A SYSTEMATIC ANALYSIS OF MOLECULAR AND PHYSIOLOGICAL EFFECTS OF MYO-INOSITOL.
APPLICATION IN OBSTETRICS AND GYNECOLOGY.
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In the peer-reviewed scientific journals of today there are more than 37000 publications on the results of mechanism of action and clinical trials of myo-inositol. This study provides the first global survey on myo-inositol by means of computer data mining in order to obtain a range of potential drugs based on the applicability of myo-inositol.

With the help of Protein data bank we selected all proteins that perform signal transmission via myo-inositol. As a result we came across 120 myo-inositol dependent proteins. It should be highlighted that there are 233 proteins somehow involved in the transmission of intracellular signals by myo-inositol derivatives, but mostly their biological role is not well understood. Our following step was to analyses what functions these 120 proteins are responsible for. The pathway looks like myo-inositol=>protein=>function=>evidence-based medicine.

More than half of inositol-dependent proteins involved in supporting cardiovascular system, immune system and connective tissue. Indeed there is evidence-based medicine data that supplementation of the diet with inositol improves the health status of patients of these profiles.

Equally important part is maintaining CNS (including neurotrophic and neuroprotective role), the metabolism of sugars (primarily in the insulin signaling cascade) and the functioning of the kidneys and liver which is absolutely essential for the physical health of pregnant.

The reciprocity of the inositol derivatives with the specific proteins, that act in the reproductive system functioning, gamete maturation and embryo development along with myo-inositol effect as the folate synergist point out intrinsic opportunities of the myo-inositol use in Obstetrics and Gynaecology.