

Neurology 2021: The missing drug for neuropsychiatric patients: Radical compassion- Utah Valley University, USA

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Introduction:

Many of the therapeutics used for the treatment of brain disorders are not effective and not delivered to the brain due to the complex structure and its barriers. In recent years, many advanced approaches have emerged for the brain drug delivery. Intranasal drug delivery is one of non-invasive approach has gained interest because of direct transport of drugs circumventing the brain barriers through olfactory and trigeminal nerve pathways. Even though through these pathways the therapeutics have direct access to the brain, the main limitations of this approach are only limited drug absorption, and nasal permeability. To overcome the issues related to the brain targeting via nasal drug delivery encourage the development of novel drug delivery by combining with nanotechnology. This article will discuss pathways of drug transport from nose to brain, toxicity of nanoparticles role and need of nanostructured lipid carriers (NLCs) and recent advance in combination of NLCs with intranasal drug delivery for targeting the brain. Stressful experiences are a normal part of life, and the stress response is a survival mechanism that primes us to respond to threats. Some stress is positive: Imagine standing in front of a crowd to give a speech and hitting it out of the park. Stressful? Certainly. But also challenging and satisfying.

But when a stressor is negative and can't be fought off or avoided — such as layoffs at work or a loved one's medical crisis — or when the experience of stress becomes chronic, our biological responses to stress can impair our physical and mental health.

Fortunately, there are many evidence-based tools to help combat the negative effects of stress in healthy ways. When confronted with a stressor, the central nervous system releases adrenaline and cortisol, which affects the digestive tract among other physiological changes. Acute stress can kill the appetite, but the release of the hormone cortisol during chronic stress can cause fat and sugar cravings. Research also suggests that high cortisol combined with high sugar consumption may prompt the deposition of fat around our internal organs³ — visceral fat that is associated with cardiovascular and metabolic diseases. A diet high in a variety of nutrients can both protect health and provide more physical energy to deal with challenges. No need to go vegan or swear off cookies —just aim to consume a rainbow of fruits and vegetables as part of your daily diet. Avoid using substances such as alcohol to dampen the stress response since substances do not solve the root of the problem and can have serious health effects.

Objectives: Accumulating research demonstrates the potential of intranasal delivery of psychopharmacological agents to treat a range of psychiatric disorders and symptoms. It is believed that intranasal administration offers both direct and indirect pathways to deliver psychopharmacological agents to the central nervous system. This administration route provides a unique opportunity to repurpose both old drugs for new uses and improve currently approved drugs that are indicated for other administration routes. Despite this promise, however, the physiology of intranasal delivery and related assumptions behind the bypassing of the blood brain barrier is seldom considered in detail in clinical trials and translational research. In this review, we describe the current state of the art in intranasal psychopharmacological agent delivery research and current challenges using this administration route, and discuss important aspects of nose-to-brain delivery that may improve the efficacy of these new therapies in future research. We also highlight current gaps in the literature and suggest how research can directly examine the assumptions of nose-to-brain delivery of psychopharmacological agents in humans.

Results: Whether or not you experience an intolerable level of psychological stress depends on the intensity of the situation and also the person experiencing it. How you perceive and think about a stressor can also make a big impact on how you respond. It's not always possible to escape a stressful situation or avoid a problem, but you can try to reduce the stress you are feeling. Evaluate whether you can change the situation that is causing you stress, perhaps by dropping some responsibility, relaxing your standards or asking for help.

Strong social support can improve resilience to stress.¹ Reach out strategically. Some friends or family members may be good at listening and sympathizing. Others might excel at practical help, like bringing over a home-cooked meal or covering an hour of child care. Giving support can also increase positive emotions and decrease negative emotions.² Just make sure your relationships stay in balance. A friend who requires support but never gives it may increase your stress level.