

GREG E. POPOVICH, School of Exercise Science & Athletic Training, West Virginia Wesleyan College, Buckhannon, WV 26201. Why zombies crave brains: an exploration of two hypotheses.

In recent years, the allure of zombie culture has found its way into innovative teaching of biology and medical courses. In the current example, zombies are used to facilitate understanding of applied nutritional biochemistry. Specifically, two competing hypotheses are explored to evaluate which poses the most plausible explanation as to why zombies purportedly crave human brains: 1) as a source of omega 3 fatty acids versus 2) as a source of endogenous opiates (endorphins).

The common drive for ingesting either compound stems from the assumption (as put forth in pop culture) that zombies are sentient and can feel themselves decompose, which is painful. Omega-3 fatty acids further rely on the following established premises: 1) the brain, by dry weight, is 60% lipid, most of which is essential fatty acids (EFAs); 2) the brain's EFA content is mostly omega-3s, but is somewhat dependent on diet; 3) omega-3s exert anti-inflammatory and anti-nociceptive effects. The hypothesis that exogenous endorphins impart analgesia centers on their known binding to opiate receptors in the brain, assuming they can be absorbed at a sufficient dose to impart an effect. Evaluation of the potential effectiveness included quantitative and qualitative comparisons of digestion and absorption as well as effective dose.

Although these two tentative explanations are not mutually exclusive, EFA consumption would be more likely to alleviate pain in the reanimated. This is primarily due to the likely destruction of endorphins by the gastrointestinal tract given that they are polypeptidal hormones and would be rendered ineffective for analgesia.