer useful," Turner said. Yale's first test case was an 82-year-old man near death from a heart implant teeming with untreatable pseudomonas. Chan purified a phage from a Connecticut lake that he'd matched to the patient's germs, and with emergency permission from the Food and Drug Administration, doctors squirted it into the wound. The man's infection then disappeared.

Then doctors at the University of California, San Diego, saved a colleague who'd been in a months-long coma. They used an IV mixture of several phages that target a superbug named Acinetobacter baumannii. Doctors and families began calling both centers seeking emergency care, even as formal studies are being planned to try to prove phages' value.

"There's an incredible opportunity here," said Yale pulmonologist Dr. Jon Koff. "But with that you have to have the appropriate amount of skepticism," with careful testing to tell when it might help.

Last month, Balasa became Yale's eighth patient, inhaling billions of phages over seven days. Almost immediately, she was coughing up fewer bacteria. It took a few weeks for her to feel better, though, and during that time she switched briefly to some antibiotics she'd previously given up. Without a formal study it's hard to know, but Benjamin Chan's tests suggest phages killed much of her predominant pseudomonas

strain and made the survivors sensitive again to a course of those antibiotics.

Ella Balasa called that "a very big success for me," and was able to quit her antibiotics. She did not, however, notice additional improvement after a second round of phages, aimed at different strains. "The true test," Emily said, "is how long I can go without using any antibiotics again."

WOKV News
Online Edition
February 26, 2019
WOKV News

OSHA NEWS

Carbon Monoxide Exposure from Portable Gas-Powered Equipment – Featured OSHA Videos

Every year, workers die from carbon monoxide poisoning, usually while using fuel-burning equipment, tools, compressors and pumps, gas-powered forklifts, and other devices in buildings or semi-enclosed spaces without adequate ventilation. OSHA's videos on carbon monoxide in construction (in English and Spanish) use computer generated reenactments of actual incidents to demonstrate how to protect workers lives.

OSHA Newsletter
E-Mail Edition
March 6, 2019
OSHA Quick Takes

Job Market Links

Occupational Health and Safety Specialist

Company: The Boeing Company
Job ID: 1900016696
Date posted: 02/01/2019
Location: Jacksonville Florida United States
Apply Here

Lead Environment, Health and Safety Specialist

Company: The Boeing Company
Job ID: 1900018301
Date posted: 02/01/2019
Location: Jacksonville, Florida, United States
Apply Here

Safety Specialist

Company: Dragados USA
Dragados USA's contractor, Prince contracting, is looking for a person to cover North Florida and Savannah.
If interested in this position contact:
Michael Spyra, **Health & Safety Officer**
Cellular Phone: 305-606-2497
Office Phone: 904-435-0975
Email: mspyra@dragados-usa.com
8465 Merchants Way, Suite 4
Jacksonville, FL 32222

General Employment Links

ASSP
BCSP General Safety Jobs
BCSP Construction Safety Jobs
BCSP Industrial Hygiene Jobs
EHS Careers

AMERICAN SOCIETY OF SAFETY PROFESSIONALS
North Florida Chapter

ASSP Chapter Links

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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 Hempsall
- Past President - Dan Hempsall
- 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.

Local Chapter Meeting Schedule

- **Date:** March 20, 2019
  Topic - Annual OSHA Update
  Time: 11:30 Lunch & Networking
  12 Noon Meeting and Technical Session
  Location: Northeast Florida Safety Council
  1725 Art Museum Drive
  Building B, Classroom D
  Jacksonville, FL 32207

- **Date:** April 17, 2019
  Topic - KAMAN Aerospace Facility Tour
  Details TBA

- **Date:** April 26, 2019
  Annual Worker's Memorial
  Time: 10:00 a.m.

- **Date:** May 15, 2019
  Topic - Construction Safety

Additional details to be announced as meeting dates become closer.

To attend any meeting, please RSVP to the Chapter Secretary.

Or, you may sign up online at ASSP Northeast FL Chapter

Meeting Cost:
$15 for Members
$20 for Non-members

PayPal is available on the website for an added convenience fee of .50 for members and $1 for non-members.