FOOD CREATES MOOD

THE GUT-BRAIN-MICROBIOME AXIS AND DEPRESSION

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1. OBJECTIVES

- Shed light on the **impact of gut microbiome on mood disorders**, particularly depression.
- Identify **factors** influencing gut-brain signaling that could be manipulated for better mental health.

2. BACKGROUND

THE GUT-BRAIN-MICROBIOTA AXIS

Constant bi-directional communication
Evidence on this matter remains limited

3. METHODS AND MATERIALS

Systematic literature review

Articles published in the last 5 years on PubMed

Query “(psychobiotics OR microbiome OR microbiota) AND depression”

Full-text articles + inclusion & exclusion criteria

4. RESULTS

Food digestion by commensal gut bacteria

Impact on brain function

- Neurotransmitter creation & regulation
- Influence on brain tryptophan availability
- Dysbiosis → oxidative stress + inflammation

Depression

Growing interest in **psychobiotics**

Ingested bacteria which may benefit mental health

Potential benefits to mental health

- Effects via enteric nervous system
- Impact on emotional and cognitive functions
- Exposure during puberty might reduce inflammation & stress-induced vulnerability
- Potential antidepressant effects, although evidence for efficacy is still insufficient

5. CONCLUSIONS

Gut-brain-microbiome axis management and psychobiotics stand as a promising therapeutic alternative in the treatment of mood disorders, such as depression.

6. REFERENCES

Nikolova, Ther Adv Psychopharm 2019; Lukic, Front Behav Neurosci. 2019; Murray, Brain Behav Immun 2019; Luca, Oxid Med Cell Longev 2019; Peirce, J Neurosci Res 2019; Li N, Stress 2019