Neuropharmacological evaluation of movement disorders that are adverse reactions to specific foods.

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Abstract

Three cases are reported of patients who had episodic movement disorders triggered by foods or components of the diet. In the first patient, the movement consisted of shaking the head from side to side that was triggered by milk and a number of other foods. In the second patient, the movement consisted of a repeated shrugging of the shoulders that was triggered by egg and coffee. In the third, the movement consisted of rhythmic contractions of the arms and legs that were triggered by aspartame. The first patient agreed to participate in a study in which she drank 250 ml of skim milk, an amount sufficient to trigger head shaking, after pretreatment with drugs known to alter neurotransmission across beta-adrenergic, dopaminergic, GABAergic or purinergic synapses. At the doses used, propranolol and diazepam had no effect on the milk evoked movement disorder. Levodopa (plus carbidopa) blocked the reaction to milk. Haloperidol, salbutamol and theophylline by themselves triggered a reaction similar to that evoked by milk. These observations suggest that, in susceptible individuals, foods can trigger movement disorders through an action on dopamine and other neurotransmitter pathways in the brain. A videotape of the reactions of the first two patients is available.

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