

Hypnosis has garnered attention for its potential effects on the hypothalamic-pituitary-adrenal (HPA) axis and the modulation of pro-inflammatory cytokines, both of which are critical in the context of pain and inflammation. The HPA axis is a central stress response system that regulates the production of cortisol, a hormone that plays a significant role in the body's response to stress and inflammation. Studies have shown that hypnotherapy can lead to significant reductions in cortisol levels, suggesting a direct relationship between hypnosis and the modulation of the HPA axis (Respati et al., 2023; Goodin et al., 2012). For instance, a randomized controlled trial indicated that hypnosis not only reduced cortisol levels but also influenced pain-related neuroendocrine changes, which are often exacerbated by stress (Goodin et al., 2012).

Moreover, hypnosis has been associated with alterations in immune function, particularly in the regulation of pro-inflammatory cytokines. Research indicates that hypnosis can modulate the immune response by affecting T-lymphocytes and natural killer cells, which are crucial components of the immune system (Takahashi et al., 2020; Sutanto et al., 2021). In the context of pain management, hypnosis has been shown to reduce inflammation and pain intensity in patients undergoing various medical treatments, including chemotherapy and surgery (Berlière et al., 2021; Milling, 2023). This is particularly relevant as the experience of pain is often linked to increased levels of pro-inflammatory cytokines, which can further sensitize the nervous system and amplify pain transmission (Goodin et al., 2012).

Additionally, the effects of hypnosis on cytokine levels have been documented in various studies. For example, hypnotherapy has been reported to improve immune responses in patients with psychogenic asthma by affecting cytokine levels, including interleukin-13 and interleukin-17, although the changes were not statistically significant (Sutanto et al., 2021). This suggests that while hypnosis may not always lead to drastic changes in specific cytokines, it can still play a role in modulating the overall immune response, which is crucial for managing inflammation and pain.

In summary, the evidence supports the notion that hypnosis can influence both the HPA axis and the immune system, leading to reductions in cortisol levels and modulation of pro-inflammatory cytokines. These effects are particularly beneficial in managing pain and inflammation, highlighting the therapeutic potential of hypnosis in clinical settings.

References:

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