

Don't Be Chicken of the Egg

(Excerpted from: <http://articles.mercola.com/sites/articles/archive/2000/11/12/eggs-part-one.aspx>)

Where Would We Be Without the Egg?

Dr. Clare M. Hasler, Ph.D, of the University of Illinois gave a presentation entitled, "The Changing Face of Functional Foods", in which she defines 'functional foods' as "... those providing health benefits beyond basic nutrition and include whole, fortified, enriched or enhanced foods which have a potentially beneficial effect on health ..."

She notes that "eggs have not traditionally been regarded as a functional food, primarily due to concerns about their adverse effects on serum cholesterol levels." However, "it is now known **that there is little if any connection between dietary cholesterol and blood cholesterol levels** ..." she states.

Choline

The importance of the essential nutrient choline and the egg's potential to supply it, was the subject of a presentation by Dr. Steven H. Zeisel, MD, PhD, of the School of Public Health, School of Medicine, University of North Carolina at Chapel Hill, North Carolina, entitled "Choline: Needed For Normal Development of Memory."

"Choline is a dietary component essential for normal function of all cells," states Dr. Zeisel, noting that eggs are an excellent dietary source of choline.

- It is responsible for the structural integrity and signaling functions of cell membranes.
- It is the major source of methyl-groups in the diet (one of choline's metabolites, betaine, participates in the methylation of homocysteine to form methionine)
- It directly affects nerve signaling, cell signaling and lipid transport/metabolism.

In addition, during pregnancy and breastfeeding, choline may be required in greater quantity as the mother's reserves are depleted. This is critical, because the availability of choline for normal brain development is critical.

In experimental rats, newborn rats who received choline supplements, either in utero or during the second week of life, showed improved brain functioning and greater lifelong memory capabilities, probably due to changes in the development of the memory center (hippocampus) in the brain.

According to Dr. Zeisel, "the mother's dietary choline during a critical period in brain development of her infant influences the rate of birth and death of nerve cells in this center." "These changes are so important that we can pick out the groups of animals whose mothers had extra choline even when these animals are elderly."

In other words, if the same association holds true in humans, this means that the memory capacity of an adult is greatly influenced by the diet that his mother ate during her pregnancy.

Dr. Zeisel notes that this critical need for choline during early brain development and is very similar to the need for folate during early gestation as well. "If folate isn't available in the first few weeks of pregnancy, the brain does not form normally," he states.

Therefore, he stresses that pregnancy is a critical period during which special attention has to be paid to ensure adequate dietary intake of various nutrients.