SHIFTWORK AND ITS IMPLICATIONS

Joana Peta ^{MD}

Centro Hospitalar Psiquiátrico de Lisboa, Psychiatry, Lisboa, Portugal

More than at any other time in history, life operates on a 24/7 schedule. The downside is that it has erased many of the old boundaries about work schedules. It is estimated that currently 20% of the working population performs some kind of work in shifts in different areas, which include healthcare sector.

Shiftwork interferes with the circadian chronobiological rhythm. The master circadian clock is the suprachiasmatic nucleus of the hypothalamus which is mainly synchronized by the light-dark cycle. The consequence is that physiological variables reach their peak expression at wrong moments according to environmental demands leading then to deficient responses.

Review the impact of shift-system features on mental and physical health and safety.

frequent headaches
generalized muscle ache
lack of concentration

lower nocturnal sleep duration
lower sleep efficiency
excessive daytime sleepiness
fatigue

mood fluctuations
depression and anxiety
social and familiar disruption

hypertension
vascular events
increased secretion of cortisol

metabolic syndrome
dyslipidaemia
diabetes mellitus
breast cancer

abuse of caffeine and caffeinated drinks
use of psychostimulants
drugs and alcohol consumption

From a chronobiological view, the lifestyle imposed by shiftwork is associated with increased level of health complaints and physiologic indices of stress as well as sleep impairment. Shift-system features result in disturbed biological rhythms, which can have a deleterious effect on working performance and accident rates.

Furthermore, it is associated to depression, anxiety and altered sleep architecture, as well as adverse cardiovascular effects and breast cancer.

Coping with these potentially harmful work schedules can lead not only to the disruption of mental and physical health, but these people can also experience considerable disruption of family and social activities.

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PERINATAL SUPPLEMENT WITH L-METHYLFOLATE FOR THE TREATMENT AND PREVENTION OF DEPRESSION

♠ BACKGROUND AND AIMS

Depression is a major public health priority that represents the leading cause of disability worldwide. More than 300 million people of all ages suffer from this mental disorder, that affects more women than men.

Perinatal depression is a common condition with significant adverse maternal, fetal, neonatal, and early childhood outcomes. It is defined as minor or major episodes of depression occurring during pregnancy or the first postpartum year. In developing countries, about 15.6% women experience this mental disorder during pregnancy and 19.8% after child birth (WHO).

Maternal depression is treatable. Between the various modalities of treatment, a new discovery in the field of nutrition included the neurochemistry and the function of the brain, coining the name Nutritional Psychiatry, was reported, considering that certain nutrients are important in the neurotransmission system and pregnancy depletes essential nutrients.

👁 OBJECTIVES

Several nutrients have been examined in relation to their contribution to prevention and management of depression.

This non-systematic literature review analyzes the nutritional supplement L-methylfolate, the active form of folic acid, as a promising add-on agent for acute treatment of depressive disorder and for depressive relapse prevention in women planning or during pregnancy.

♣ METHODS

Data was obtained through an internet-based literature search, using the following keywords: depression; perinatal depression; maternal health; nutrition; L-methylfolate.

The search used mainly the databases PubMed, Elsevier and NCBI. The World Health Organization was also utilized.

❤ RESULTS

Individuals deficient in folic acid present psychological symptoms, particularly depressive symptoms and impaired cognitive functioning. Compared to healthy controls, individuals with depression had lower serum and red blood cell folic acid levels. Folic acid can be used as a supplement for enhancing pharmaceutical treatment, or even on its own, to treat individuals with depression, who have borderline low or deficient folic acid levels.

♦ CONCLUSIONS

Depression in pregnancy is a common condition but is underreported as it's symptoms are often attributed to the pregnancy itself. The use of antidepressants non-teratogenics is recommended, in addition to the implementation of non-pharmacological treatment such as nutritional supplements.

Literature suggested L-methylfolate supplementation as a well-tolerated intervention with potential efficacy for prevention and treatment of perinatal depression.

Despite accumulating evidence for the relation between folic acid and mood disorders, the existing evidence is not yet sufficient to infer a causal direction.

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AUTHORS

Peta J.¹, Albuquerque M.², Caldas I.¹, Moreno M.¹.

¹ Centro Hospitalar Psiquiátrico de Lisboa, Psychiatry, Lisboa, Portugal.

² Hospital de Cascais, Psychiatry, Cascais, Portugal.