

Reduced Presynaptic Dopamine Activity in Fibromyalgia Syndrome Demonstrated With Positron Emission Tomography: A Pilot Study.

- [Wood PB,](#)
- [Patterson Ii JC,](#)
- [Sunderland JJ,](#)
- [Tainter KH,](#)
- [Glabus MF,](#)
- [Lilien DL.](#)

Departments of Family Medicine and Anesthesiology, Louisiana State University Health Sciences Center-Shreveport, Shreveport, Louisiana; Department of Psychiatry, Louisiana State University Health Sciences Center-Shreveport, Shreveport, Louisiana.

Although the pathophysiology underlying the pain of fibromyalgia syndrome (FMS) remains unknown, a variety of clinical and investigational findings suggests a dysregulation of dopaminergic neurotransmission. We therefore investigated presynaptic dopaminergic function in 6 female FMS patients in comparison to 8 age- and gender-matched controls as assessed by positron emission tomography with 6-[(18)F]fluoro-L-DOPA as a tracer. Semiquantitative analysis revealed reductions in 6-[(18)F]fluoro-L-DOPA uptake in several brain regions, indicating a disruption of presynaptic dopamine activity wherein dopamine plays a putative role in natural analgesia. Although the small sample size makes these findings preliminary, it appears that FMS might be characterized by a disruption of dopaminergic neurotransmission. PERSPECTIVE: An association between FMS and reduced dopamine metabolism within the pain neuromatrix provides important insights into the pathophysiology of this mysterious disorder.

PMID: 17023218 [PubMed - as supplied by publisher]

