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## Poster Presentation

### The Human Microbiome and PTSD, the Mechanisms of Interaction-A Narrative Review

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#### Abstract

present therapeutic methods for PTSD are not efficient enough to reduce or disappear all the symptoms. several peripheral factors can affect developing and treating PTSD, such as human microbiota. There is a growing volume of evidence showing the effect of gut microbiota on brain and behaviour. PTSD is associated with an inflammatory state in blood, brain and cerebrospinal fluid. also, there is evidence showing that the gut microbiota can affect the pathogenesis of mental diseases with the mechanism of inflammation. so, the inflammation can be considered as a mechanism of interaction between microbiota and PTSD. PTSD is along with sleep disorders and there are evidence showing that by treating the sleep disorders, we can have a general improvement in PTSD symptoms. also it is shown that intestinal dysbiosis can cause sleep disorders and by adding probiotics to the dysbiosed rats, their sleep disorder improved, so it can be considered as an evidence on the efficiency of altering the gut microbiota on treating PTSD. Also, it is shown that oxytocin can decrease the anxiety and depression, and its intranasal usage after exposing to the traumatic event can decrease the probability of affecting PTSD. on the other hand, there is some kind of probiotics that can increase the oxytocin in the blood. so by altering the gut microbiota with this probiotic, we may have an improvement in PTSD symptoms. gut microbiota may have a key role in both predisposing people to PTSD and also PTSD treatment, so we propose more researches on the therapeutic interventions with the approach of altering the gut microbiota.

**Keywords:** PTSD, Microbiome, Probiotic

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