



NUTRITION : COMMON PRECONCEPTION



Document produced in the framework of the partnership between
BNP Paribas Cardif and Rouen-Normandie hospital
[For any questions, contact : nutriactis@chu-rouen.fr](mailto:nutriactis@chu-rouen.fr)

Nutrition plays an essential role in physical and mental health. Preconceived ideas abound in the media, and it is often complex to distinguish validated information from wrong ideas. In this context, nutrition professionals are confronted with a big challenge : detect the false information and deconstruct it in order to avoid the disinformation and all associated risks. It is important to be **careful against messages diffused by the media** and to **consult nutrition professionals** to obtain **reliable information and scientifically validated**. We are going to present to you some ideas frequently diffused in the media and discuss their pertinence.

"Nutritionally, the potato is a vegetable" : FALSE



A vegetable is defined as a vegetable plant whose certain parts can go into the diet (tuber, root, etc.). So, the potato is a **vegetable from a botanic point of view**. However, due to its high carbohydrates content, it is **nutritionally considered as starchy food**. The majority of the energy comes from starch, which is a carbohydrate.

Note: Corn, kidney bean, flageolet, chickpeas are also high in starch and are nutritionally considered as starchy foods.

Although potatoes are not nutritionally a vegetable, they also contain **dietary fiber** in their skin and their flesh, thus promoting **satiety** and the **proper functioning of the digestive system**. They are also an interesting source of **vitamins** and **minerals**, including vitamins C and B6, potassium, magnesium and iron, which are essential for a healthy organism. However, its nutrient content can change depending on the cooking method. For example, **boiling potatoes with the skin on** would limit the loss of potassium.



According to the type of starch and its cooking, the glycemic index (GI) of the potatoes can vary. Based on several studies, one of the lowest GI is that of **the boiled potatoes then cooled**. In fact, when they cooled, their **rate of resistant starch** (which resists the degradation during digestion to reach the large intestine) increases. This induces a **decrease in the GI** and favors the production by the microbiota of molecules recognized as "**beneficial**" for health (Short chain fatty acids = prebiotics).

Cooking methods	Mash (nature)	Hot boiled (nature)	Chips	French fries	Cooled Boiled (nature)
GI	105	90	69	58	56
Kcal (100 g)	92	76	545	260	80

Potato chips and french fries have actually a lower GI than other cooking methods, but these foods are not healthier because they are also **very rich in salt and in fat due to the frying**. This is why it is important to diversify his diet: vegetables, meat, fish, dried pulses (chickpeas, broad beans, etc.), starchy foods, fruits and dairy products.

"The collation is a snacking" : FALSE

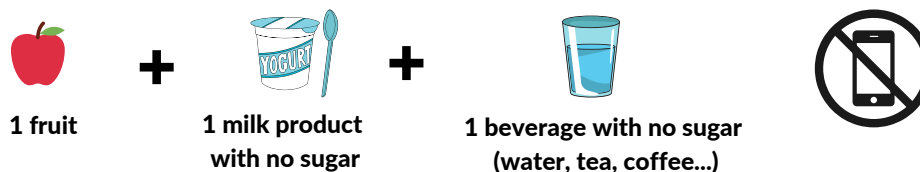


The collation* (light meal) corresponds to a food intake (morning or afternoon) **in response to signals of physical hunger** contrary to snacking. When the collation is controlled and balanced, it can **limit the feeling of hunger**, the **associated frustration**, and therefore **food compulsions**.

Despite awareness campaign about nutritional recommendations, collations are still often composed of foods that are **too sweet, too fatty and ultra-processed**, so unbalanced and harmful to health. For a mindfulness collation, it is important to get away from all sources of distraction because they can disrupt the food sensations and therefore modify the eating behavior.



Thus, if the physical hunger appears, it is recommended to take a collation with food rich in fiber, an to limit fat and sugar intake. Here is an example of a balanced collation :



This type of collation **helps to satisfy hunger** while providing **essential nutrients to reach your nutritional needs**. Additionally, studies have shown that **a balanced collation does not affect daily food intake** (calories); dinner is generally later and less plentiful.

"The breakfast makes fat" : FALSE

Breakfast is **an important meal** because it is the first meal to break the **nocturnal fast**** and provides essential nutrients and energy to the body for its proper physical and intellectual functioning during the morning. A balanced breakfast usually consists of:



Eating whole cereals and fruits at the breakfast brings **dietary fiber**, which provides a **greater feeling of satiety** and could help **reduce the risk of diabetes and obesity**. The consumption of dairy products not only brings **protein** but also **calcium**, which is essential for healthy bones.

A balanced breakfast could **limit snacks** in the morning and provide the energy needed to start a good day. However, if you are hungry in the morning, despite breakfast, do not hesitate to have a balanced collation 😊. Moreover, according to several studies, skipping breakfast several times a week could increase the risk of obesity, so **it is better to eat breakfast daily**.

If you want more information on breakfast or collation, you can contact a nutrition professional who can guide you and give you information.



*A collation is usually defined as any occasion to eat outside of a typical meal.

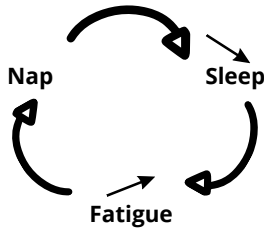
**Night fasting is defined as the period of time without food intake between lunch and the next day's first intake.

"The nap makes fat" : FALSE

About 57% of people with eating disorders (ED) have **sleep disorders**, such as difficulty falling asleep, parasomnias, hypersomnia and insomnia. As a result, fatigue can appear during the day, leading to an increased risk of eating compulsions and the consumption of energy-rich foods (too fat and/or too sweet and/or too salty), which could induce obesity.



In response to this fatigue or simply to take some time for yourself, it is possible to sleep during the day for a short time, often after lunch; this is called a nap. According to several studies, the benefits of napping remain unclear. Indeed, there are many factors that can change its effectiveness: the **time**, the **duration**, the **age**, or the **sleep** of the person.



According to several studies, taking frequently long naps, even to counterbalance a lack of sleep, could alter the nighttime sleep process, internal body rhythms and lead to **an increased risk of type 2 diabetes and obesity**. A short nap in the early afternoon (<1h) would be the most optimal.

Ideally, it is important to have **quality and quantity of sleep**. Following lifestyle rules can help you improve your sleep: no screen before bedtime, a fixed time to get up and sleep, avoiding stimulants (alcohol, coffee, etc.).



If you feel the need for a nap, opt for **short naps of less than 30 minutes** in the early afternoon to avoid post-awakening sleepiness. If you still have a sleep disorder and/or significant fatigue, we recommend you to consult your doctor who will be able to advise you.

PNNS recommendations "Eat five fruits and vegetables a day": Clarification

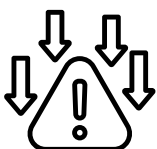


The National Nutrition Health Program (PNNS) is a french public health plan aimed at **improving the health status of the population** by acting on one of its major determinants: **Nutrition**. It is mainly known for his message "**Eat 5 fruits and vegetables per day**". Nevertheless, studies have pointed out that this message can be difficult to interpret. Indeed, some people may understand that 5 fruits or vegetables (ex: 2 strawberries + 3 radishes) would be enough to reach the recommendations, while the message talk about serving.

The message talks about **5 servings** of fruits and vegetables per day. However, the term "**serving**" is not clearly defined in the eyes of the population. It has been determined that **one serving corresponds to all that fits in one hand**, representing around **100 g**. It is important to note that this serving is suitable for an adult, but may vary depending on the population. For example, for a child aged 4 to 6 years old, the portion will be reduced by half.



The choice of servings was based on two studies that showed that consuming five servings of fruits and vegetables per day, is **associated with a reduced risk of mortality**. The ideal is to consume 2 servings of fruit and 3 servings of vegetables per day and diversify as much as possible. To have a healthy body, a **varied diet** with all food categories (meat, starch, dairy products, etc.) is essential.



Conclusion



In conclusion, it is important **to question the preconceived ideas about food and health**. Advice from a health professional or from sites based on **scientific evidence** can guide us towards better-informed choices. It is important to underline that there are no good or bad foods ; **you should eat diversified, balanced and with pleasure**.

By staying informed and listening to our body's sensations, **we can adopt a balanced and healthy diet for our health and well-being**.



References

- Beals, K. A. (2019). Potatoes, Nutrition and Health. *American Journal of Potato Research*, 96(2), 102-110. <https://doi.org/10.1007/s12230-018-09705-4>
- Bellisle, F. (2014). Meals and snacking, diet quality and energy balance. *Physiology & Behavior*, 134, 38-43. <https://doi.org/10.1016/j.physbeh.2014.03.010>
- Ciquial (2020). <https://ciquial.anses.fr/#/aliments/4026/pomme-de-terre-rotie-cuite-au-four>
- Douglas, S. M., Ortinau, L. C., Hoertel, H. A., & Leidy, H. J. (2013). Low, moderate, or high protein yogurt snacks on appetite control and subsequent eating in healthy women. *Appetite*, 60, 117-122. <https://doi.org/10.1016/j.appet.2012.09.012>
- Enriquez, J. P., & Gollub, E. (2023). Snacking Consumption among Adults in the United States: A Scoping Review. *Nutrients*, 15(7), 1596. <https://doi.org/10.3390/nu15071596>
- Giménez-Legarre, N., Flores-Barrantes, P., Miguel-Berges, M. L., Moreno, L. A., & Santaliestra-Pasías, A. M. (2020). Breakfast Characteristics and Their Association with Energy, Macronutrients, and Food Intake in Children and Adolescents: A Systematic Review and Meta-Analysis. *Nutrients*, 12(8), 2460. <https://doi.org/10.3390/nu12082460>
- Guo, V. Y., Cao, B., Wong, C. K. H., & Yu, E. Y. T. (2017). The association between daytime napping and risk of diabetes: a systematic review and meta-analysis of observational studies. *Sleep Medicine*, 37, 105-112. <https://doi.org/10.1016/j.sleep.2017.01.018>
- Hess, J. M., Jonnalagadda, S. S., & Slavin, J. L. (2016). What Is a Snack, Why Do We Snack, and How Can We Choose Better Snacks? A Review of the Definitions of Snacking, Motivations to Snack, Contributions to Dietary Intake, and Recommendations for Improvement. *Advances in Nutrition*, 7(3), 466-475. <https://doi.org/10.3945/an.115.009571>
- INSERM. (2021). Microbiote intestinal (flore intestinale) Une piste sérieuse pour comprendre l'origine de nombreuses maladies. INSERM. <https://www.inserm.fr/dossier/microbiote-intestinal-flore-intestinale/>
- Ji, X., Saylor, J., & Liu, J. (2019). The interactive effect of habitual midday napping and nighttime sleep duration on impaired fasting glucose risk in healthy adolescents. *Sleep Medicine*, 64, 77-84. <https://doi.org/10.1016/j.sleep.2019.06.016>
- Kranz, S., Brauchla, M., Slavin, J. L., & Miller, K. B. (2012). What Do We Know about Dietary Fiber Intake in Children and Health? The Effects of Fiber Intake on Constipation, Obesity, and Diabetes in Children. *Advances in Nutrition*, 3(1), 47-53. <https://doi.org/10.3945/an.111.001362>
- Lecerf, J.-M., Cayzele, A., & Bal, S. (2011). Petit déjeuner, est-ce utile ? *Cahiers de Nutrition et de Diététique*, 46(1), 30-39. <https://doi.org/10.1016/j.cnd.2010.10.001>
- Leidy, H. J., Gwin, J. A., Roenfeldt, C. A., Zino, A. Z., & Shafer, R. S. (2016). Evaluating the Intervention-Based Evidence Surrounding the Causal Role of Breakfast on Markers of Weight Management, with Specific Focus on Breakfast Composition and Size. *Advances in Nutrition*, 7(3), 563S-575S. <https://doi.org/10.3945/an.115.010223>
- mangerbouger.fr. (s. d.). Augmenter les fruits et légumes. [mangerbouger.fr. Consulté 21 juillet 2023, à l'adresse https://www.mangerbouger.fr/l-essentiel/les-recommandations-sur-l-alimentation-l-activite-physique-et-la-sedentarite/augmenter/augmenter-les-fruits-et-legumes](https://www.mangerbouger.fr/l-essentiel/les-recommandations-sur-l-alimentation-l-activite-physique-et-la-sedentarite/augmenter/augmenter-les-fruits-et-legumes)
- Moreira, T. S., Wolever, T. M. S., Davignon, J., & Yada, R. (2010). Influence des procédés de cuisson sur la composition nutritionnelle et la digestibilité de la pomme de terre. *Cahiers de Nutrition et de Diététique*, 45(6), S37-S43. [https://doi.org/10.1016/S0007-9960\(10\)70006-7](https://doi.org/10.1016/S0007-9960(10)70006-7)
- Nayak, B., De J. Berrios, J., & Tang, J. (2014). Impact of food processing on the glycemic index (GI) of potato products. *Food Research International*, 56, 35-46. <https://doi.org/10.1016/j.foodres.2013.12.020>
- Ortinau, L. C., Hoertel, H. A., Douglas, S. M., & Leidy, H. J. (2014). Effects of high-protein vs. high-fat snacks on appetite control, satiety, and eating initiation in healthy women. *Nutrition Journal*, 13(1), 97. <https://doi.org/10.1186/1475-2891-13-97>
- PNNS. (2023). Les féculents un plaisir à chaque repas. https://sante.gouv.fr/IMG/pdf/inpes_feculents.pdf
- Potter, M., Vlassopoulos, A., & Lehmann, U. (2018). Snacking Recommendations Worldwide: A Scoping Review. *Advances in Nutrition*, 9(2), 86-98. <https://doi.org/10.1093/advances/nmx003>
- Richter, J., Herzog, N., Janka, S., Baumann, T., Kistenmacher, A., & Oltmanns, K. M. (2020). Twice as High Diet-Induced Thermogenesis After Breakfast vs Dinner On High-Calorie as Well as Low-Calorie Meals. *The Journal of Clinical Endocrinology & Metabolism*, 105(3), e211-e221. <https://doi.org/10.1210/clinem/dgz311>
- Royant-Parola, S. (2005). Retard de phase et psychopathologie. *Médecine du Sommeil*, 1(4), 21-26. [https://doi.org/10.1016/S1769-4493\(05\)70145-X](https://doi.org/10.1016/S1769-4493(05)70145-X)
- Sagili, V. S., Chakrabarti, P., Jayanty, S., Kardile, H., & Sathuvalli, V. (2022). The Glycemic Index and Human Health with an Emphasis on Potatoes. *Foods*, 11(15), 2302. <https://doi.org/10.3390/foods11152302>
- Santé Publique France. (2019). RECOMMANDATIONS SUR L'ALIMENTATION, L'ACTIVITÉ PHYSIQUE & LA SÉDENTARITÉ POUR LES ADULTES. <https://www.santepubliquefrance.fr/content/download/35744/file/dp-reco-nutritionnelles-220119.pdf>
- Schlienger, J.-L., & Monnier, L. (2020). Le défi des « fake news » en nutrition. *Médecine des Maladies Métaboliques*, 14(2), 98-100. <https://doi.org/10.1016/j.mmm.2020.01.003>
- Tibère, L., Rochedy, A., & Sarat, C. (2018). Le goûter résiste à la nutritionnalisation. *Cahiers de Nutrition et de Diététique*, 53(4), 232-239. <https://doi.org/10.1016/j.cnd.2018.03.008>
- Wang, D. D., Li, Y., Bhupathiraju, S. N., Rosner, B. A., Sun, Q., Giovannucci, E. L., Rimm, E. B., Manson, J. E., Willett, W. C., Stampfer, M. J., & Hu, F. B. (2021). Fruit and Vegetable Intake and Mortality: Results From 2 Prospective Cohort Studies of US Men and Women and a Meta-Analysis of 26 Cohort Studies. *Circulation*, 143(17), 1642-1654. <https://doi.org/10.1161/CIRCULATIONAHA.120.048996>
- Wang, J., Wu, Z., Jin, X., Jin, R., Han, Z., Zhang, H., Xu, Z., Liu, Y., Guo, X., & Tao, L. (2022). Bidirectional Associations between Daytime Napping Duration and Metabolic Syndrome: A Nationally Representative Cohort Study. *Nutrients*, 14(24), 5292. <https://doi.org/10.3390/nu14245292>