Online Supporting Material

Description of the linear regression models used to assess the effect of gender and body size on the erythrocyte folate response

We calculated the percentage of the gender difference in erythrocyte folate response to folic acid treatment that was explained by body size with the following formula:

\[
\text{Percentage} = 100 \times \left( \frac{\beta_{\text{gender}} - \beta_{\text{gender}&\text{bodysize}}}{\beta_{\text{gender}}} \right)
\]

For the three year trial, the betas were estimated with the following models.

\((\beta_{\text{gender}})_{\text{gender}}\) was the slope for gender in the model with gender as the only independent variable:

\[
\text{Response of erythrocyte folate (nmol/L)} = \text{intercept} + (\beta_{\text{gender}})_{\text{gender}} \times \text{gender}
\]

All subjects received the same dose of folic acid in this trial, and thus we did not include the variable ‘dose of folic acid’ in the analysis of the three-year trial.

\((\beta_{\text{gender}})_{\text{gender}&\text{bodysize}}\) was the slope for gender in the model that also included body size as independent variable:

\[
\text{Response of erythrocyte folate (nmol/L)} = \text{intercept} + (\beta_{\text{gender}})_{\text{gender}&\text{bodysize}} \times \text{gender} + \beta_{\text{body size}} \times \text{body size}
\]

We separately included height (in m), weight (in kg) lean body mass (in kg), or body surface area (in m\(^2\)) as indicator of body size.

For the 12-week trial, the regression models we used were slightly different, since the variable ‘dose of folic acid’ was included in the models. Thus, \((\beta_{\text{gender}})_{\text{gender}}\) was derived from the following model:

\[
\text{Response of erythrocyte folate (nmol/L)} = \text{intercept} + (\beta_{\text{gender}})_{\text{gender}} \times \text{gender} + \beta_{\text{dose of folic acid}} \times \text{dose of folic acid (µg/day)}
\]

And \((\beta_{\text{gender}})_{\text{gender}&\text{bodysize}}\) was estimated with the following model:

\[
\text{Response of erythrocyte folate (nmol/L)} = \text{intercept} + (\beta_{\text{gender}})_{\text{gender}&\text{body size}} \times \text{gender} + \beta_{\text{dose of folic acid}} \times \text{dose of folic acid (µg/day)} + \beta_{\text{body size}} \times \text{body size}
\]