

MALMO (SWEDEN): The well-heeled might have cause for alarm. A scientist in Sweden says wearing high heels can lead to mental disorders, and has drawn alarming parallels between stilettos and schizophrenia among women.

Jarl Flensmark says high heels cause their wearers to tense their calves in a way that normal walking never does. That could prevent neuro-receptors in the calf muscles from triggering release of dopamine, a compound necessary for mental well-being.

"During walking, synchronised stimuli from mechanoreceptors in the lower extremities increase activity in cerebellothalamo-cortico-cerebellar loops through their action on NMDA-receptors," Flensmark wrote in a recent paper in the journal *Medical Hypotheses*.

"Using heeled shoes leads to weaker stimulation of the loops. Reduced cortical activity changes dopaminergic function, which involves the basal gangliathalamo-cortical-nigro-basal ganglia loops," he said.

Longterm wearing of high heels could conceivably explain why Western societies have higher rates of schizophrenia among women than do other societies where high heels are rarely worn.

"Heeled footwear," he writes, "began to be used more than 1,000 years ago, and led to the occurrence of the first cases of schizophrenia ... Industrialisation of shoe production increased schizophrenia prevalence.

"Mechanisation of the production started in Massachusetts, spread from there to England and Germany, and then to the rest of Western Europe. A remarkable increase in schizophrenia prevalence followed the same pattern."

Flensmark says he has done painstaking research into his subject.

"The oldest depiction of a heeled shoe comes from Mesopotamia, and in this part of the world we also find the first institutions making provisions for mental disorders ... In the beginning, schizophrenia appears to be more common in the upper classes."

He cites evidence from other parts of the world, too - Turkey, Taiwan, the Balkans, Ireland, Italy, Ghana, Greenland, the Caribbean and elsewhere. He then cites studies from India and elsewhere, which seem to confirm that schizophrenia first affects the upper classes".

From these two streams of evidence - the rise of heels and the increase in documented cases of schizophrenia - Flensmark divines a strong connection.

He modestly implies that he is not the first to do so. In the year 1740, he writes, "the Danish-French anatomist Jakob Winslow warned against the wearing of heeled shoes, expecting it to be the cause of certain infirmities which appear not to have any relation to it".

Flensmark boils the matter into a damning statement: "After heeled shoes are introduced into a population, the first cases of schizophrenia appear and then the increase in prevalence of schizophrenia follows the increase in use of heeled shoes.

"I have," he writes, "not been able to find any contradictory data."

Web link to Guardian newspaper report 2004 UK

<http://education.guardian.co.uk/egweekly/story/0,,1351659,00.html>