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12/19/2018 12:05 AM

Fwd: TRB presentations

To Nancy Tosta <nancyt@burienwa.gov> • Sharyn Parker <sparkerward@comcast.net>

Serving a few links to current research on aviation emissions with a side of noise and health:

Please review the email below: ACRP-Association of Clinical Research Physicians

Not the congressional research service CRS, but CRP and still worth reading #135 (I have not watched the video yet. See section 5)

Another science based assessment here:

<http://iopscience.iop.org/article/10.1088/1748-9326/10/4/041001>

The MOV-UP study of ultrafine by the UW is confirming that ultrafine from aircraft are having a ground level impact on air quality in the vicinity of Sea-Tac Airport and flightpaths.

Hudda study at Boston Logan found airport related ultrafine infiltrating inside homes in residential communities downwind of airport pollution. <https://fairskiesnation.com/study-aviation-related-impacts-on-ultrafine-particle-number-concentrations-outside-and-inside-residences-near-an-airport/>

Derrick Ho, at the Hong Kong Polytechnic University, said the impact of air pollution on cognition was important and his group had similar preliminary findings in their work. "It is because high air pollution can potentially be associated with oxidative stress, neuroinflammation, and neurodegeneration of humans," he said."

[https://www.theguardian.com/environment/2018/aug/27/air-pollution-causes-huge-reduction-in-intelligence-study-reveals?CMP=share\\_btn\\_link](https://www.theguardian.com/environment/2018/aug/27/air-pollution-causes-huge-reduction-in-intelligence-study-reveals?CMP=share_btn_link)

Aircraft noise causes oxidative stress in the brain. "Thus the presented results may explain at least in part why sleep phase rather than awake phase noise leads to cardiovascular diseases and may also provide an explanation why aircraft noise is linked with cognitive impairment including retardations of learning and memory capabilities in children. Thus preventive measures should be considered to reduce night-time aircraft noise."

"One hundred million Americans are effected by unhealthy levels of noise." <https://academic.oup.com/eurheartj/advance-article/doi/10.1093/eurheartj/ehy333/5037114#.W1m3vsP6liE.facebook>

"New research Links Air Pollution to Global Diabetes

*Air pollution linked to 3.2 million new diabetes cases in one year.*

A new research study links air pollution with an increased risk of global diabetes, even at pollution levels deemed safe by other governing bodies.

A study from the Washington University School of Medicine in St. Louis collaborated with the Veterans Affairs (VA) St. Louis Health Care System. The findings could impact a global understanding of one of the fastest growing diseases. More than 420 million people are affected by diabetes worldwide, and roughly 30 million people in the United States alone." <http://www.webtopnews.com/new-research-links-air-pollution-to-global-diabetes-8905-2018/>

"We report a higher lifetime prevalence of breast, melanoma and non-melanoma skin cancers among flight crews relative to the general population."

“Taking age into account, the study found a higher prevalence of cancer in flight crew for every type of cancer examined.” <https://www.yahoo.com/news/commercial-flight-crews-show-higher-cancer-rates-study-172109583.html>

“Aviation Emissions Impact Ambient Ultrafine Particle Concentrations in the Greater Boston Area.”  
<https://pubs.acs.org/doi/pdf/10.1021/acs.est.6b01815>

“An air quality study has for the first time detected nano-sized particles of air pollution in children’s urine...these ultrafine particles are the smallest particles found in air pollution and have been linked to heart disease and respiratory conditions in previous studies.

The research provides the first direct evidence that some of the particulate matter known as black carbon that we inhale in soot and fumes is making it across the lung barrier and into the body’s circulatory system.”  
[https://horizon-magazine.eu/article/ultrafine-pollution-particles-create-air-menace\\_en.html](https://horizon-magazine.eu/article/ultrafine-pollution-particles-create-air-menace_en.html)

Begin forwarded message:

**From:** Grass, Running  
**Date:** December 12, 2018 3:25:53 PM  
**To:** Debi Wagner <[debi.wagner@icloud.com](mailto:debi.wagner@icloud.com)>, Maria Batayola <[mbjumpstart@msn.com](mailto:mbjumpstart@msn.com)>  
**Subject:** FW: TRB presentations

fyi

**From:** Pepple, Karl  
**Sent:** Wednesday, December 12, 2018 2:28 PM  
**To:** Grass, Running <[Grass.Running@epa.gov](mailto:Grass.Running@epa.gov)>; Mbabaliye, Theogene <[Mbabaliye.Theogene@epa.gov](mailto:Mbabaliye.Theogene@epa.gov)>  
**Subject:** TRB presentations

Gentlemen,

Did you listen in on the TRB presentations today? They struck me as very useful for a lot of the folks you two are talking to right now, since they dealt with airport emissions and public health. Here are some links:

DOWNLOAD THE PUBLICATIONS:

ACRP Report 135: Understanding Airport Air Quality and Public Health Studies Related to Airports

<http://www.trb.org/main/blurbs/172802.aspx>

ACRP Research Report 185: Airport Air Quality Management 101

<http://www.trb.org/main/blurbs/177823.aspx>

ACRP WebResource 4: Airport Air Quality Resource Library

<http://www.trb.org/Main/Blurbs/177822.aspx>

PANELIST PRESENTATIONS:

<http://onlinepubs.trb.org/onlinepubs/webinars/181212.pdf>

The actual video of the webinar will be posted soon. That strikes me as more useful than just sending the links to the slides (PANELIST PRESENTATIONS link above), but the latter is what I have right now.

RG – regarding the folks you are working with on Beacon Hill, they might already have come across ACRP 135. If they have not, it contains an extensive literature search that might help the community. Also, if they have not come across it, the video will be very good for them to see. Alison Barrett did a great presentation on that document. Her slides start at #10 (of 52) from the panelist presentation link.

RG and TM – once you have the link to the recorded webinar, please listen to the questions at the end. Some fine particulate issues were raised, and these experts made it clear that those answers are not yet known.

Have a great day

KP

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