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MAJOR DEPRESSION, CARDIOVASCULAR RISK FACTORS AND THE OMEGA-3 INDEX

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Introduction: Cardiovascular disease (CVD) and major depressive disorders (MDD) are frequent diseases worldwide with a high comorbidity rate. Omega-3 fatty acids have been suggested as disease modulators for both CVD and MDD.

Objective and aims: Therefore, we studied whether polyunsaturated fatty acids and the Omega-3 Index may represent markers for assessment of the cardiovascular risk in physically healthy patients suffering from MDD.

Methods: Case-control study in 166 adults (86 MDD patients without CVD, 80 matched healthy controls). Baseline examinations included depression ratings, conventional cardiovascular risk factors, fatty acid, and interleukin-6 determinations.

Results: Several conventional risk factors were more prevalent in MDD patients. The Omega-3 Index and individual omega-3 fatty acids were significantly lower in MDD patients. An Omega-3 Index < 4% was associated with high concentrations of the proinflammatory cytokine IL-6.

Conclusion: Conventional cardiovascular risk factors, the Omega-3 Index and IL-6 indicated an elevated cardiovascular risk profile in MDD patients currently free of CVD. Our results support the employment of strategies to reduce the cardiovascular risk in yet cardiovascularly healthy MDD patients by targeting conventional risk factors and the Omega-3 Index.