Are Pesticides The New Birth Control?

By Lila Abassi — November 1, 2017

When studies are published in major journals one assumes that study adds value to scientific knowledge - sadly this is not always the case. One such study [2], recently published in *JAMA Internal Medicine*, revealed an association between high pesticide exposure and decreased pregnancies and live births in women participating in fertility treatments.

The data included 325 women, from 2006 onward, undergoing fertility treatments at Massachusetts General Hospital as part of Environment and Reproductive Health Study (EARTH). Women were asked to fill out dietary questionnaires to determine their dietary patterns prior to initiating assisted reproductive technologies (ART).

The women were categorized into organic versus non-organic consumers of fruits and vegetables (FVs) depending on how often they consumed organic products per week. The degree of pesticide exposure was assessed using the United States Department of Agriculture Pesticide Data Program (PDP) that determines pesticide residue in the food supply. Based on this data, different food items received a Pesticide Residue Burden Score (PRBS).

Researchers stratified data for age, sex, race, smoking status, organic or non-organic FV consumption, dietary patterns, pesticide exposure, reason for infertility, and some others categories. Their data found that women consuming high-pesticide residue foods were less likely to have a clinical pregnancy and less likely to have live births when compared to women who consumed lower pesticide residue foods.

These findings are unreliable at best. First and foremost, as the authors admit, there are no direct measurements involved in this study. To extrapolate exposure from USDA data and not the actual food items calls into question the degree of exposure. Secondly, food survey data which are self-
reported are scientifically unsound, and people tend not to remember or misrepresent data. For example, the appearance of social desirability could lead to unreliable reporting. Although the numbers show a correlation between exposure and outcome, the leap certainly cannot be made that pesticides are responsible for reduced fertility or decreased ability to carry a fetus to term.

The biggest point of contention in this article was the authors' claim that consuming organic FVs may expose people to fewer pesticides [3] which is absolutely inaccurate. These statements serve to propagate the fallacy that organic farmers do not use pesticides in their farming practices. Organic farmers claim that their pesticides and fungicides are "natural" or non-synthetic, whereas conventional farming utilizes synthetic pesticides. This is, as we have previously stated, both misleading and manipulative as some organic pesticides are more damaging ecologically and farmers use more of it. Rotenone [4], in particular, heavily used in organic farming is a highly toxic poison.

This study also does not account for the fact that there are different classes [5] of pesticides and they behave very differently. Is it the case that all "pesticides" are capable of contributing to reduced fertility? This makes the results even more problematic.

What does this paper add, if anything, to meaningful scientific data? Not much. We already know that organic FVs are not pesticide-free, to claim otherwise would be a lie. If the authors are pushing the idea that organic products are somehow better, not only is that incorrect, but it serves to shame those unable to afford organic food. Quite frankly, all this study does is cast doubt among pregnant moms - those undergoing fertility treatments who are even more emotionally vulnerable - about eating fruits and vegetables. That is irresponsible.

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