World Depression Congress, March 2019, Dubai, United Arab Emirates

# TREATING DEPRESSION WITH MEDICAL ACUPUNCTURE – CURRENT EVIDENCE

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## INTRODUCTION

Depression, which is a mood disorder, has increased in incidence over the last years. Its symptoms can be treated with conventional pharmacotherapy and behavioral therapy, but these modalities may exert serious side-effects or be time-consuming. Acupuncture, and its most potent form electroacupuncture, has been found to exert significant anxiolytic and antidepressant effects through numerous pathways.



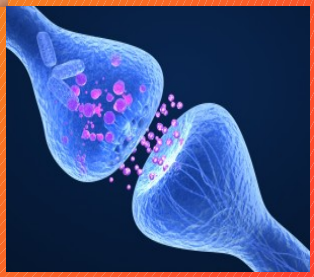
## MECHANISMS OF ACTION

Experimental animal studies have shown that acupuncture can cause alterations of monoamines neurotransmitters and their receptors [such as 5-hydroxytryptamine (5-HT), norepinephrine (NE) and dopamine (DA)] in the hypothalamus and hippocampus. It can also alter levels of opioid peptides (such as beta-endorphine), neuropeptide Y, glutamate, gamma-aminobutyric acid (GABA), as well as nuclear factor-κB (NF-κB), cyclooxygenase-2 (COX-2), prostaglandin E2 (PGE2) and inflammatory cytokines [such as IL-1β, IL-6 and tumor necrosis factor-alpha (TNF-α)]. Furthermore, acupuncture can increase sucrose consumption and upregulate p-ERK 1/2 and brain-derived neurotrophic factor (BDNF) mRNA and protein expression levels in the prefrontal cortex and hippocampus of rats. Moreover, there is increasing evidence that both hypothalamus-pituitary-adrenal (HPA) axis and hypothalamus-pituitary-thyroid (HPT) axis can also be affected.



Clinical studies have found that acupuncture can have equal, or even superior, antidepressant effects to those of selective serotonin reuptake inhibitors (SSRI), such as fluoxetine, with more rapid onset of action and significantly fewer side-effects. It can effectively reduce various forms of depression such as cancer-related, post-menopause, post-stroke, as well as pregnancy-related depression, as assessed with several depression scales [Self-rating Depression Scale (SDS), Hamilton Depression Rating Scale (HAMD), Beck Depression Inventory-II (BDI-II) and Asberg antidepressant side effect scale (ASES)]. It can also improve sleep quality [assessed with Pittsburgh Sleep Quality Index (PSQI)] and, thus improve quality of life in patients with depression.





## CONCLUSION

Acupuncture is a safe and effective treatment modality for depression and should be considered as a complementary therapy to standard drug treatment or even as a monotherapy.