



Editorial Promotion and Restoration of Health with the Amazing Mediterranean Diet versus an Increase in Childhood Pathology Due to the Disastrous Diet of 'Western Civilisation'

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'Understand your honours that it is not so much that the traditional diet rooted in our homes has a miraculous character, as that the diet that modernity imposes on us is unhealthy and inadequate for the human intestines. Take off the blindfolds that flood your eyes and darken your intellect, due to entanglements and management of commercial companies, which subjugate good understanding with deception and a bewitching modern appearance'. Paraphrasing Don Quixote of La Mancha

We are a small research group (with little financial and institutional support) that works in primary care. Fifteen years ago, after a collaborator with a background in nutrition joined our paediatric clinic; we started paying more attention to the diet of our patients. Since then, we have progressively been applying the Traditional Mediterranean Diet (TMD) to all consultation patients—starting with overweight and obese children. We not only observed an improvement in the weight control of these children but were also struck by the fact that their associated inflammatory pathology decreased [1].

The first surprise was observing the importance of a healthy diet in the resolution of inflammatory and recurrent diseases (IRD). We began by treating frequently repeated inflammatory diseases that were commonly encountered in primary care, i.e., recurrent otitis, recurrent rhinosinusitis, otitis media with effusion, persistent nasal obstruction, and childhood asthma. The initial results were satisfactory and despite our limitations and primary care-related difficulties, we decided to conduct further research.

The second surprise was noting the lack of bibliographical references that relate nutritional quality to the development of IRDs in childhood. When searching for possible associations between the Traditional Mediterranean Diet and different IRDs on PubMed hardly any results were available. Furthermore, no one was paying attention to the diets of IRD patients or the eating errors in clinical practice. We thus took it upon ourselves to study this topic.

The third surprise was verifying that the non-well-defined standard diet was manipulated by commercial initiatives and institutional neglect, while the TMD had been destroyed. The diet of 'Western Civilisation' (that was clearly influenced by the food industry) predominated our environment and a reconstruction effort was thus necessary (See Table 1). Based on the Mediterranean Diet Foundation [2], we developed a nutritional program that we called 'Learning to eat Mediterranean'. We discussed the test of the TMD and the TMD-Infants to promote and evaluate adherence to the TMD.

We started applying the TMD (Nutritional Therapy) to children who presented IRD and performed pre- vs. post-test comparison studies by assessing the clinical evolution of children who followed TMD (for one year) with those who did not [3–9].



Citation: Calatayud-Sáez, F.M. Promotion and Restoration of Health with the Amazing Mediterranean Diet versus an Increase in Childhood Pathology Due to the Disastrous Diet of 'Western Civilisation'. *Sinusitis* 2022, 6, 26–31. https://doi.org/ 10.3390/sinusitis6020004

Received: 2 June 2022 Accepted: 12 July 2022 Published: 15 July 2022

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Traditional Mediterranean Diet	Western Civilisation Diet				
Breastfeeding	Adapted milk				
Varied, seasonal fruit	Jars of baby food and canned fruits				
Vegetables (including leafy vegetables)	Jars of baby food, canned vegetables, and leafy vegetables				
Pulses and non-processed nuts	Processed legumes and nuts				
Minimally processed and fermented (in the traditional way) whole grains	Refined, processed cereals with industrial fermenting agents				
Fermented milk (mainly from goats and sheep)	Processed dairy (mainly from cows)				
Occasional lean meat (in small quantities)	High consumption of red and processed meats				
Minimally processed, perishable, fresh, and local foods	Non-perishable processed and ultra-processed foods				
Homemade food	Pre-cooked food				
Limits on products with added chemicals	Presence of chemical agents (suspected of negative interactions)				

Table 1. Differences between the Traditional Mediterranean Diet and the 'Western Civilisation' Diet.

Due to the good results obtained in the nutritional treatment of IRD, we decided to extend TMD to all healthy patients with the intention to prevent the characteristic proinflammatory state of IRD and thereby avoid IRD manifestation [10]. After the improvement of food quality, **the fourth surprise** was observing that patients barely developed acute inflammatory diseases and that new episodes of IRD stopped appearing. This suggested that TMD acted as a powerful preventative measure. Consequently, we implemented a study where we compared the effects of TMD in two groups of healthy infants (with either low or high diet adherence). We were surprised to record that the incidence of illnesses greatly decreased in both groups. Yet, this was especially true for the greater TMD affinity and breastfeeding group.

As a small group of patients continued to develop IRDs (particularly childhood asthma) despite following a quality TMD, we tried to find an explanation. **The fifth surprise** was learning about the HISTAL Group and its HANA test (non-allergic food histaminosis) [11], which allowed us to understand histamine responses to food antigens. By removing foods indicated by the HANA test, symptoms improved and most resistant IRDs could be resolved. This suggested that, while accepted by dietary guidelines, some common foods, such as foods of animal origin, may not be entirely healthy (especially cow's milk and red meat).

The sixth surprise was negative as it refers to many difficulties in publishing our findings. Several paediatric journals have rejected our articles merely because they do not consider nutrition as a therapeutic weapon in paediatric diseases. Although we had better luck with journals that focus on immunology and nutrition, we could not understand the obstinacy of paediatric academicism which favours pharmacological and surgical intervention, even when to the detriment of primary prevention and restoration of the defensive system [12]. In an act of open-mindedness and in the light of knowledge and understanding, we believe alternative proposals should be fairly evaluated and considered for publication.

Finally, we have progressively included the entire child population of our practice in the TMD nutritional program over the last 8 years (before the SARS-CoV-2 pandemic) and have been evaluating IRD incidence. The results for families that made good use of TMD and chose breastfeeding have been especially noteworthy, with a significant decrease in acute illnesses and IRDs (almost completely disappeared). The only exception has been that of childhood asthma which, in our opinion, might rather be related to the abandonment of breastfeeding for the incorporation and excessive consumption of highly processed, adapted milk (Table 2) [13].

Number of Children/Year	2011	2012	2013	2014	2015	2016	2017	2018
Recurrent colds with bacterial complications	46	36	19	18	16	6	5	4
Recurrent acute otitis media	27	12	10	9	9	4	2	2
Recurrent acute rhinosinusitis	40	24	12	11	10	5	3	2
Otitis media with effusion	24	16	10	9	6	4	3	1
Persistent nasal obstruction	27	12	11	11	5	2	1	2
Recurrent wheezing or childhood asthma	41	25	20	18	17	12	9	9
Overweight and obesity	19	13	12	11	9	4	3	3
Total number of children	244	138	94	87	72	37	31	24

Table 2. Evolution of the annual number of patients diagnosed with IRD after the progressive introduction of the TMD.

We cannot explain, and this is **the seventh surprise**, the insufficient amount of attention that institutional and academic administrations pay to the importance of nutrition in children's health. There have been no studies analogous to ours and, despite this, they do not seem to be interested in verifying whether our clinical results are as relevant as we claim and whether our findings could have more widespread healthcare and preventive applications than that observed in our practice.

In general, our hypotheses about the commercial colonisation of dietary patterns and their possible harmful effects on health have not been rejected. Nor has the presence of a 'pro-inflammatory' state that can be measured with inflammatory markers (as shown by the pan-European IDEFICS study [14]) been rejected. Furthermore, it has been taken in stride that the 'Western Civilisation' Diet could alter the microbiota and, in turn, affect the immune system [15,16]. Thus, our field of research has not been dismissed as being unscientific (as they do with other alternative medicines); they just do not listen or respond to us and rather choose to look the other way. It is as though food, its nutrients and all its surroundings, does not belong to the topic of health. It could even be likened to a children's story where an evil (marketing) witch lulled the conscious of the beautiful (paediatric) maiden and plunged her into a deep sleep.

In our opinion, merely considering food as nutrients is a fundamental error of medicine. We are far from understanding all the complexities of the digestive system. It is without a doubt that food, in addition to nutrients, contributes various chemical compounds and live microorganisms to the human digestive system, which require a metabolic system that adequately assimilates them and a the complex immune system, in turn, recognises what is proper vs. what is foreign and has the ability to reject or eliminate substances and microorganisms that do not correspond. When this does not happen, immune alarms are activated, inflammatory mechanisms and metabolic processes are altered and, finally, disease ensues. The ongoing pandemic caused by the SARS-CoV-2 virus has reminded us that diseases can be induced by a hyper-response of the immune system (i.e., where a surprising production of antibodies, or cytokine storm, causes serious lung inflammation) [17,18].

Similarly, hyper-reactivity of the mucous membranes (caused by a poor immune response against physical or microbial agents) can give rise to relapses when a patient encounters new agents [19,20]. When a patient excessively repeats a disease, we say that we are facing an EIR. Recurrent acute rhinosinusitis, recurrent acute otitis media, recurrent pharyngotonsillitis, otitis media with effusion, and recurrent wheezing or childhood asthma are some of the most common IRDs observed during childhood [12]. These IRDs can cause hypertrophy of the lymph nodes, tonsils, and adenoids. A subsequent persistent nasal obstruction may also occur and often requires surgical intervention.

We believe that our findings thus far provide a reasonable explanation for the epidemic of noncommunicable diseases suffered in our Western civilisation. These findings, with a reasonable degree of evidence (B-II), form part of preliminary studies (not yet assessed in clinical trials) that should be repeated, evaluated, and confirmed, as well as invite new research studies.

As the human species is not genetically prepared to eat all kinds of food without the risk of getting sick, we could start with a suitable consensual Pattern Diet. We believe that the Foundation of the Mediterranean Diet, duly de-industrialised, should be in charge of the elaboration of the Pattern Diet.

At the very least, nutrition and food deficiencies that currently afflict our health institutions should be agreed upon and rectified:

- Hardly any time is devoted to nutritional training during medical school. leaving the food industry a free to train doctors in nutrition;
- There are no nutritionists in the health care system. Although there are many professionals, most are unemployed and/or without a sufficient platform in hospitals. The absence of nutritionists in specifically primary care is complete;
- In overcrowded paediatric and otorhinolaryngology (ENT) clinics, there is hardly any time to assess the quality of a child's diet. Furthermore, most primary care paediatricians and ENTs do not have the means or research incentives to do so;
- Nutrition should be considered an important part of medicine and all child patients should have a 'nutritional report' (i.e., their doctor knowing what they are eating and their adherence to the Standard Diet) as opposed to only ordering analyses, imaging tests and specialised referrals due to a lack of time;
- As a modified diet could be an important part of the solution to many childhood diseases [12], the application of drugs and surgical interventions, without first having tried alternative dietary options, does not seem reasonable;
- The worrying abandonment of breastfeeding and commercialisation of complementary feeding should receive significant attention. Most children have abandoned breastfeeding and the traditional diet by the age of one, followed by the incorporation of the 'Western Civilisation' Diet (Table 3).

 Table 3. Prototype diet accepted by 'Western civilisation' at one year of life.

Adapted and Processed Cow's Milk					
Processed cereal or porridge					
Fruits from jars, industrial juices, and fruit concentrates					
Vegetables from jars, dehydrated vegetables, and/or added to pasta					
Industrial pastries, cookies, and breakfast cereals					
Excessive consumption of animal origin foods					
Excessive consumption of processed dairy					
Excessive consumption of red meats and processed meat products					
Excessive consumption of pre-cooked, ready-to-serve foods					
Excessive consumption of sugary and fizzy drinks					
Scarcity in water consumption					
Shortage of fresh and fermentative foods (such as fruit and vegetables)					
Shortage of whole grains and natural ferments					
Shortage of legumes and nuts					
Shortage of homemade or home-cooked food					

The TMD, as a family diet, is, unfortunately, not incorporated into the lifestyle of many children after having been weaned. By receiving a 'commercial food education' rooted

in convenient pre-cooked consumption, industrial drinks, and products that are kept in the pantry, fridge, or freezer, these children usually stop eating traditional foods, reject traditional home cooking, and start to abhor homemade food. As such, how is it possible that a 'nutritional report' is not made and related to paediatric pathology?

Due to the continually increasing number of non-communicable diseases caused by bad 'Western civilisation' dietary habits, it is of great importance that we restore the traditional diet of human beings with fresh, seasonal, fermentable, perishable foods that are locally sourced and prepared in home-cooked family meals. The diet of our grandparents (with which we all share a close experience) is not only anchored in tradition but also easy to prepare. The scientific peer-review process should do its due diligence in checking the results we have obtained over many years and determine if our findings are chimerical or capable of restoring and optimising the metabolic, immune and inflammatory systems.

Funding: This research received no external funding.

Conflicts of Interest: The authors declare no conflict of interest.

References

- Calatayud, F.; Calatayud, B.; Gallego, J.G.; Alguacil, L.F.; González, C. Effects of a traditional Mediterranean diet in overweight and obese children after one year of intervention. *Rev. Pediatr. Atención Primaria* 2011, 13, 553–569. Available online: https://pap.es/articulo/11621/efectos-de-una-dieta-mediterranea-tradicional-en-ninos-con-sobrepeso-y-obesidad-trasun-ano-de-intervencion (accessed on 14 July 2022).
- Bach-Faig, A.; Berry, E.M.; Lairon, D.; Reguant, J.; Trichopoulou, A.; Dernini, S.; Medina, F.X.; Battino, M.; Belahsen, R.; Miranda, G.; et al. Mediterranean diet pyramid today. Science and cultural updates. *Public Health Nutr.* 2011, 14, 2274–2284. [CrossRef] [PubMed]
- 3. Calatayud, F.; Calatayud, B.; Gallego, J.; González-Martín, C.; Alguacil, L. Effects of Mediterranean diet in patients with recurring colds and frequent complications. *Allergol. Immunopathol.* **2017**, *45*, 417–424. [CrossRef] [PubMed]
- 4. Calatayud-Sáez, F.M.; Calatayud, B.; Calatayud, A. Recurrent acute otitis media could be related to the pro-inflammatory state that causes an incorrect diet. *Sinusitis*, 2022; *pending publication*.
- Calatayud-Sáez, F.M.; Calatayud, B.; Calatayud, A. Effects of the Traditional Mediterranean Diet in Childhood Recurrent Acute Rhinosinusitis. Sinusitis 2021, 5, 11. [CrossRef]
- Calatayud-Sáez, F.; Calatayud, B.; Calatayud, A. Effects of the Traditional Mediterranean Diet in Patients with Otitis Media with Effusion. Nutrients 2021, 13, 2181. [CrossRef] [PubMed]
- Calatayud-Sáez, F.; Calatayud, B.; Calatayud, A. Persistent Nasal Obstruction: An Expression of the Pro-Inflammatory State? Sinusitis 2021, 5, 10. [CrossRef]
- Calatayud-Sáez, F.M.; del Prado, B.C.M.; Fernández-Pacheco, J.G.G.; González-Martín, C.; Alguacil-Merino, L.F. Mediterranean diet and childhood asthma. *Allergol. Immunophatol.* 2016, 44, 99–105. [CrossRef] [PubMed]
- Calatayud-Sáez, F.M.; Calatayud, B. Efficacy of the recommendation of a Mediterranean diet pattern in preschoolers with overweight and obesity. *Acta Pediátr. Esp.* 2020, 78, e101–e110. Available online: http://www.actapediatrica.com/index.php/ secciones/nutricion-infantil/1716-eficacia-de-la-recomendacion-de-un-patron-de-dieta-mediterranea-en-preescolares-consobrepeso-y-obesidad#.X5gBjlj0lyw (accessed on 14 July 2022).
- Calatayud-Sáez, F.M.; del Prado, B.C.M.; Navas, M.L.; Fernández-Pacheco, J.G.G.; Ruiz, F.R. Effects of the affinity to the Mediterranean diet pattern together with breastfeeding on the incidence of childhood asthma and other inflammatory and recurrent diseases. *Allergol. Immunopathol.* 2021, 49, 48–55. [CrossRef] [PubMed]
- Elorza, F.L.; Rubio, N.; Lizaso, M.; Malagón, F.; Dorado, M.E. Standardization of the histamina liberation test. *Allergol. Immunopathol.* 1982, 10, 221–228. Available online: https://pubmed.ncbi.nlm.nih.gov/6183962/ (accessed on 14 July 2022).
- 12. Calatayud-Sáez, F.M. The traditional Mediterranean diet is effective in the prevention and treatment of acute and recurrent inflammatory diseases of childhood. *Allergol. Immunopathol.* **2022**, *50*, 93–95. [CrossRef] [PubMed]
- 13. Calatayud-Sáez, F.M.; Calatayud, B.; Calatayud, A. Effects of the Mediterranean Diet on Morbidity from Inflammatory and Recurrent Diseases with Special Reference to Childhood Asthma. *Nutrients* **2022**, *14*, 936. [CrossRef] [PubMed]
- González-Gil, E.M.; Santabárbara, J.; Russo, P.; Ahrens, W.; Claessens, M.; Lissner, L.; Börnhorst, C.; Krogh, V.; Iacoviello, L.; Molnar, D.; et al. Food intake and inflammation in European children: The IDEFICS study. *Eur. J. Nutr.* 2015, 55, 2459–2468. [CrossRef] [PubMed]
- 15. Venter, C.; Eyerich, S.; Sarin, T.; Klatt, K.C. Nutrition and the Immune System: A Complicated Tango. *Nutrients* **2020**, *12*, 818. [CrossRef] [PubMed]
- García-Montero, C.; Fraile-Martínez, O.; Gómez-Lahoz, A.; Pekarek, L.; Castellanos, A.; Noguerales-Fraguas, F.; Coca, S.; Guijarro, L.; García-Honduvilla, N.; Asúnsolo, A.; et al. Nutritional Components in Western Diet Versus Mediterranean Diet at the Gut Microbiota–Immune System Interplay. Implications for Health and Disease. *Nutrients* 2021, 13, 699. [CrossRef]

- 17. Perez-Araluce, R.; Martinez-Gonzalez, M.; Fernández-Lázaro, C.; Bes-Rastrollo, M.; Gea, A.; Carlos, S. Mediterranean diet and the risk of COVID-19 in the 'Seguimiento Universidad de Navarra' cohort. *Clin. Nutr.* 2021; *in press.* [CrossRef]
- 18. Gombart, A.F.; Pierre, A.; Maggini, S. A Review of Micronutrients and the Immune System–Working in Harmony to Reduce the Risk of Infection. *Nutrients* **2020**, *12*, 236. [CrossRef] [PubMed]
- Calder, P.C.; Carr, A.C.; Gombart, A.F.; Eggersdorfer, M. Optimal Nutritional Status for a Well-Functioning Immune System Is an Important Factor to Protect against Viral Infections. *Nutrients* 2020, 12, 1181. Available online: https://www.ncbi.nlm.nih.gov/ pmc/articles/PMC7230749/ (accessed on 14 July 2022). [CrossRef] [PubMed]
- 20. Childs, C.E.; Calder, P.C.; Miles, E.A. Diet and Immune Function. Nutrients 2019, 11, 1933. [CrossRef] [PubMed]