

## No Preservatives, No Problems

There is now yet another reason to avoid packaged, sugar-laden breakfast cereals: A food preservative found in some types of cereal can interfere with the functioning of hormones that regulate weight gain and appetite. **THE CULPRITS:** The endocrine-disrupting chemical butylhydroxytoluene (BHT) and two other endocrine-disrupting chemicals – tributyltin (TBT) and perfluorooctanoic acid (PFOA). BHT is commonly found in boxed breakfast cereals and cosmetics and PFOA is a polymer found in some types of cookware and carpeting. TBT can enter the body as a preservative in paper, leather, textiles, plastic, wood and contaminated seafood. **THE THEORY:** The study, published in *Nature Communications*, discovered that each of these three chemicals damaged key hormones that communicate between the gut and brain, and the disruption was the strongest when all three were tested together. Since the study was conducted on early-stage stem cells, researchers theorize that these endocrine disruptors could predispose young offspring to metabolic disorders and eventually obesity. **WHAT'S NEXT?** Lead researcher Dhruv Sareen, PhD, assistant professor of medicine and biomedical sciences at Cedars-Sinai Medical Center, stresses that more research is needed to understand how different hormone and organ systems are affected by chronic preservative exposure. “Our human stem cell platform allows us to better test many such chemicals in human tissues and organs and so to better understand how they may affect us,” he says.



Try out CE's Orange Sesame Chicken Bowl at [cleaneating.com/chickenbowl](http://cleaneating.com/chickenbowl).

## CALM YOUR GUT WITH BROCCOLI

In a recent Penn State study published in *Journal of Functional Foods*, researchers found that broccoli can help improve the intestinal barrier in the stomachs of mice, helping to prevent inflammatory digestive issues that can lead to conditions such as colitis. Other cruciferous vegetables like Brussels sprouts and cauliflower may also have similar properties. **MEET THE GUT HELPERS:** Lead researcher Gary Perdew, PhD, speculates that the anti-inflammatory effects may stem from a receptor in the gut called aryl hydrocarbon (AHR), which helps the body regulate its reaction to particular environmental toxins while also precipitating other responses to toxin exposure. Additionally, when cruciferous vegetables are consumed, an organic chemical compound called indole glucosinolates breaks down into other compounds, including indolocarbazole (ICZ), in the stomach. **DISEASE FIGHTER:** ICZ activates AHR by binding to it, which helps maintain the health of the microbiome. This action also enhances the intestinal lining's host barrier function, which may help prevent some cancers and inflammatory diseases of the gut such as Crohn's. **UP YOUR INTAKE:** While further research is needed, Perdew says humans would have to eat the equivalent of 3½ cups broccoli per day, or the same amount of other cruciferous foods such as cabbage or kale, to reap similar benefits.



### CHEW ON THIS #200

To remove pesticide residues on your fruits and veggies, wash them with baking soda. According to a new study published in *Journal of Agricultural and Food Chemistry*, baking soda is superior to tap water or a Clorox bleach solution when it comes to removing the most pesticide residues. (One caveat: Some pesticides can leach into the flesh of the fruit or vegetables, so you may not be able to get rid of all of it by washing the skin.) To lower pesticide exposure further, buy organic or opt for produce with the lowest levels of pesticides. Check out the Dirty Dozen list on [ewg.org/foodnews](http://ewg.org/foodnews) to find out which produce you should be buying organic.