



September 8, 2010

Dispatch: Dredging Data on the Ohio River

Wikipedia [defines](#) data dredging as “the inappropriate (sometimes deliberately so) use of data mining to uncover misleading relationships in data. These relationships may be valid within the test set but have no statistical significance in the wider population.”

Dr. Ross says it appears researchers at West Virginia University School of Medicine did just that with a [study](#) suggesting that a chemical used in non-stick pans can raise children's cholesterol. The team examined children who had been exposed to elevated levels of perfluorooctanoic acid (PFOA) and perfluorooctanesulfonate (PFOS) from contaminated drinking water in the mid-Ohio River Valley. The one-fifth of children with the highest exposure levels had slightly higher total and LDL cholesterol readings than the group with the lowest levels of the chemicals.

“They took the top quintile and the bottom quintile and they threw them all into the grinder and they analyzed for every known chemical and biological substrate, and they found, ‘We have a statistically significant match here, let’s publish a paper!’” Dr. Ross scoffs with a chuckle. “It’s what your statistics professor warned you about all these years ago — don’t do it! These researchers should know better — and certainly the journal did know better, and they should be ashamed for publishing this.”

In any case, typical exposures to PFOA and PFOS from non-stick frying pans would be considerably less than what these children received. Cathy Ross, a senior cardiac nurse at the British Heart Foundation, [tells the BBC](#) that kids’ hearts are at greater risk from a sedentary lifestyle and what goes into a frying pan than what it’s lined with.

Visitor Responses

[Lance_K](#) (September 9, 2010)

We have a saying in the engineering world: "If you torture data long enough, it will confess to anything."

This information was found online at:

http://www.acsh.org/factsfears/newsID.1833/news_detail.asp