

Nutrition and headache

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The question whether dietary habits and lifestyle have influence on headache is still a matter of debate. Obesity and headaches including migraine could be attributed to each other through mechanisms like inflammation, and irregular hypothalamic function. Thereby, applying dietary strategies for weight loss may also ameliorate headache/migraine. Between different weight loss strategies, low glycemic index diet, ketogenic diet, and modified Atkins diet were shown to have independent promising effect on migraine headache control. Low glycemic diet could modify inflammatory responses, and reduce the risk of migraine comorbidities such as hypertension and dyslipidemia. Ketogenic diet and modified Atkins diet are thought to play a role in neuroprotection, improving mitochondrial function and energy metabolism, compensating serotonergic dysfunction, decreasing calcitonin gene-related peptide (CGRP) level and suppressing neuro-inflammation. Preserving the balance between the intake of essential fatty acids, omega-6 and omega-3 is speculated to be effective in headache/migraine improvement by affect inflammatory responses, platelet function and regulation of vascular tone. Also, evidences pointed to the role of different vitamins and minerals in amelioration of headache symptoms. For instance, riboflavin can prevent migraine by influencing mitochondrial dysfunction. Preventing from hyperhomocysteinemia requires the presence of vitamins B6, B12, and folic acid, which can decrease the severity of migraine. Vitamin D, can affect migraine severity through ameliorating neuro-inflammation. So, adequate intake of different vitamins and minerals are also important in controlling headache/migraine symptoms. Dietary intake also affects the composition of commensal gut microbiota. The role of gut-CNS-Axis in headache/migraine control has become a matter of special interest in recent years and probiotic supplementation has been mentioned in migraine headache. Taken together, dietary approaches could be considered as effective strategies in headache/migraine prophylaxis.