

**Table S1.** Intervention arms<sup>1</sup> at 4 primary schools in Nelson Mandela Bay, South Africa carried out between April 2019 and September 2019.

School	Grade level			
	1	2	3	4
1	PA + Placebo	PA + MMNS	MMNS	Placebo
2	Placebo	PA + Placebo	PA + MMNS	MMNS
3	MMNS	Placebo	PA + Placebo	PA + MMNS
4	PA + MMNS	MMNS	Placebo	PA + Placebo

Notes. <sup>1</sup> PA = Physical activity, MMNS = Multi-micronutrient supplementation, Placebo = Placebo control-group condition.

**Table S2.** Composition of the MMNS used in the intervention study.

Nutrient	Amount per tablet (mg)	Overage <sup>1</sup> %
$\beta$ -carotene (Provitamin A)	3600 (equiv. to 2000 IU Vit. A)	60%
Cholecalciferol (Vit. D <sub>3</sub> )	0.010	60%
Rac- $\alpha$ -tocopherylacetate, TE-3 (Vit. E)	9.0	60%
Thiamine (Vit. B <sub>1</sub> )	1.1	60%
Riboflavin (Vit. B <sub>2</sub> )	0.5	60%
Pyridoxine (Vit. B <sub>6</sub> )	0.5	60%
Folic acid (Vit. B <sub>9</sub> )	0.2	60%
Niacin (Vit. B <sub>3</sub> )	8.0	60%
Vitamin B <sub>12</sub>	0.0012	60%
Ascorbic acid (Vit. C)	60	60%
Iron (as NsFeEDTA)	8.0	60%
Iodite	0.1	60%
Selenium	0.02	60%
Zinc	5.0	60%
Carrier <sup>2</sup>		

Notes. <sup>1</sup> Overage of 60% were added to ensure required amounts during 12-month shelf life. <sup>2</sup> Carrier is used to indicate that the amount of carrier needed to have a total of 1 kg/kg was added. Vit. = Vitamin, equiv. = equivalent, NsFeEDTA = sodium ferric ethylenediaminetetraacetate.