

CEEREAL STATEMENT ON WHOLE GRAIN

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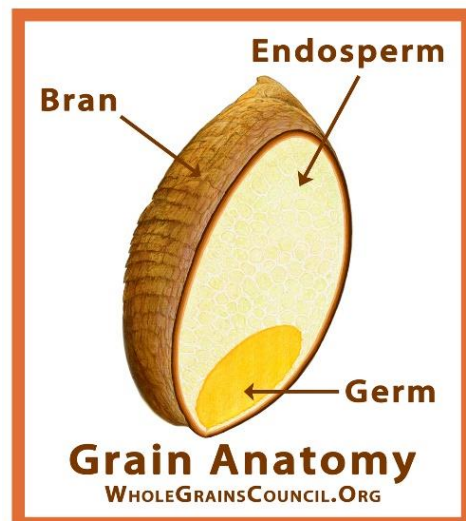
Whole grains are associated with positive health benefits, including lower risks of non-communicable diseases¹. Breakfast cereals are one important source of whole grain and an enjoyable and convenient way to increase their daily intake together with that of dietary fibre, vitamins, and minerals.^{2,3,4}

Between 2015 and 2023, CEEREAL members have increased the wholegrain content in their breakfast cereal recipes by 38.6%⁵ and they will continue their efforts to raise the bar.

WHAT ARE WHOLE GRAINS?

Whole grains refer to every grain's natural state when growing on the fields. Whole grains are the entire seed of a plant, also referred to as kernel. The kernel is protected by an inedible husk from sunlight, humidity, and disease. The husk needs to be removed for the whole grain to become consumable. The edible part of whole grains is made up of three components:

- **Germ:** the most nutrient-rich part, containing healthy fats, vitamins, and minerals.
- **Endosperm:** the largest part of the kernel containing starchy carbohydrates, proteins and small amounts of vitamins and minerals.
- **Bran:** the outer layer of the edible kernel, which is rich in dietary fibre, B vitamins, and antioxidants.



¹ European Commission (n.d.). *Health Promotion and Disease Prevention Knowledge Gateway*. https://knowledge4policy.ec.europa.eu/health-promotion-knowledge-gateway_en

² Bellisle, F., et al. (2014). *Consumption of whole grains in French children, adolescents and adults*. *British Journal of Nutrition*. 112(10):1674-1684. Doi: <https://www.doi.org/10.1017/S0007114514002670>.

³ Sette, S., D'Addezio, L., Piccinelli, R. et al. (2017). *Intakes of whole grain in an Italian sample of children, adolescents and adults*. *European Journal of Nutrition*. 56:521–533. Doi: <https://www.doi.org/10.1007/s00394-015-1097-5>.

⁴ Mann, K. D., Pearce, M. S., McKeivith, B., Thielecke, F., Seal, C. J. (2015). *Whole grain intake is associated with intakes of other foods and nutrients and some markers of health in the National Diet and Nutrition Survey rolling programme years 1, 2 and 3*. *Proceedings of the Nutrition Society*. 74(OCE1):E102. Doi: <https://www.doi.org/10.1017/S0029665115001172>.

⁵ On a sales-weighted basis for recipes constituting 85% of volume sales in the EU and UK for CEEREAL members in 2015 and 2023.

The Whole Grain Initiative (WGI), a world-wide interdisciplinary collaboration, defines whole grains as “intact, ground, cracked, flaked, or otherwise processed kernel after the removal of inedible parts such as the hull and husk. All anatomical components, including the endosperm, germ, and bran must be present in the same relative proportions in the intact kernel.”⁶ The WGI suggests that food products denominated “whole grain” should contain at least 50% of whole grains on a dry-weight basis. When containing a minimum of 25% wholegrain ingredients based on dry weight, food products can carry a front-of-pack claim on the presence of whole grain.

Refined grains are no longer “whole”, since refinement removes (part of) the bran and the germ, and some outer layers of the endosperm. This is the case, for example, with white flour or white rice.

WHY IS IT IMPORTANT TO EAT (MORE) WHOLE GRAIN?

Whole grains are high in dietary fibre and contain other important nutrients, including protein, vitamins, minerals, as well as bioactive compounds⁷, such as phytochemicals⁸. Typical whole grain products include whole grain breakfast cereals, oats, or muesli.

Higher whole grain intake is associated with a reduced incidence and mortality from several non-communicable diseases, including coronary heart disease, stroke, type 2 diabetes, and colorectal cancer⁹. According to the same study, increased whole grain consumption led to a reduction in bodyweight, systolic blood pressure and total cholesterol.

⁶ Van der Kamp, J-W., Miller Jones, J, Miller, K. et al. (2021). *Consensus, Global Definitions of Whole Grain as a Food Ingredient and of Whole-Grain Foods Presented on Behalf of the Whole Grain Initiative*. *Nutrients* 2022, 14 (1), Doi: <https://doi.org/10.3390/nu14010138>.

⁷ Harvard T.H. Chan School of Public Health (n.d.). *Whole Grains. The Nutrition Source*. <https://www.hsph.harvard.edu/nutritionsource/what-should-you-eat/whole-grains/>

⁸ Aune, D., Keum, N., Giovannucci, E. et al. (2016). *Whole grain consumption and risk of cardiovascular disease, cancer, and all cause and cause specific mortality: systematic review and dose-response meta-analysis of prospective studies*. *BMI*, Doi: <https://doi.org/10.1136/bmj.i2716>

Aune, D., Chan, D., Lau, R. et al. (2011). *Dietary fibre, whole grains, and risk of colorectal cancer: systematic review and dose-response meta-analysis of prospective studies*. *BMI*, Doi: <https://www.doi.org/10.1136/bmj.d6617>.

Barrett, E., Batterham, M., Ray, S., Beck, E. (2019). *Whole grain, bran and cereal fibre consumption and CVD: a systematic review*. *British Journal of Nutrition*, Doi: <https://doi.org/10.1017/S000711451900031X>.

Bechthold, A., Boeing, H., Schedhelm, C. et al. (2017). *Food groups and risk of coronary heart disease, stroke and heart failure: A systematic review and dose-response meta-analysis of prospective studies*. *Critical Review in Food Science and Nutrition*, 59 (7), Doi: <https://doi.org/10.1080/10408398.2017.1392288>.

Reynolds, A., Mann, J., Cummings, J. et al. (2019). *Carbohydrate quality and human health: a series of systematic reviews and meta-analyses*. *The Lancet*, 393 (10170), 434-445, Doi: [http://dx.doi.org/10.1016/S0140-6736\(18\)31809-9](http://dx.doi.org/10.1016/S0140-6736(18)31809-9).

Schwingshackl, L., Schwedhelm, C., Hoffmann, G. et al. (2017). *Food groups and risk of all-cause mortality: a systematic review and meta-analysis of prospective studies*. *The American Journal of Clinical Nutrition*, 105 (6), 1462-1473, Doi: <https://doi.org/10.3945/ajcn.117.153148>.

⁹ Reynolds, A., Mann, J., Cummings, J., et al. (2019). *Carbohydrate quality and human health: a series of systematic reviews and meta-analyses*. *The Lancet*, 393 (10170), 434-445, Doi: [http://dx.doi.org/10.1016/S0140-6736\(18\)31809-9](http://dx.doi.org/10.1016/S0140-6736(18)31809-9).

It should not come as a surprise that various dietary recommendations take into account the benefits of whole grain consumption¹⁰. The Nordic Nutrition Recommendations (2023), for example, included a recommended whole grain intake of at least 90g/day, including whole grains in products¹¹. There are also other examples of dietary recommendations for the intake of whole grain¹².

Nevertheless, a large majority of the global population does not meet recommendations for whole grain intake in terms of grams or servings per day. The Global Burden of Disease study 2017 estimated global mean consumption of whole grain at 29g per day.¹³ In Europe, the lowest intakes were reported for Hungary, Croatia, Belgium, Italy, and Spain.¹⁴

WHAT ARE BREAKFAST CEREAL MANUFACTURERS DOING TO INCREASE THE AMOUNT OF WHOLE GRAIN IN THEIR PRODUCTS?

CEEREAL members are committed to further increasing the whole grain content in breakfast cereals and broadening the variety of their offer. Also, they will make it easier for people to understand the benefits of these products and opt for a more balanced and nutritious diet¹⁵.

This will be achieved through innovation (new foods with increased whole grain content), renovation (increasing whole grain in existing products) as well as communication and education about the benefits of breakfast cereals as an important source of whole grain.

EXAMPLES OF INTERNATIONAL AND NATIONAL ACTIVITIES TO RAISE AWARENESS OF WHOLE GRAIN

CEEREAL and some of its member companies are part of the Whole Grain Initiative (WGI), which is coordinated by the International Association for Cereal Science and Technology. WGI aims to increase consumption of whole grains and brings together public health experts, manufacturers, marketers, grain scientists and government regulators from more than 30 countries. WGI is also celebrating International Whole Grain Day every year in November.

¹⁰ WholeEUGrain (2021). *Whole Grain: definition, evidence base review, sustainability aspects and considerations for a dietary guideline*. Lourenço S. https://www.gzs.si/Portals/288/210427_WholeEUGrain_Deliverable%204.1_FINAL%20report.pdf.

¹¹ Nordic Council of Ministers (2023). *Nordic Nutrition Recommendations 2023*. <https://pub.norden.org/nord2023-003/cereals-grains-.html>.

¹² European Commission (2021). *Health Promotion and Disease Prevention Knowledge Gateway: Dietary recommendations for whole grain intake*. https://knowledge4policy.ec.europa.eu/health-promotion-knowledge-gateway/whole-grain-dietary-recommendations-4_en.

¹³ Afshin, A., Sur, P. J., Fay, K. A., et al. (2019). *Health effects of dietary risks in 195 countries, 1990-2017: a systematic analysis for the Global Burden of Disease Study 2017*. *The Lancet*, 393 (10184), Doi: [https://doi.org/10.1016/S0140-6736\(19\)30041-8](https://doi.org/10.1016/S0140-6736(19)30041-8).

¹⁴ European Commission (2021). *Supporting policy with scientific evidence – Whole grain intake across European countries*. Health Promotion Knowledge Gateway. https://knowledge4policy.ec.europa.eu/health-promotion-knowledge-gateway/whole-grain-5_en.

¹⁵ CEEREAL (n.d.). *Priorities and actions*. <https://www.ceereal.eu/priorities-actions/>.

In a public-private “Whole Grain Partnership” (WGP), Denmark has managed to increase the average whole grain intake of Danes from 36 to 82g per 10 MJ per day within 15 years¹⁶. The WGP was set up to counteract the decrease of whole grain intake observed in Denmark in the 1990s and 2000s. Today, it consists of partners from health authorities, health NGOs, the food industry (millers, food producers, retailers), and interest groups, all of which were responsible for executing WGP campaigns¹⁷. Lately, the WGP has introduced a distinctive whole grain logo, which informs consumers that a product contains at least a specific amount of whole grain thereby making it easier for consumers to identify and choose products with higher wholegrain content¹⁸.

GENERAL INFORMATION AND RESOURCES ON WHOLE GRAIN (NON-EXHAUSTIVE)

Danish Whole Grain Partnership

<https://fuldkorn.dk/english/>

European Commission, Health Promotion Knowledge Gateway: Whole Grain

https://knowledge4policy.ec.europa.eu/health-promotion-knowledge-gateway/whole-grain_en

EUFIC resources on whole grain

<https://www.eufic.org/en/whats-in-food/article/whole-grains-updated-2015>

FoodDrinkEurope, Whole grains and fibre: The basics (2023)

https://www.fooddrinkeurope.eu/wp-content/uploads/2023/11/07157_1-Whole-Grains-and-Fibre.pdf

WholEUGrain project

https://www.gzs.si/Portals/288/210427_WholEUGrain_Deliverable%204.1_FINAL%20report.pdf

Whole Grain Initiative

<https://www.wholegraininitiative.org/>

Whole Grain Initiative – Factsheet on the consumption of whole grains

https://www.wholegraininitiative.org/media/attachments/2024/01/16/wgi-factsheet---whole-grains---final_2024.pdf

¹⁶ Fuldkornspartnerskabet (n.d.). *The Danish Whole Grain Partnership*. <https://fuldkorn.dk/english/>.

¹⁷ Lourenço, S., Hansen, G. (2019, June). *The Whole Grain Partnership – How a public-private partnership helped increased whole grain intake in Denmark*. https://www.researchgate.net/publication/333641500_The_Whole_Grain_Partnership-How_a_Public-Private_Partnership_Helped_Increase_Whole_Grain_Intake_in_Denmark.

¹⁸ Fuldkornspartnerskabet (n.d.). *The Danish Whole Grain Partnership. The whole grain logo*. <https://fuldkorn.dk/en/about-us/the-whole-grain-logo/>.

WHO: Whole grain is part of a healthy diet

<https://www.who.int/news-room/fact-sheets/detail/healthy-diet>

FOR FURTHER INFORMATION, PLEASE CONTACT

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