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Dr. Stuart Levy's Comments on Article Suggesting Breast Cancer is Linked to Use of Antibiotics

An article by Velicer and colleagues in the February 18 issue of the *Journal of the American Medical Association* reports a statistically significant increased risk of breast cancer among women who have taken antibiotics as compared to a control group that did not. The risk increased with the numbers of days the individuals used an antibiotic. The relationship held for all antibiotics monitored.

The findings are intriguing. While not demonstrating a cause and effect relationship, the data do ask: what are the reasons for this association? Is there another unknown factor(s) which distinguishes some women taking antibiotics from those who do not? Could it be specific to women prone to breast cancer? In this latter instance, the authors suggest that antibiotics may have an impact on the immune system which could alter host control of breast cancer development or that they may affect intestinal absorption and metabolism by altering the intestinal flora. Since nitrofurantoin, which have little effect on intestinal flora, are included in the list of antibiotics, the latter reason seems less likely. Follow-up studies should further explore the basis for this association.

For the moment, the authors and other medical and public health groups strongly advise women to continue taking antibiotics when needed. They are important and often life-saving drugs. Still, the message from the Alliance for Prudent Use of Antibiotics (APUA), The Centers for Disease Control and Prevention (CDC), The National Institutes of Health (NIH), and other public health organizations remains—use antibiotics only when needed for a diagnosed bacterial infection and always in a prudent manner.

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