## Why Breastfeeding Lowers Women's Risk of Cardiovascular and Metabolic Diseases Kathleen Kendall-Tackett, Ph.D., IBCLC

Heart disease is the number one killer of women in the world. You may be surprised to learn that breastfeeding can lower women's risk.

An intriguing study was published in the February 2010 issues of *Diabetes*. It was a study of 704 women who were enrolled during their first pregnancy and followed for 20 years. At the end of the study period, they noted that women who had breastfed for at least nine months had a 56% reduction in developing metabolic syndrome during the study period. Metabolic syndrome is the precursor syndrome to Type-2 diabetes and includes a cluster of symptoms such as insulin resistance, high LDL and VLDL cholesterol, high triglycerides, high BMI, and visceral obesity. These symptoms also increase the risk of cardiovascular disease.

Along these same lines, a paper published last year in *Obstetrics & Gynecology* found that post-menopausal women (average age of 60) who had breastfed had significantly lower rates of heart disease, hyperlipidemia, high LDL cholesterol, and a host of other cardiovascular risk factors. Since cardiovascular disease is the number killer of women worldwide, these studies are of interest. But why would breastfeeding lower women's risk of heart disease? To a health psychologist, these findings make perfect sense. And it all has to do with understanding the human stress response. Allow me to illustrate by describing what happens when this stress response is chronically activated.

In the Dunedin Multidisciplinary Health and Development, a birth cohort from Dunedin, New Zealand of 1,037 participants was followed for 32 years. During the first 10 years of the study, the children were assessed for three types of adverse childhood experiences: socioeconomic disadvantage, maltreatment and social isolation. These experiences, particularly if chronic, can permanently upregulate the stress response, increasing the risk for disease. As predicted, when study participants were 32 years old, researchers found that those who experienced adverse childhood experiences had higher rates of major depression, high levels of systemic inflammation, and higher rates of having at least 3 metabolic risk markers (January 2010, Archives of Pediatric & Adolescent Medicine). Each of these factors increases the risk for both cardiovascular disease and diabetes.

So back to our original question: How does *breastfeeding* lower women's risk metabolic and cardiovascular disease? The Dunedin study demonstrates that an upregulated stress response increases the risk for CV and metabolic disease. But what does breastfeeding do? Several studies conducted with mothers of infants have shown that breastfeeding downregulates stress in both mothers and babies. In fact, after breastfeeding, women are less stress-responsive in laboratory settings, meaning that when researchers try to stress them in the half hour or so after breastfeeding, the mothers show less of a stress response. That's the short-term effect of breastfeeding.

The results of the recent studies on cardiovascular disease and metabolic syndrome suggest that breastfeeding has a far longer-term stress-lowering effect than anyone suspected. Breastfeeding appears to have permanently changed women's stress response, lowering their overall risk of disease in their 60s, 70s and beyond. And that is great news indeed.

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