

# Optimal red blood cell folate level about 1,000 nmol/L

August 4 2014

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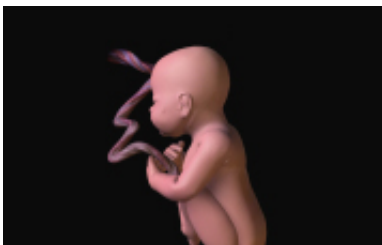


Image courtesy of Blausen Medical

(HealthDay)—The optimal population red blood cell folate level for prevention of neural tube defects could be defined as approximately 1,000 nmol/L, according to research published online July 29 in *BMJ*.

Krista S. Crider, Ph.D., from the U.S. Centers for Disease Control and Prevention in Atlanta, and colleagues used data from two population-based studies in China to determine an optimal population red blood cell folate concentration for the prevention of neural tube birth defects. The studies included 247,831 participants in a prospective community intervention project and 1,194 participants in a randomized trial; in both studies the intervention was 400 µg/day folic acid supplementation.

The researchers found that at the lowest estimated red blood cell folate concentrations the risk of neural tube defects was high (for example,

25.4 defects per 10,000 births at 500 nmol/L); the risk decreased with increasing estimated red blood cell folate concentration. At estimated red blood cell folate concentrations above about 1,000 nmol/L the risk of neural tube defects was attenuated substantially (for example, six defects per 10,000 births at 1,180 nmol/L). These estimates of [neural tube](#) defect risk were consistent with the prevalence of defects in the U.S. population before and after [folic acid](#) food fortification.

"A threshold for 'optimal' population [red blood cell](#) folate concentration for the prevention of [neural tube defects](#) could be defined (for example, approximately 1,000 nmol/L)," the authors write.

**More information:** [Full Text Editorial](#)

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