



The Air You Breathe

A free quarterly newsletter from Akron Regional Air Quality Management District.

VOLUME 30, ISSUE 1

SPRING 2015

Cleaner Air - Healthier Kids

From E&E Publishing's *Greenwire*.
Authored by Amanda Peterka.

Better air quality leads to improved children's health, according to a long-term study of children living in Southern California.

Researchers from the University of Southern California studied more than 2,000 children growing up over the past two decades and found that children who grew up in the 2000s had better lung function than those growing up in the 1990s. During that time, key air pollutants declined by as much as 50 percent.

The authors are calling it a landmark study that shows there are broad benefits from improving air quality and said it's important to continue to reduce air pollution emissions in the Southern California area.

"Over a period of only 20 years, we've been able to see both dramatic reductions in air pollution and also such dramatic improvements in children's health," said W. James Gauderman, the study's senior author and a professor of preventive medicine at USC. "Since we have been studying children in exactly the same communities, we've really been able to control for a lot of the other possible explanations that might exist for improved health over that time."

The results were published in the *New England Journal of Medicine*. It is part of the broader Children's Health Center at USC, a grant-funded initiative that has published many studies on air pollution and children's health.

The California Air Resources Board, National Institutes of Environmental Health

Sciences, Health Effects Institute, Hastings Foundation and South Coast Air Quality Management District provided funding for today's study.

In the 20-year study, researchers enrolled three separate groups of children from five Southern California communities between the years 1994-98, 1997-2001 and 2007-11. The children were, on average, 11 years old at the beginning of their study period.

The study cohorts included children of all racial groups, as well as both asthmatics and non-asthmatics.

The study found that the proportion of children with abnormally low lung function -- defined as less than 80% what it should be for the age of the child -- was significantly higher in 1998 than in 2011. Nearly 8 percent of the group of children studied in the early group had abnormally low lung function, compared with 3.6 percent in the 2007-11 group of children.

Lung growth also increased. Children in the 2007-11 cohort saw their lungs grow 10 percent greater than the children from the 1994-98 group.

The improvements in the lung function came as the Southern California area experienced gains in air quality. Combined, exposure to nitrogen dioxide and fine particulate matter -- or particles about one-thirtieth the width of a human hair -- dropped 40 percent between the first group of children and the third group. Reduced lung function in children is significant because it will likely affect

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Air Quality and Exercise

A recent article in TIME magazine (*This Study Busts Your Work Out Excuse*, March 30, 2015) examines a study from Copenhagen University that studied the effects of physical activity in areas with air pollution on overall health of those studied.

It's a common thought that the deeper and more frequent respiration of someone being physically active would lead them to inhale particle pollution at higher rates and thusly would cause more negative health impacts. This study somewhat sets that idea on its ear.

In fact the article says, *"being active trumps some of the negative health effects the breathing in polluted air might have."*

The study involved over 50,000 people who were followed for 13 years. The article states, "those who were more active were less likely to die during the study than those who were more sedentary, regardless of the pollutant levels where they lived." The types of physical activity ranged from biking to gardening. The key was that people were up, out, and moving. Previous studies had shown a negative impact



on lung function of those who had participated in vigorous exercise near busy city streets. The effects were slight, but noted.

This study looked at overall chances of mortality, and found, according to the article that, "people who participated in sports showed a 22% lower risk of dying from any cause during the 13 year follow-up." Cyclists showed a 17% lower risk and gardeners showed a 16 % lower risk.

People within sensitive groups; i.e., those with respiratory illnesses, chronic heart conditions, asthma, even the very old or very young, may want to consult the AQI to find a more appropriate time to be active, but staying indoors and not being active is not a great solution.

The majority of the days in our service region (Medina, Summit & Portage counties) are within the "Good to Moderate" range. This means that only folks with **extreme** sensitivity to air pollutants should find that most days are great for getting out and getting active!

We live in a region with beautiful local parks and trails, the enviable Ohio and Erie Canalway, and our very own Cuyahoga Valley National Park. Get out, breathe deeply, and be active!

Cleaner Air Cont'd

them for the rest of their lives, Gauderman said.

"It means that as they transition into adulthood, they're starting their adult life with a lower starting point," he said. "The real concern happens at the other end of the life spectrum where we know from a lot of other work that low lung function is related to significant increases in lung disease, heart disease and even in premature death."

The authors of the study said they're planning to follow up with the children in the study to assess their health later in life. The challenge, the authors said, is continu-

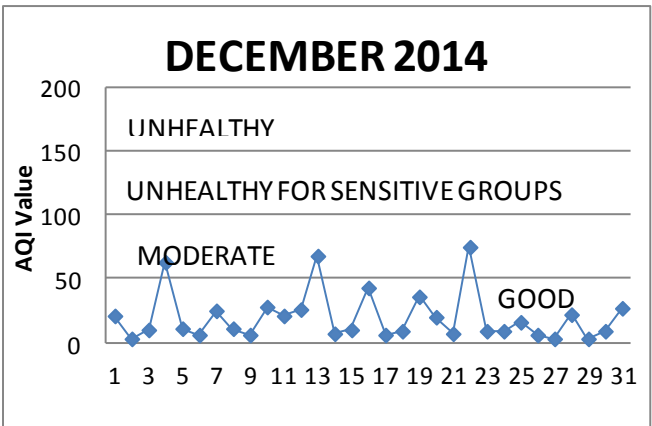
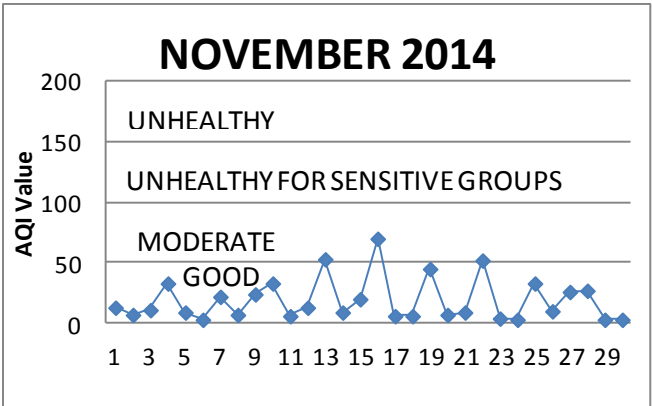
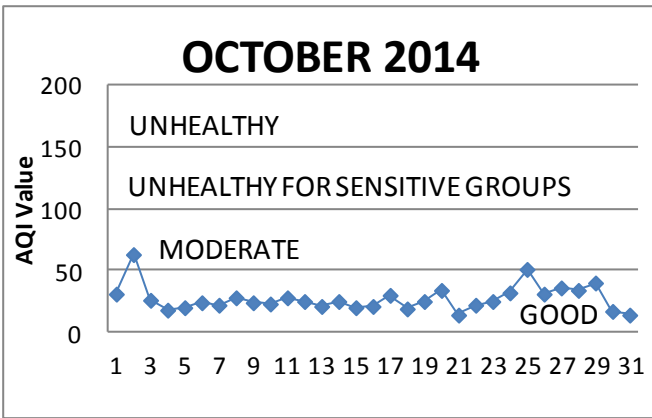
ing the gains in air quality in the coming years even as the population in Southern California is expected to increase. U.S. EPA tightened the federal standard for fine particulate matter in 2012, which left the five communities in the study either at or slightly above the new standard.

"These gains really aren't fixed," said senior author Frank Gilliland, a professor of preventive medicine at USC. "We have to maintain the same sort of level of effort to keep the levels of air pollution down. Just because we've succeeded now doesn't mean that without continued effort we're going to succeed in the future."

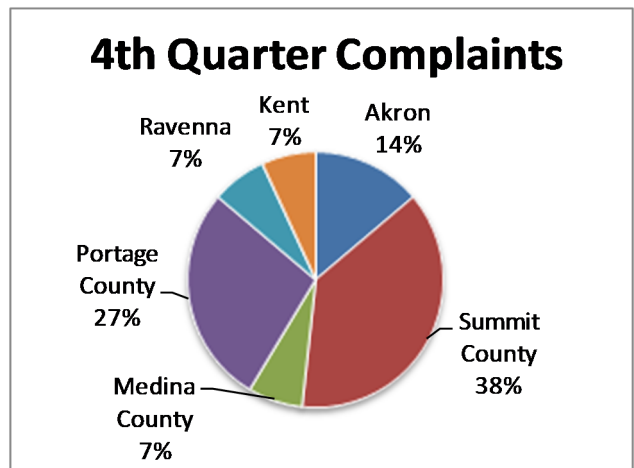
Statistic Snap Shot

4th Quarter 2014 AQI Charts

4th Quarter 2014 Complaints



Area	Commercial/Industrial	Residential	Total
Akron	3	1	4
Summit County	4	7	11
Medina County	1	1	2
Portage County	4	4	8
Ravenna	1	1	2
Kent	1	1	2



Site Visits	4th Quarter 2014
FEPTIO	6
Title V	6
Non Title V	1
GDF	63
Full Compliance Evaluations	3

Permits Issued

Quarter	PTI		PTIO		TV		PBR
	Draft	Final	Draft	Final	Draft**	Final	Total
4th 2014	0	1	4	11	4	0	33

**Includes PPP & PP

Asbestos		Indoor Air Quality Inquiries	
4th Q — Notifications	176	4th Q —	37
4th Q — Inspections	115		



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EPA Safer Choice Label: Same Program, New Label

Finding cleaning and other products that are safer for you, your family, and the environment should be easy — that's why EPA developed the new Safer Choice label. Everyone plays a role in protecting our families' health and the environment. Products with the Safer Choice label help consumers and commercial buyers identify and select products with safer chemical ingredients, without sacrificing quality or performance. More than 2,000 products currently qualify to carry the Safer Choice label.

For the past 15 years EPA's label for safer chemical products has been known as the Design for the Environment, or the "DfE," label. More than a year was spent collecting ideas and discussing new label options with stakeholders, such as product manufacturers and environmental and health advocates. Then ideas went to consumers and what worked best for them was determined. The result is the new Safer Choice label.

When you see a product with the Safer Choice label, it means that every ingredient in the product has been reviewed by EPA scientists. Only products that meet the Safer Choice Standard, which includes stringent human health and environmental

criteria, are allowed to carry the label.

Meeting the Safer Choice Standard is voluntary. Companies who manufacture Safer Choice products have invested heavily in research and reformulation to ensure that their ingredients and finished product line up on the green end of the health and environmental spectrum. These companies are leaders in safer products and sustainability.

Safer Choice products work well and are less toxic. They are safer for:

- You, your family, and pets;
- Workers' health; and
- Fish and the environment.

In addition to safer ingredients, EPA's Safer Choice Standard also includes requirements for:

- performance,
- packaging,
- pH, and
- volatile organic compounds (VOCs)

To see the old and new label side by side go to: <http://www2.epa.gov/saferchoice/learn-about-safer-choice-label>