

## 50. PSYCHOLOGICAL CHARACTERISTICS OF DYSFUNCTIONAL BREATHING

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**Introduction.** Panic disorders (PD), depression, and anxiety are specific conditions commonly found in Dysfunctional Breathing (DB). Hyperventilation induces significant changes in respiratory rate, breath-hold time, and depth of breath, which are mainly mediated by current/previous traumatic or psychological experiences. Thus, DB plays an important role in the clinical diagnosis and treatment of psychological disorders.

**Aim of study.** To highlight the psychological characteristics of DB and remark the correlation between abnormal breathing patterns, anxiety and PD.

**Methods and materials.** Literature review, including 50 scientific-practical articles addressing similar aspects of the proposed topic.

**Results.** There is extensive research on changes in breathing patterns, especially hyperventilation in PD. Arbitrary hyperventilation is accompanied by changes in autonomic nerve regulation, with a predominance of sympathetic effects leading to anger and panic attacks. According to DSM-5, diagnostic criteria for a panic attack include a discrete period of intense fear or discomfort in which at least four of the following symptoms develop suddenly and peak within minutes: palpitations, and/or increased heart rate, sweating, shaking, short of breath, feeling of suffocation, chest pain or discomfort, nausea or abdominal pain, dizziness, unsteadiness or fainting, chills, derealization (feelings of unreality) or depersonalization (detachment from self), fear of losing control or going mad, feeling of impending death, paresthesia (numbness or tingling), hot flushes. Many of these symptoms attributed to PD are also common to DB. The underlying origin of these respiratory symptoms is attributed to an acute disturbance of acid-base balance. The breathing pattern of these patients is disorganized, with low carbon dioxide (PCO<sub>2</sub>) levels and increased breathing frequency. Moreover, these patients are often anxious and depressed.

**Conclusion.** Hyperventilation plays a major role in the clinical diagnosis and treatment of psychological disorders. Considering the high frequency of abnormal breathing patterns, attention to hyperventilation symptoms should be a routine part of every psychological examination, regardless of the specific complaints presented.