

**IS06****Impact of life event stress on patients with COPD**

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Anxiety and depression are more common in patients with COPD (6–80%) than in the general population and are usually underdiagnosed comorbidities in COPD. Both are related with poor prognosis, lower lung function, younger age, female gender, smoking, cough and lower quality of life.

(1) COPD patients have a relative risk of 1.69 of developing depression and the risk is greater in patients who experience more pronounced breathlessness. Anxiety evolves most often during exacerbations and patients claim that stress deteriorates their dyspnea. Increased life event stress can increase tobacco use which increases the risk of disease progression, pronounced symptoms, exacerbation, and lung cancer (2). Life event stress can also increase the risk of anxiety and depression. It was shown that elevated levels of psychological distress are related to more frequent and longer hospitalizations for exacerbations among COPD patients. A greater impact of life event stress on psychological status and quality of life in COPD patients is possibly due to different perception of stressful life events compared to perception of patients without COPD and poorer coping skills as well as low socio-economic status. (3) Depression disrupts hypothalamic-pituitary-adrenal activities that regulate responses to stress and immune system resistance to disease and is associated with impaired immune defenses due to chronic elevated levels of cortisol. Aforementioned cause loss of memory resulting in forgetting patients to take their medication or follow medical advice (4). During chronic stress, a prolonged increase in cortisol leads to glucocorticoid resistance, high inflammatory markers, and increased susceptibility to respiratory viruses, all of which may increase the risk of COPD exacerbations. Under stressful situations, it is common for people to hyperventilate which can also cause COPD flare-ups. A stress response is found to trigger the release of molecules such as histamines and leukotrienes resulting in narrowing of the airways. Stress stimulates the activity of the vagus nerve. Parasympathetic activity contributes to airway obstruction in multiple ways in COPD: bronchoconstriction, mucus secretion and airway remodeling by increased proliferation of both fibroblasts and smooth muscle cells. COPD patients with an increased basal cholinergic tone and/or with vagal fluctuations induced by anxiety and stress could benefit from anticholinergic agents as the first therapeutic option. There is no evidence that anxiety and depression should be treated differently in the presence of COPD. Pulmonary rehabilitation should be encouraged since studies have found that physical exercise has a beneficial effect on depression in general.

(1) GOLD 2023 dostupno na: <https://goldcopd.org/2023-gold-report-2/>

- (2) Kulik MC, Glantz SA. Softening among U.S. smokers with psychological distress: more quit attempts and lower consumption as smoking drops. *Am J Prev Med.* 2017;53(6):810-817. doi: [HTTPS://DOI.ORG/10.1016/J.AMEPRE.2017.08.004](https://doi.org/10.1016/j.amepre.2017.08.004)
- (3) Lu Y, Nyunt MS, Gwee X, Feng L, Feng L, Kua EH, Kumar R, Ng TP. Life event stress and chronic obstructive pulmonary disease (COPD): associations with mental well-being and quality of life in a population-based study. *BMJ Open.* 2012 Nov 19;2(6):e001674. doi: 10.1136/bmjopen-2012-001674. PMID: 23166130; PMCID: PMC3533009
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**IS07****Family in the bathroom**

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When distinguished members of a large family inhabit their house bathroom, all of us, like voyeurs, can see the dynamic or psychodynamic of many eating disorders. So let me just point to some scenes in this "bathroom play" and talk about psychosomatic energy in emotions behind the closed door.

This is, shortly to say, the theme of my presentation although it isn't sponsored by any bathroom industry.