

# Organic Food: Is It Better Than Conventional Food?

## What is “organic”?

- Organically grown foods are foods that are grown or processed without the use of synthetic fertilizers or pesticides.
- Livestock and poultry used for egg, dairy, and meat production are raised on organically grown feed, without antibiotics or hormones, and provided with access to the outdoors.

## How do I know if it is organic?

- Look for the USDA Organic Seal
- Products sold, labeled, or represented as organic must have at least 95 percent certified organic content.



## Is organic food more nutritious?

- There is little evidence that organic foods have higher nutritional quality than conventionally produced foods.
- Both organic and conventional produce are similar in macronutrients and fiber content; some organic products may have more antioxidants and omega-3 fatty acids, however, there is insufficient evidence to show that organic food intake improves health outcomes.



## Is organic food safer?

- Organic produce have lower levels of pesticide residue, however, the risk of pesticide contamination exceeding maximum-allowed limits is small for conventional produce.
- Conventional milk does not contain significantly higher levels of bovine growth hormone compared with organic milk, despite that any bovine growth hormone has no physiological effect on humans.
- Meats produced conventionally may have a higher occurrence of bacteria resistant to antibiotic treatment.
- The overall risk of bacterial contamination of organic foods is the same as conventional foods.
- Environmental contaminants are equally present in foods of both organic and conventional origins.

## What Should I do?

- **Eat a variety of foods from a variety of sources:** this will give you a better mix of nutrients and reduce your likelihood of exposure to a single pesticide.
- **Buy fruits and vegetables that are freshest and in season:** they will have the best taste and highest nutrient content.
- **Read food labels:** just because a product says it's organic or contains organic ingredients doesn't necessarily mean it's a healthier alternative. Some organic products may still be high in sugar, salt, fat or calories.
- **Wash and scrub fruits and vegetables thoroughly under running water:** washing helps remove dirt, bacteria and traces of chemicals from the surface of fruits and vegetables, but not all pesticide residues can be removed by washing. Discarding outer leaves of leafy vegetables can reduce contaminants. Peeling fruits and vegetables can remove contaminants but may also reduce nutrients.



## References

- Forman, J., & Silverstein, J. (2012). Organic foods: health and environmental advantages and disadvantages. *Pediatrics*, 130(5), e1406-e1415.
- González, N., Marquès, M., Nadal, M., & Domingo, J. L. (2019). Occurrence of environmental pollutants in foodstuffs: a review of organic vs. conventional food. *Food and chemical toxicology*.
- Magkos, F., Arvaniti, F., & Zampelas, A. (2003). Putting the safety of organic food into perspective. *Nutrition research reviews*, 16(2), 211-222.
- Massey, M., O'Casey, A., & O'tahal, P. (2018). A meta-analytic study of the factors driving the purchase of organic food. *Appetite*, 125, 418-427.
- Mie, A., Andersen, H. R., Gunnarsson, S., Kahl, J., Kesse-Guyot, E., Rembiałkowska, E., ... & Grandjean, P. (2017). Human health implications of organic food and organic agriculture: a comprehensive review. *Environmental Health*, 16(1), 111.
- Organic foods and children. UpToDate. [https://www.uptodate.com/contents/organic-foods-and-children?search=organic%20food&source=search\\_result&selectedTitle=1~13&usage\\_type=default&display\\_rank=1#H14](https://www.uptodate.com/contents/organic-foods-and-children?search=organic%20food&source=search_result&selectedTitle=1~13&usage_type=default&display_rank=1#H14)
- Organic market overview. U.S. Department of Agriculture. <https://www.ers.usda.gov/topics/natural-resources-environment/organic-agriculture/organic-market-overview/>
- Organic production and handling standards. U.S. Department of Agriculture. <https://www.ams.usda.gov/sites/default/files/media/Organic%20Production-Handling%20Standards.pdf>
- Rana, J., & Paul, J. (2017). Consumer behavior and purchase intention for organic food: A review and research agenda. *Journal of Retailing and Consumer Services*, 38, 157-165.
- Smith-Spangler, C., Branda, M. L., Hunter, G. E., Bavinger, J. C., Pearson, M., Eschbach, P. J., ... & Olkin, I. (2012). Are organic foods safer or healthier than conventional alternatives?: a systematic review. *Annals of internal medicine*, 157(5), 348-366.
- Vigar, V., Myers, S., Oliver, C., Arellano, J., Robinson, S., & Leifert, C. (2020). A Systematic Review of Organic Versus Conventional Food Consumption: Is There a Measurable Benefit on Human Health?. *Nutrients*, 12(1), 7.
- Willer, H., & Lernoud, J. (2019). *The world of organic agriculture. Statistics and emerging trends 2019* (pp. 1-336). Research Institute of Organic Agriculture FiBL and IFOAM Organics International.