

For the Health of It

Clark County Health Department

July 1, 2023

VOLUME 6
ISSUE 3

NOTABLE NEWS

LIFESPRING IMPACT AWARDS

LifeSpring Health systems recently presented our Administrator, Doug Bentfield, the Community Heart Award. This award is presented to one person or organization who has made a positive difference or contribution in the field of behavioral healthcare, addictions treatment, or community health/primary care. Congratulations, Doug!

INSIDE THIS ISSUE:

Notable News	Page 1-2
Dept. Programs	Page 3
One Health: Soil	Page 4-5
Health Officer Perspective	Page 6
Brain Games	Page 7
Science Spotlight	Page 8
Contact Us	Page 8



Community Heart Award winner, Doug Bentfield, and Clark County Health Officer/LifeSpring CMO, Dr. Eric Yazel





Left: CCHD Outreach at Jeffersonville PRIDE Festival

Right: The Department helped raise 8 car loads of donations to two local animal shelters this past April. In previous years, we have been a collection point for, and supported WaterStep and Dare to Care for our annual donation organization drives. Stay tuned to learn about what next year's cause will be!



Left: Environmentalist Zak McKinley discussing mosquitoes and ticks at the Clark Memorial Health Fair

NEW PROGRAM

Your Health *is priority*

The Department has partnered with IDOH to provide in-home visits to assess possible asthma triggers. If you or your doctor believes your child may benefit from education and identification of asthma triggers, please complete the survey at <https://redcap.isdh.in.gov/surveys/?s=E9E8CRFCC4>



Public Health
Prevent. Promote. Protect.

Clark County Health Department



**Indiana
Department
of
Health**

**CALL MIKE ROSS WITH ANY QUESTIONS:
812-282-7521 EXT 232**

FREE SAFE SLEEP PROGRAM & ADULT/CHILD/ INFANT CPR CERTIFICATION

**August 8
October 10
December 12**

If your child does not have a safe place to sleep, you may qualify for a FREE pack and play after course completion.

[HTTPS://CLARK-COUNTY-INDIANA-HEALTH-DEPARTMENT.TICKETLEAP.COM](https://clark-county-indiana-health-department.ticketleap.com)

ONE HEALTH: ANIMALS, PEOPLE, AND THEIR ENVIRONMENT: SECRETS IN SOIL

A single gram of healthy soil contains millions of organisms

It's just dirt. How important could it be? Why should I care? I live in the city. But just ask any gardener how important it is to have good quality, fertile soil. It is one of the most basic ingredients in all that is life, and therefore, an important aspect of One Health.

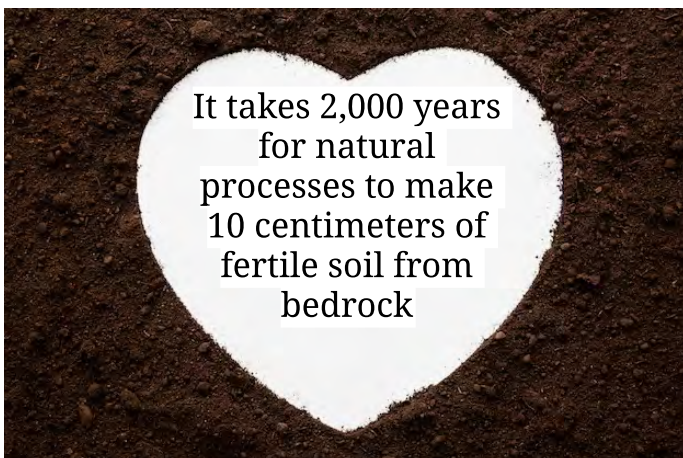
Soil Quality Effects

We all know that soil is necessary for plant growth, but the quality of the soil can actually impact the nutrition and composition of plants, as well as their growth and crop yield ¹. Although what defines soil 'quality' is complex, its ability to hold water is a key indicator. High quality soil can hold more water, benefiting plants, limiting runoff, and reducing flooding ². Heavy metal pollution from factories, automobiles, and lead paints can end up in soil, be taken up by plants, and consumed by foragers. Heavy metals also have a negative feedback on the function and nutrient availability in the soil itself ³.

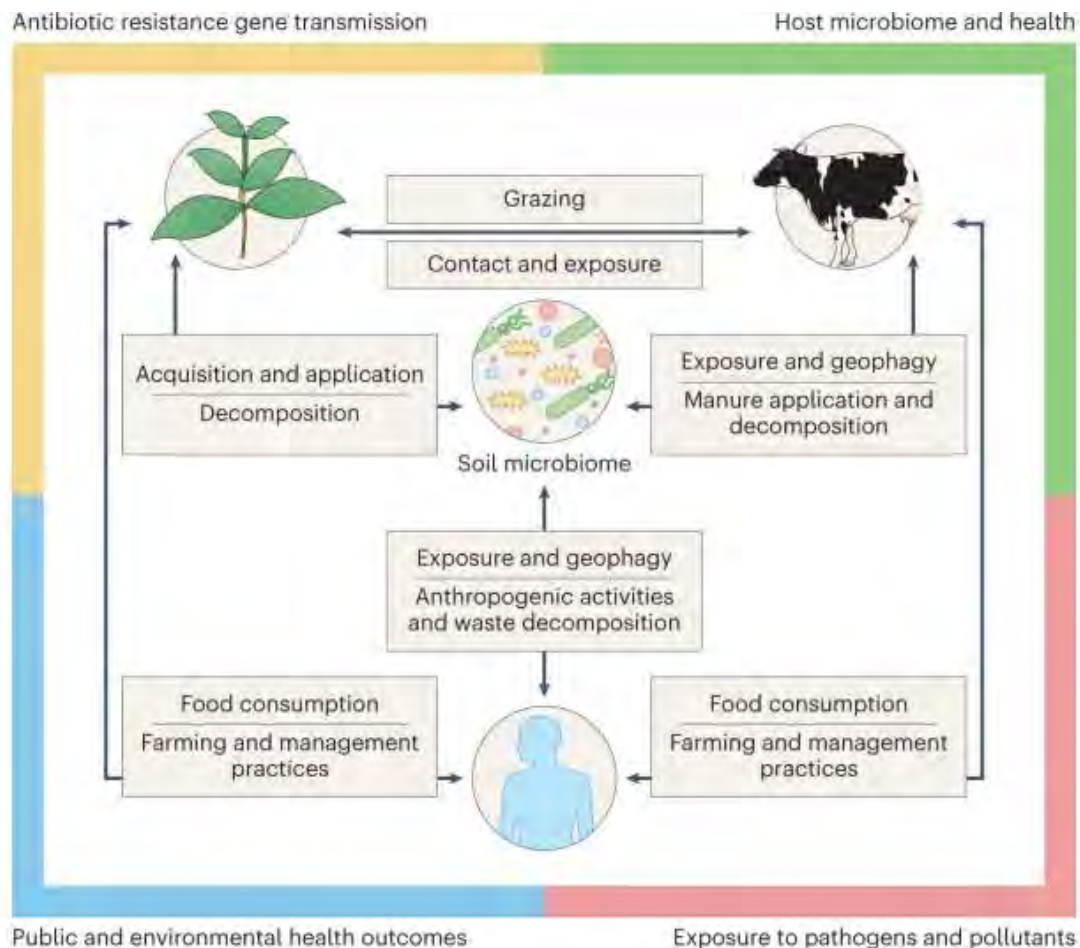


Human Health

Not just limited to crops and gardens, soil is the basis for trees and forests. Forests have a huge impact on economics, local and world wide water cycles, and play a role in climate change with their ability to absorb carbon from the air and release oxygen. Spending time in forests has also shown to have therapeutic benefits on human health ⁴.



Humans are also impacted by parasites in the soil. An increase in human disease comes from areas with higher rates of contaminated soils ⁵. Human health is directly affected by both crops and livestock, which rely on fertile soil, as well as the overall quality and contamination of soil. This is the basic definition of One Health: that humans, animals, and the environment are intricately connected.



The microbial loop in One Health. Credit:Nature Microbiology(2023). DOI: 10.1038/s41564-023-01386-y

More info:

<https://www.conserve-energy-future.com/remarkable-ways-to- conserve-and-protect-soil.php>

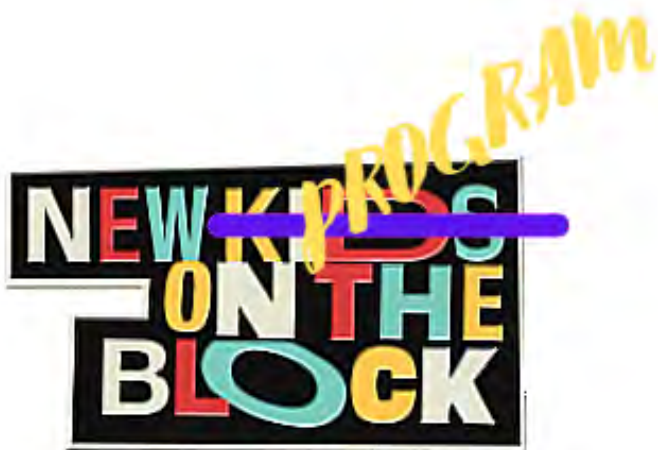
<https://www.farmers.gov/conservation/concerns-tool/soil>

<https://blog.cabi.org/2016/11/03/how-soil-health-is-integral-to-one-health/>

<https://www.who.int/news-room/fact-sheets/detail/soil-transmitted-helminth-infections>

1. https://www.researchgate.net/profile/Tarek-Alshaal/publication/268747111_Soil_Quality_and_Plant_Nutrition/links/54bacd6a0cf29e0cb04bd63e/Soil-Quality-and-Plant-Nutrition.pdf
2. <https://www.mdpi.com/2073-4395/11/9/1681>
3. https://www.researchgate.net/profile/Christian-Kampichler-2/publication/226933985_Influence_of_Heavy_Metals_on_the_Functional_Diversity_of_Soil_Microbial_Communities/links/542a8f720cf29bbc1267b09b/Influence-of-Heavy-Metals-on-the-Functional-Diversity-of-Soil-Microbial-Communities.pdf
4. <https://www.mdpi.com/1660-4601/18/4/1770>
5. <https://www.frontiersin.org/articles/10.3389/fmed.2023.1167812/full>

HEALTH OFFICER'S PERSPECTIVE



BY DR. ERIC
YAZEL,
CLARK COUNTY
HEALTH
OFFICER



We are excited to introduce the Clark County Health Department Mobile Integrated Health (MIH) program in the next few months. I am sure a lot of you are saying 'sounds great, but what is that?'. Great question! MIH is one of the new emerging fields in medicine. Basically, it involves EMS personnel coming to the homes of citizens in need and providing services, all without transporting them to the hospital. Some of the common programs involve fall prevention for the elderly, newborn education, overdose and behavioral health follow-ups, wound management, and chronic disease management such as diabetes and heart failure. I like to say it is one of the few programs in medicine where everyone wins. Most importantly, it serves the most medically vulnerable of our community. It also helps decrease EMS utilization for routine care, freeing them to respond more quickly to acute situations. Ultimately, it helps decrease preventable hospital visits, which helps with emergency department crowding and wait times.

Mobile Integrated Health is flexible and can adjust to the healthcare needs of our community. As we continue to learn more about the healthcare disparities that exist and the ever-changing needs of our citizens, we can adjust the populations served by MIH to meet that need. As with every service we provide, we will care for our patients with professionalism, kindness, and empathy. So be on the lookout for the Clark County Health Department MIH vehicles out and about in the community. We are excited to serve you!

MENTAL HEALTH: BRAINGAMES

WORDSEARCH

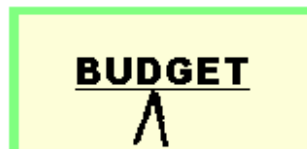
C N T W C G P X W V A P A B O
 A W B J D R N D D Z K S Z W Z
 R A T U S G P I K Y U C L T F
 C Y S P O I B G N N N U G C L
 I T E D A H S K G E E L L R M
 N K D K L M X L D Q E T E W D
 O F M L F C A F X L R R W T N
 M G H F K S N O G U C A C D A
 A G N P S B B B W M S V A S M
 M O L E L X M N Y P N I T L R
 F D S I Q V N H T I U O S Y E
 Z Z M E L A N O M A S L S Q Z
 M I I G U B T B Y H Q E Y Q M
 Z S V H E Y W I J A Q T S H A
 A S Y M M E T R Y S Z V R R K

CARCINOMA
 MELANOMA
 ULTRAVIOLET
 SUNSCREEN
 ASYMMETRY
 MOLE
 SHADE
 BIOPSY
 SUNGLASSES
 SCREENING

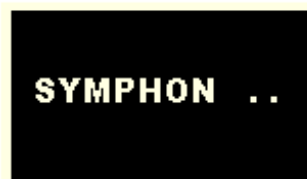
BRAINTEASER

What items/sayings do the following pictures represent?

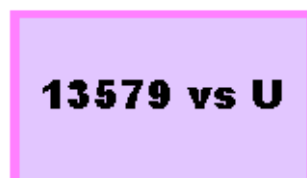
1)



2)



3)



1) Balanced Budget
 2) Unfinished Symphony
 3) Odds are against you

SCIENCE SPOTLIGHT

Consideration of pathways for immunotoxicity of per- and polyfluoroalkyl substances (PFAS)

[Veronika Ehrlich, Wieneke Bil, Rob Vandebriel, Berit Granum, Mirjam Luijten, Birgitte Lindeman, Philippe Grandjean, Andreas-Marius Kaiser, Ingrid Hauzenberger, Christina Hartmann, Claudia Gundacker & Maria Uhl](#)

Background

Per- and polyfluoroalkyl substances (PFAS) are of public health concern, because of their ubiquitous and extremely persistent occurrence, and depending on their structure, their bio-accumulative, mobile and toxic properties. Human health effects associated with exposure to PFAS include adverse effects on the immune system. In 2020, EFSA (the European Food Safety Authority) defined adverse effects on the immune system as the most critical effect for human health risk assessment, based on reduced antibody responses to childhood vaccines and similar effects observed in experimental animal studies. Likewise, the U.S. EPA (Environmental Protection Agency) considers PFAS-induced immunotoxicity, especially in children, as the critical effect for risk assessment. However, the mechanisms by which antibody concentrations are impacted are not completely understood. Furthermore, other targets of the immune system functions have been reported in the literature.

Objective

The aim of this review is to explore PFAS-associated immune-related effects. This includes, relevant mechanisms that may underlie the observed effects on the immune system, immunosuppression as well as immunoenhancement, such as i) modulation of cell signalling and nuclear receptors, such as NF- κ B and PPARs; ii) alteration of calcium signalling and homeostasis in immune cells; iii) modulation of immune cell populations; iv) oxidative stress and v) impact on fatty acid metabolism & secondary effects on the immune system.

Conclusions

Taken together, we show that there is substantial evidence from both in vitro and in vivo experimental as well as epidemiological studies, supporting that various PFAS, not only PFOA and PFOS, affect multiple aspects of the immune system. Timing of exposure is critical, because the developing immune system is especially vulnerable to toxic insults, resulting in a higher risk of particularly adverse immune effects but also other organs later in life.

<https://link.springer.com/article/10.1186/s12940-022-00958-5>

Office Hours

Monday 8:30am - 4:30pm
Tuesday 8:30am - 4:30pm
Wednesday 8:30am - 4:30pm
Thursday 8:30am - 4:30pm
Friday 8:30am - 4:30pm
Saturday - CLOSED
Sunday - CLOSED

1201 Wall Street Jeffersonville, IN 47130

Administration/Vital Records/Environmental

812-282-7521

Public Health Nurse

812-283-2459

HIV/STD Program Office

812-288-2706

Public Health
Prevent. Promote. Protect.

Clark County Health Department

