**MEMORANDUM**

PROJECT: Balanced energy protein (BEP) on maternal and child health outcomes

FROM: Nicole Young

DATE: 20th July 2020

RE: Documentation of the control groups of BEP trials from Ota 2015 Cochrane review

**BACKGROUND**: This is to understand what the ∆effect of the BEP intervention contains- whether the effect size is energy+protein+vitamins+minerals or just energy+protein. Comparing intervention vs control group of the studies taken from the Ota 2015 review in the malnourished/normal groups, the ∆effect of the BEP intervention is energy + protein only. Hence, the way we applied the intervention effect in the Feb 2020 BEP model was correct.

An extra note however, the interventions started at different times, some earlier and some in third trimester. Hence we should be careful on how when our BEP intervention should start so that the effect size we are picking up from the literature is applied correctly.

**DATA**:

|  |  |  |  |
| --- | --- | --- | --- |
| **Study** | | **BEP group** | **Placebo or no intervention** |
| **Malnourished group** | | | |
| Blackwell 1973 | Taiwan | chocolate-flavoured liquid supplement given twice daily beginning after prior birth and continuing during index pregnancy until 15 months postpartum; supplement contained 40 g protein and 800 kcal energy plus **vitamins/minerals** | supplement containing **vitamins and minerals** only, but given at the same time and for the same duration. |
| [Ceesay 1997](https://pubmed.ncbi.nlm.nih.gov/9345173/) | Gambia | 2 supplement biscuits containing roasted groundnuts, rice flour, sugar, and groundnut oil (4250 kJ (1017 kcal) energy, 22 g protein, 56 g fat, 47 mg calcium, and 1.8 mg iron) consumed daily in presence of birth attendants. Supplementation began at 20 weeks' gestation. | no supplement  (Women in both the control and the intervention villages received routine antenatal care from midwives in a mobile clinic that visited each village twice monthly. **All women received graded, combined iron and folate supplements according to their haemoglobin concentration.** Tetanus toxoid was given to all women not previously protected, and during the hungry season all women received a weekly prophylactic dose of chloroquine. |
| Girija 1984 | India (women in last trimester) | supplement containing 50g sesame cake, 40g jaggery, and 10g oil (417 kcal energy and 30 g protein) | normal (un-supplemented) diet. Third trimester women only |
| Huybregts 2009 | Burkina faso | prenatal multiple micronutrient + fortified food supplement | multiple micronutrient |
| Kardjati 1988 | East Java | supplement containing a dry powder (50% fat, 10% casein, and 40% glucose) providing 465 kcal energy and 7.1 g protein ('high energy') | supplement containing 52 kcal energy and 6.2 g protein ('low energy') Third trimester women only. |
| Mora 1978 |  | supplement containing 60g dried skim milk, 150g enriched bread, and 20gg vegetable oil (856 kcal energy and 38.4 g protein) beginning in third trimester | normal (unsupplemented) diet. Third trimester women only |
| Rush 1980 | Harlem, NY | Experimental (1): balanced energy/protein 16-oz beverage supplement containing 322 kcal energy, 6g protein, and **vitamins/minerals** ('complement').  Experimental (2): high-protein 16-oz beverage supplement containing 470 kcal + 40g protein per day + **vitamins and minerals.** | supplement containing **vitamins/minerals** only |
| Viegas 1982b | Asian women in UK | supplement of flavoured carbonated glucose drink providing 273 kcal energy (with 11% of energy as protein) plus **vitamins** from 18 to 38 weeks | supplement of flavoured carbonated water containing **iron and vitamin C** |
| Normal group | | | |
| Blackwell 1973 | Taiwan | See above |  |
| Elwood 1981 | Wales, UK | free tokens worth ½ pint milk each. | no intervention. |
| Huybregts 2009 | Burkina faso | See above |  |
| Ross 1985 |  | supplement containing 700-800 kcal energy and 36-44 g protein. 2 types of supplements were given: a high-bulk mixture of beans and maize, given as mush with **added vitamins**, and a low bulk porridge containing dried skimmed milk, maize, flour**, vitamins, and minerals**; the high- and low bulk groups are combined in the experimental group for this review. | placebo pills |
| Viegas 1982a | Asian women in UK |  |  |
| Viegas 1982b | Asian women in UK | See above |  |