



### Effect of Mitochondrial Mutation on Depression and Anxiety

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#### **Abstract**

Mitochondria are membrane-enclosed organelle found in most eukaryotic cells, which known as power house in cells. This organelle transforms energy into forms that are usable by the cell. The most common psychiatric disorders such as depression and anxiety can be linked to mitochondrial disorders. Furthermore, mutations of mitochondrial or nuclear DNA (mtDNA and nDNA, respectively) have been linked to deprecation and anxiety. Gene sets play a crucial role in the development of personality property including also affective temperaments, in the mediation of the effects of environmental factors and in the interaction of these elements in the development of anxiety. Mutation of mitochondrial DNA such as deletion or decreased gene expression has direct effect with psychiatric disorder that the details of this mechanism have not been detected. The aim of this study is to review the literature on the relationship between neuropsychiatric disorders especially, depression and anxiety, with DNA mutations and mitochondrial alterations.

**Keywords:** Mitochondrial mutations, DNA, Depression, Anxiety.

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