Study: BPA chemical exposure is underestimated

By Wendy Koch, USA TODAY
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Exposure to the hormone-disrupting chemical Bisphenol A (BPA) has been underestimated, because prior lab tests have looked at single exposures rather than daily diets, the University of Missouri reports.

The UM scientists continuously exposed the mice to BPA through their feed and found a significantly greater increase in the active form of the chemical, which can bind to sex steroid receptors and exert adverse effects.

"When BPA is taken through the food, the active form may remain in the body for a longer period of time than when it is provided through a single treatment," the study's lead author Cheryl Rosenfeld, associate professor in biomedical sciences, said in a statement. She added:

We know that the active form of BPA binds to our steroid receptors, meaning it can affect estrogen, thyroid and testosterone function. It might also cause genetic mutations. Thus, this chemical can hinder our ability to reproduce and possibly cause behavioral abnormalities that we are just beginning to understand.

The study, published in Environmental Health Perspectives, says more than 8 billion pounds of BPA are produced every year, and more than 90% of U.S. residents have measurable amounts of BPA in their bodies. Its funding came from the National Institute of Environmental Health and Sciences.

An increasing number of U.S. states have been moving to ban BPA's use in products aimed at young children, and some countries, including Canada, have already approved such bans. The U.S. Food and Drug Administration, in Jan. 2010, said it had "some concerns" about the chemical's potential effects on brain development of fetuses, infants and children. It did not say BPA is unsafe.

Via its packaging, food is by far the main source of human exposure to BPA, according to the World Health Organization and the United Nation's Food and Agriculture Organization. Less important sources, they said, are house dust, soil or toys, dental treatments and thermal papers such as cash register receipts.
Americans have twice as much of BPA in their bodies as do Canadians, but the reasons for the disparity remain a mystery, a Tufts University study in March concluded. The author, Laura Vandenburg, found the disparity in all age groups and noted, in both countries, that children and adolescents have the highest levels of BPA.

Another study released in March said adults and children can reduce their BPA exposure by eating more fruits and vegetables and less food from plastic containers and metal cans. A group of 20 San Francisco residents had 66% less BPA in their urine after spending three days on a diet of fresh, organic and unpackaged food, according to the Silent Spring Institute, a Massachusetts-based nonprofit that studies environmental factors in women's health.
Stressed Show Horses May Spread Equine Herpes

Normally horses' immune systems keep the virus at bay, but stress and an increase in contact may break down defenses.

By Jennifer Viegas  Mon Jun 6, 2011 01:28 PM ET

THE GIST

- Although most adult horses are infected with the herpes virus, stress can cause the virus to become active and contagious.
- The present horse herpes outbreak centers around a show horse event that was held in Utah about a month ago.
- The outbreak has resulted in at least 84 confirmed cases of the disease in horses from 10 states so far.

Equine herpes, a highly contagious infection among horses that can be fatal, may spread when stressed out show horses come together for competitions, according to animal health experts.

That appears to have helped fuel the current equine herpes outbreak, which has killed at least 12 horses and sickened 72 others in 10 states so far. These states include Arizona, California, Colorado, Idaho, New Mexico, Nevada, Oklahoma, Oregon, Utah and Washington.

"Most adult horses are infected with the virus," Philip Johnson, a professor of equine internal medicine at the University of Missouri's College of Veterinary Medicine, told Discovery News. "Like most herpes viruses -- human and animal -- infection leads to a lifelong association between the virus and the host. In most healthy horses most of the time, the host's immune system prevents the virus from going active and being especially contagious."

Given "the right circumstances," however, he said "the virus can defeat the constraints of the host's immune system and go active."

Such circumstances likely were in place at the National Cutting Horse Association's Western National Championships held at the Golden Spike Event Center in Ogden, Utah, from April 29 to May 8. According to the U.S. Department of Agriculture, this event resulted in 32 confirmed cases of equine herpes, with these horses later spreading the disease to other victims.

Johnson explained that while the virus can "go active in any horse at any time, it's very likely that the immune system has something to do with it. Congregated horses coming together to compete are stressed, adversely affecting the immune system's function."
Another factor is that the virus comes in two strains, with one strain more likely to cause neurological problems than the other. Symptoms can include a fever of 102 degrees Fahrenheit or higher, nasal discharge from the nostrils, unusual tiredness, weakness, leaning, urine dribbling, reduced tail tone, and a difficulty or inability to stand.

Direct horse-to-horse contact, breathing in the virus, contaminated hands of horse workers, and equipment, tack and food harboring the virus can all lead to transmission of the disease.

Bruce King, state veterinarian of Utah, shared that "EHV-1 (equine herpes) is not transmissible to people." But due to the "highly infectious" nature of this particular outbreak, numerous secondary cases in horses have occurred, leading to the "quarantine of the veterinary teaching hospitals in Fort Collins, Colorado, and Pullman, Washington."

King said "voluntary isolation" of infected horses is encouraged, "with a minimum of two temperatures taken and recorded per day on each horse."

Acting Arizona State Veterinarian John Hunt further recommends that "isolation and monitoring continue for 28 days after any clinical signs of disease are observed."

Hunt agrees that the illness "poses no threat to humans," but Johnson said it could affect other animals, such as mules, donkeys, alpacas, llamas, giraffes and gazelles. So far, the latest outbreak seems to have only impacted horses.

Veterinarians may treat victims with anti-inflammatory drugs, anti-viral drugs and antibiotics for secondary infections. Slings and body padding could be required to help the horses stand up, while intravenous feeding and use of a urinary catheter may also provide additional medical support.

The disease has been documented for at least six decades, but it has resulted in a number of headline-generating outbreaks in recent years.

"It has been conjectured that horse owners subject their competitive horses to more intense confinement, more transport between shows, and stress and transport than they used to, making it easier for the activated virus to pass quickly between horses," Johnson said, adding that grouping "the horses more closely together in temporary housing at horse shows" could also facilitate spread of the disease.

Some vaccines provide protection against the less debilitating form of the virus, but they do not appear to protect against the neurological syndrome. Several virologists are now working on a vaccine that they hope will target this particularly virulent form of herpes.
Craig Van Matre

Our new curator

By Henry J. Waters III

I was certain the deed would be done, but what a stupid process getting there.

Gov. Jay Nixon nominated Columbia lawyer Craig Van Matre to fill the seat on the University of Missouri Board of Curators vacated by Columbia banker Bo Fraser, who resigned late last year in midterm because he no longer lives in the district.

Van Matre should have been confirmed without delay in the regular legislative session, but Senate President Pro Tem Rob Mayer held up action trying to get Nixon to make an unrelated appointment Mayer wanted. If Van Matre’s appointment had expired with the end of the session, he could not have been named again to the same position, so Nixon withdrew his name. Now, with his interim appointment, Van Matre takes office immediately and can serve the regular term unless the Senate fails to confirm within 30 days after next year’s legislature convenes.

Van Matre is an excellent choice. I’ll bet most senators will approve next year when Mayer’s distraction will not interfere.

HJW III
MU starts priority list for new fund campaign

By Janese Silvey

University of Missouri administrators have begun working behind the scenes on a new major fundraising campaign expected to raise more than $1 billion for the campus.

The so-called “quiet phase” of the yet-to-be-named campaign starts July 1. That period will allow the university to first reach out to large-scale donors with the hope of raising half of the goal amount before unveiling the campaign publicly. Chancellor Brady Deaton hasn’t specified a total dollar amount other than to say the fundraising effort aims to generate more than the $1 billion that “For All We Call Mizzou” brought in over its eight-year campaign period.

During a pre-planning phase, deans of MU’s schools and colleges have submitted their wish lists, outlining where they think future donations should be directed. Buildings, including a new performing arts center, are on those lists, but the priority this go-round is to raise money for students and instructors.

“The focus is on people this campaign,” said Catey Terry, spokeswoman for the Development Office. “I know that most schools and colleges have some sort of scholarship component and a faculty component such as professorships and endowed chairs. It’s about recruiting and retaining students and faculty.”

More institutes and centers on campus will be asked to submit lists of priorities in the coming weeks.

Deaton and Provost Brian Foster will then spend four to six months reviewing the proposed projects and whittling priorities down to best tie in with the university’s goals, spokeswoman Mary Jo Banken said.

That means facilities could remain unfunded.

“Many requests were submitted for buildings because the university has not received any substantive money for capital improvements since 2002,” Banken said. “However, the strategic plan is specifically focused on people — meaning fundraising targeted for student scholarships and more endowed faculty positions will be top priorities. We need more scholarships to recruit and retain good students, and we need more faculty money to stay competitive with recruiting and retaining faculty.”
Among the building projects that have landed on various wish lists is a new performing arts center for the College of Arts and Science. That facility has been considered a priority for the university for more than two decades.

It has been a community priority, too. During a meeting last year between then-UM System President Gary Forsee and about 30 business leaders, several said a performing arts facility is critical for economic development efforts.

In the past, administrators have discussed building that new facility at the northeast corner of Hitt Street and University Avenue to house classrooms, a 1,000-seat concert hall and a 350-seat recital hall.

The ideal building would be more than simply a place for performances, Terry said.

"We need an appropriate venue for music and voice students and teaching facilities," she said. "A performing arts center is more than that; it’s also focused on the academic mission."

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University of Missouri professor, Tina Bloom, says women who are victims of domestic violence often seek health care, rather than support services when they are victims of domestic violence, and that's a problem.

Bloom says health care is reactive, rather than proactive, so it doesn’t stop the abuse from happening. Resources such as counseling and hotlines can not only help women get out of their abusive relationships, but can help them find affordable and safe housing and employment.

Pregnant women are screened routinely for a number of conditions which affect a child’s health at birth. But Bloom says domestic violence is one of the leading causes of pre-term birth and low birth weight, both of which highly contribute to infant mortality.

Bloom is a professor at the Sinclair School of Nursing and is making this recommendation based on the US Department of Health and Human Services Healthy People 2020 campaign.
A lot of people who are lucky enough to get cured of cancer tend to continue experiencing health problems due to the side effects endowed by existing treatments including chemotherapy.

The most common issues related to the same include decreases in verbal fluency and memory. Now, one University of Missouri health psychologist has found evidence that indicates Chinese martial art Tai Chi might help overcome some of those problems.

"We know this activity can help people with their quality of life in general, and with this new study, we are encouraged about how Tai Chi could also help those who have received chemotherapy. I also hope this encourages more people to think about Tai Chi positively on a broader scale in their lives" said Stephanie Reid-Arndt Assistant Professor and Chair of the Department of Health Psychology in the School of Health Professions.

Tai Chi involves practicing slow motion routines and is based on several principles, including mindfulness, breathing awareness, active relaxation and slow movements. The emphasis on slow movement makes Tai Chi particularly suited to a wide range of fitness levels, which makes it very relevant for those who have had chemotherapy and might be experiencing physical limitations as a result, said Reid-Arndt.

The MU pilot study followed a group of women with a history of chemotherapy. The women participated in a 60-minute Tai Chi class two times a week for 10 weeks. The women were tested on memory, language, attention, stress, mood and fatigue before and after the 10-week sessions. According to Reid-Arndt, the results of the tests indicated that the women had made significant improvements in their psychological health and cognitive abilities.

The study was published recently in Complementary Therapies in Clinical Practice.
Missouri, Kansas populations hold steady

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While the Midwest as a whole has been losing population to southern and western states, Kansas and Missouri appear to bucking that trend, with more people moving to Kansas and Missouri than are moving out, according to new data from the U.S. Census Bureau.

The Census shows that about 25,000 more people moved into Kansas and Missouri than moved away from 2008 to 2009. The Midwest lost 62,000 people during that same period. Missouri had a net gain of about 11,000 from other states in 2009 from 2008. Kansas gained about 13,600 people, according to The Kansas City Star.

"They're not states that are going to grow rapidly in large numbers, and they're not going to decline rapidly in large numbers," William Frey, a demographer with the Brookings Institution told The Kansas City Star.

The data also show that more people are moving to Kansas and Missouri at a time when people don't seem as mobile as they were 60 years ago.

Nationwide, 3.5 percent of the population moved to a different county between 2009 and 2010, the lowest percentage since 1947-48, when the Census started tracking how people move. In 1950-51, about 7.5 percent moved to a different county.

Experts blamed the slowdown on the mortgage crisis, high unemployment and young adults who want to move but can't afford to buy a new home.

"I think there's a pent-up demand for migration among these young folks," Frey said.
Laszlo Kulcsar, a demographer at Kansas State University, said migration patterns in Kansas are influenced partly by the health of meat-packing plants in the southwest corner of the state and their attraction to immigrants.

"When we think about migration we usually assume that people are coming from other states to Kansas, and we tend to discount the international migration," Kulcsar said.

The other factor, Kulcsar said, is the growth of suburban areas like Johnson County, which grew by nearly 21 percent in the last decade.

Kulcsar said most of the gains in Kansas are concentrated in several counties near urban areas or in the southwest corner of the state, he said.

**In Missouri, migration patterns differ by region, said Bill Elder, director of the Office of Social and Economic Data Analysis at the University of Missouri.**

The areas of the state north of the Missouri River behave more like the rest of the Midwest in that they’re losing population, he said. Areas south of the Missouri River reflect more of the growth patterns seen along the Gulf Coast extending up into Arkansas, he said.

Missouri saw big population gains in Camden County near the Lake of the Ozarks as well as in Taney County, home of Branson and very near Table Rock Lake. Taney’s population exploded by 30 percent in the last 10 years, while Camden’s soared by 19 percent.
COLUMBIA, Mo. (AP) — A University of Missouri dairy grazing conference in July is moving to Springfield after the deadly Joplin tornado.

The biennial Missouri Dairy Grazing Conference takes place July 6-8 at the Springfield Expo Center. The original Joplin meeting site was not damaged but is being used for recovery efforts. Organizers say dairy farms on the conference tour were also undamaged by the severe weather.

The conference is designed for dairy farmers looking at grass feed as an affordable replacement for grain.

More information is available online at http://agebb.missouri.edu/dairy.