

Inositol – Clinical Applications for Exogenous Use

Lisa Colodny, Pharm D. and Ronald L. Hoffman, M.D.

Abstract

Recent advances in nutritional and biochemical research have documented inositol as an important dietary and cellular constituent. The processes involved in inositol metabolism and its derivatives in the tissues of mammals have been characterized *in vivo* as well as at the enzymatic level. Biochemical functions defined for phosphatidylinositol in biological membranes include the regulation of cellular responses to external stimuli and/or nerve transmission as well as the mediation of enzyme activity through interactions with various specific proteins. Altered production of inositol has been documented in patients with diabetes mellitus, chronic renal failure, galactosemia, and multiple sclerosis. Inositol has been reported to be effective in treating central nervous system disorders such as depression, Alzheimer's disease, panic disorder, and obsessive-compulsive disorder. It has documented benefit for use in pediatric respiratory depression syndrome. In addition, recent studies have evaluated its usefulness as an analgesic. Inositol has been studied extensively as potential treatment to alleviate some negative effects associated with lithium therapy. The use of inositol in pregnant women remains controversial. Although its benefit in preventing neural tube defects in embryonic mice is documented, the risk of inducing uterine contractions limits its usefulness in pregnancy.

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