Thiamine

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Wernicke's Encephalopathy: Role of Thiamine - School of Medicine Vitamin B1, also called thiamine or thiamin, is one of 8 B vitamins. All B vitamins help the body convert food carbohydrates into fuel glucose, which the body uses for energy. Absence of thiamine Vitamin B1 can cause neurological and cardiovascular symptoms. Vitamin B1 deficiency can lead to Wernicke's Encephalopathy, a neurological disorder that affects the brain and spinal cord. Wernicke's Encephalopathy is characterized by symptoms such as vomiting, headache, confusion, or loss of muscle control. Treatment with thiamine can prevent Wernicke's Encephalopathy and improve neurological symptoms. Thiamine is also important for cardiovascular health, as it is involved in the metabolism of fatty acids and the production of neurotransmitters. Deficiency of thiamine can lead to cardiac arrhythmias and peripheral neuropathy. Treatment with thiamine can improve cardiac function and reduce the risk of hospitalization for heart failure.

Thiamine is not only important for the prevention of Wernicke's Encephalopathy and heart failure, but also essential for maintaining cellular function. Thiamine is a coenzyme that is involved in the metabolism of carbohydrates, lipids, and amino acids. It is required for the production of neurotransmitters and for the regulation of gene expression. Thiamine deficiency can lead to neurological symptoms, such as memory loss, vision problems, and decreased coordination. Treatment with thiamine can improve neurological symptoms and prevent further deterioration.

In conclusion, thiamine is an essential nutrient that is required for maintaining cellular function and preventing neurological and cardiovascular symptoms. Thiamine deficiency can lead to Wernicke's Encephalopathy, heart failure, and neurological symptoms. Treatment with thiamine is effective in preventing and treating these conditions. Therefore, it is important to ensure adequate thiamine intake through diet or supplements, especially in populations at risk for deficiency, such as alcoholics, diabetics, and older adults. 

References:


Further reading: