

Important news about antibiotics: Antibiotics damage mitochondria



According to the Centers for Disease Control and Prevention (CDC), more than a quarter billion courses of antibiotics are dispensed to outpatients in America each year. That means that five out of every six people, on average, are getting a prescription for an antibiotic. The CDC tells us:

At least 30% of antibiotics prescribed in the outpatient setting are unnecessary, meaning that no antibiotic was needed at all.



There are many reasons for concern as it relates to the overuse and inappropriate use of antibiotics. Creating antibiotic-resistant organisms is a major global issue. In addition, new research indicates that antibiotic exposure may significantly increase the risk for obesity, as well as type II diabetes.

An important premise that we as healthcare practitioners have subscribed to is one that indicates that antibiotics kill bacteria but cause no harm to our body's cells. But new

research is challenging this idea. In a recent report appearing in the journal *Translational Medicine*, researchers revealed that some of our most commonly used antibiotics are actually toxic to *mitochondria*, the small bacteria-like particles that live within each of our bodies. Exposure to antibiotics of various types has now been demonstrated to damage mitochondria and at the same time increase the formation of toxic free radicals that can further damage tissue, including protein, fat, and DNA.

Interestingly, in the study, the detrimental effects of the antibiotics seemed to be offset when the animals were treated with a nutritional supplement, N-acetyl-L-cysteine, (NAC). NAC was found to dramatically mitigate damage to mitochondria with the authors concluding that the use of NAC might help us achieve, “the goal of improving the safety of antibiotic treatment in people.”

This is very important information from two perspectives. First, the potential damage to our mitochondria is yet another reason to be as judicious as possible in terms of using antibiotics. Second, this newly discovered, potentially detrimental, effect of antibiotics might well be prevented by the use of a simple nutritional supplement.

This article originally appeared on Dr. Perlmutter's website.