

Milk or Medicine?



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Introduction

Therapeutic nutrition has been plausibly gaining the trust of people worldwide. It is an exceptional phenomenon which is expanding on daily basis. When we tackle therapy by nutrition the first thing that comes to mind is milk. Starting by the breast milk with its anti-obesogenic components [1], anti-infective properties and immune boosting constituents [2], one can begin a long journey that dazzles the greatest minds; a journey which ends by the newly developed formulae that can help patients survive many drastic medical conditions. Between the preventive role and the actual management of diseases there are many grey zones in which milk can be an adjuvant and a real ally against various illnesses.

The preventive side is more like milk now or pills later, while the treatment alley can come to a real choice between milk and medicine in the management of a certain disease. Now, here is a question for you: if you get sick what would you choose as a remedy? Milk or medicine?

In the context of therapeutic nutrition where milk plays a leading role, patients may face the irritating fact that they will be kept on a strict non-traditional diet. Elimination of some items and substituting others may come at a high cost in terms of meal preparation. This can be perceived in an extreme way which leads some affected children to describe their feeding experience as “dining with an alien”. Another drawback is the quality of life of such patients and their families which gets altered especially while initiating any special dietary program. Feeling restrained and prohibited from social life is often alarming to most families. One good news is that the quality of life tends to be enhanced later in the course of management when the beneficial results start to surface [3]. Of course the availability, as well as palatability, of the special formulae remains an important issue too. Regarding the palatability, certified dietitians always have tricks to overcome possible taste drawbacks and in case of milk the younger the patient’s age when the regimen is implicated, the easier it gets accepted and tolerated.

If we start to enumerate the benefits of choosing milk or diet over drugs, we will get an endless list. Most important point to

highlight here is that we are primarily nourishing the body and even though some changes from the norm apply, far less harm is expected compared to any medication used. Additionally, the pharmacodynamics of any drug would definitely affect our body homeostasis, not to mention the harmony of the gastrointestinal tract and its friendly inhabitants from the beneficial bacterial species as described by Forslund and associates in 2015 [4]. This interesting article, which was published in Nature, emphasized the need to disentangle gut microbiota signatures of specific human diseases from those of medication. Thus, being sick and receiving medications create double trouble for your gut bacteria. On the other hand, prebiotics and probiotics in the gold standard breast milk [5] or the mimickers added to the formulae [6] can have miraculous effects on the gut microbiome. Corsello et al. [7] even demonstrated how probiotics enhance the milk’s preventive powers against common infectious diseases. Accordingly, people can only wish that their next illness has a milk remedy.

One of the best examples to discuss milk benefits is diabetes mellitus. Mother’s milk was previously described as a protective shield against type 2 diabetes later in life [8,9]. On the management side special nutritional formulae were reported to demonstrate significantly better postprandial glucose and positive insulin compared to regular oatmeal of the same caloric value in overweight patients with type 2 diabetes [10]. The latter authors suggested that changing the macronutrient composition in the formulae achieved these effects either through direct stimulation of insulin secretion from pancreatic β -cells or indirectly through stimulation of GLP-1 production; a point that can have serious implications in future management of overweight diabetic patients.

Between hopes and reality, more preventive and management goals achieved by nutrition in place of medications are on their way towards evidence-based medicine verification. This recognition is expected to give more confidence to its users.

In conclusion, therapeutic nutrition, with milk as its unique gem, is proving its benefits beyond doubt and is becoming a

real trophy that patients will not only seek out, but rather fight for. Therefore, get prepared as doctors themselves may shortly pop up the question “Milk or medicine? before filling a patient’s prescription.

References

1. Palou A, Sánchez J, Picó C (2009) Nutrient-gene interactions in early life programming: leptin in breast milk prevents obesity later on in life. *Adv Exp Med Biol* 646: 95-104.
2. Lepage P, Van de Perre P (2012) the immune system of breast milk: antimicrobial and anti-inflammatory properties. *Adv Exp Med Biol* 743: 121-137.
3. Ramm Pettersen A, Stabell KE, Nakken KO, Selmer KK (2014) Does ketogenic diet improves cognitive function in patients with GLUT1-DS? A 6- to 17-month follow-up study. *Epilepsy Behav* 39: 111-115.
4. Forslund K, Hildebrand F, Nielsen T, Falony G, Le Chatelier E, et al. (2015) Disentangling type 2 diabetes and metformin treatment signatures in the human gut microbiota. *Nature* 528(7581): 262-266.
5. Nagpal R, Tsuji H, Takahashi T, Nomoto K, Kawashima K, et al. (2017) Ontogenesis of the gut microbiota composition in healthy, full-term, vaginally born and breast-fed infants over the first 3 years of life: a quantitative bird’s-eye view. *Front Microbiol* 8: 1388.
6. Radke M, Picaud JC, Loui A, Cambonie G, Faas D, et al. (2017) Starter formula enriched in prebiotics and probiotics ensures normal growth of infants and promotes gut health: a randomized clinical trial. *Pediatr Res* 81(4): 622-631.
7. Corsello G, Carta M, Marinello R, Picca M, DeMarco G, et al. (2017) Preventive effect of cow’s milk fermented with *Lactobacillus paracasei* cba 174 on common infectious diseases in children: a multicenter randomized controlled trial. *Nutrients* 9(7): 669.
8. Owen CG, Martin RM, Whincup CH, Smith GD, Cook DG (2006) Does breastfeeding influence risk of type 2 diabetes in later life? A quantitative analysis of published evidence. *Am J Clin Nutr* 84(5): 1043-1054.
9. Das UN (2007) Breastfeeding prevents type 2 diabetes mellitus: but, how and why? *Am J Clin Nutr* 85(5): 1436-1437.
10. Mottalib A, Mohd Yusof BN, Shehabeldin M, Pober DM, Mitri J, et al. (2016) Impact of diabetes-specific nutritional formulas versus oatmeal on postprandial glucose, insulin, GLP-1 and postprandial lipidemia. *Nutrients* 8(7): 443.



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