

## Supplemental Material

Impact of menstrual pain on quality of life in past 12 months.

In the computer-assisted web interview (CAWI), data were collected on the impact of menstrual cramps or discomfort on quality of life during the 12 months before the interview. The questions included: (1) the extent to which menstrual cramps or discomfort were a problem (not a problem, a small problem, a medium problem, a big problem); (2) the extent to which menstrual cramps or discomfort interfered with being able to do things that the participant likes to do or has to do (not at all, a little, some, a lot) and (3) among those reporting daily activity interference by menstrual cramps, the number of days in the past 12 months that the participant missed work or stopped home activities because of menstrual cramps or discomfort (continuous).

We categorized problems with menstrual cramps/discomfort as 'medium/big problem' and 'not a problem/small problem', interference from menstrual cramps/discomfort as 'some/a lot' and 'not at all/a little', and the number of missed days as 'no days' and 'any days',

and included those who reported no interference with daily activities in the 'no days' category. We chose these categories to maximize the number of exposed women with adverse quality of life outcomes as these outcomes were only considered among a subset of participants who reported menses in the prior year and no use of hormonal birth control or medication that effects menses. Starting with the 1553 participants with data on soy formula feeding, we excluded participants who reported not having menses in the year before study interview ( $n = 124$ ) or in the year before the last menstrual period ( $n = 22$ ), and participants who were using hormonal birth control or medication that affects the frequency of menses or induces cessation of menses at any time during the year before the last menstrual period ( $n = 469$ ) or at the time of interview ( $n = 82$ ). Since the use of medication to alleviate menstrual pain would obscure the assessment of its impact on quality of life, we additionally excluded participants currently taking medication to treat or prevent menstrual cramps, pelvic pain or discomfort ( $n = 434$ ). This resulted in a subset of 422 participants for the evaluation of soy formula and the impact of menstrual pain on quality of life in past 12 months.