

**Evaluating an intervention to increase cereal fiber intake in children: a randomized controlled feasibility trial. (AS Donin)**

On-line Supplementary Material

Supplementary Table 1: Breakfast cereals included in the trial

	Breakfast cereal (suggested serving)	Fiber content per serving	Energy content per serving	Fiber content per 100g	Energy content per 100g
High Fiber Cereals:	Weetabix (2 biscuits)	3.8g	136kcal	10g	362kcal
	Wholegrain apricot wheats (per 45g)	3.8g	151kcal	8.3g	335kcal
	Malted wheats (per 40g)	4.3g	144kcal	10.9g	360kcal
	Crunchy bran (per 40g)	8.0g	140kcal	22g	351kcal
Low Fiber Cereals:	Rice Crispies (per 30g)	0.6g	116kcal	2.0g	387kcal
	Cornflakes (per 30g)	0.9g	113kcal	3.0g	378kcal
	Balance (per 30g)	0.8g	114kcal	2.7g	382kcal

Supplementary Table 2: Key constructs, behaviour change techniques and study activities they relate to.

<b>Key constructs</b>	<b>Behaviour change technique definition (23)</b>	<b>Activity</b>
<b>Self-Efficacy</b> Confidence in the ability to consume the designated breakfast cereal on a daily basis.	Action Planning	-Introduce breakfast cereals using taster sessions to assess palatability and preferences -Tailor the participant's individual choice of cereal for the duration of the trial to ensure the intervention is enjoyable for the participant and increase motivation to succeed -Provide free breakfast cereals -Recommendation to eat allocated cereal every day for one month
<b>Social Support</b> Extent to which support from family members and research team aids in behaviour change	Plan social support/social change	-Identify and encourage appropriate social support (e.g., positive reinforcement from family, family monitoring of progress on wall chart) -school visit from researcher mid-trial
<b>Self-regulation</b> Learning skills which increase motivation towards the desired breakfast behaviour and increase ability to resist alternative behaviour, such as alternative cereals or not eating breakfast	Barrier identification/problem solving  Teach to use prompts/cues  Prompt self-monitoring of behaviour	-Evaluation and reflection (information and education given by research team at baseline, mid-point and on completion; participation pack to encourage and motivate continued behaviour change) -Self monitoring (breakfast diary, wall chart with stickers)
<b>Outcome expectations</b> Having a strong belief in the value of switching to the designated cereal	Provide information on consequences of behaviour in general	-Provide information/education -Message: "Eating breakfast every day is important for health. You are helping us with important research to investigate the effect of the content of breakfast cereal on your health"
<b>Environmental factors</b> Create an environment which fosters behaviour change	Environmental restructuring  Use of follow-up prompts	-Create triggers in environment (wall chart; fridge magnets, cereal out and ready the night before; study bowl; school visit from researcher mid-trial)
<b>Motivation</b> Maintain a strong desire to continue behaviour change	Stimulate anticipation of future rewards	-Put in place personalised rewards (offer of gift vouchers on completion and return of wall chart and diary)

Supplementary table 3: Baseline characteristics by intervention group for 193 subjects with fasting measures of plasma AR at baseline and follow-up<sup>1</sup>

	Intervention group, median (IQR)					
	Low fiber n=106		High fiber n=87		All n=193	
Age, y	9.9	(9.6, 10.2)	9.9	(9.6, 10.2)	9.9	(9.6, 10.2)
Sex, % female	57%		62%		59%	
Ethnicity, n (%)						
White European	50	(47.2%)	39	(44.8%)	89	(46.1%)
Black African	9	(8.5%)	15	(17.2%)	24	(12.4%)
South Asian	27	(25.5%)	21	(24.1%)	48	(24.9%)
Other	20	(18.9%)	12	(13.8%)	32	(16.6%)
Total energy intake <sup>2</sup> , kcal/d	1,376	(1,095, 1,668)	1,279	(1,050, 1,685)	1,326	(1,069, 1,670)
Cereal Fiber intake <sup>2</sup> , g/d	4.2	(2.6, 6.6)	4.6	(2.9, 6.6)	4.5	(2.8, 6.6)
Carbohydrate <sup>2</sup> , g/d	195	(156, 236)	188	(149, 238)	193	(150, 237)
Protein <sup>2</sup> , g/d	53.4	(40.6, 63.1)	49.3	(36.8, 66.5)	50.7	(38.7, 64.7)
Fat <sup>2</sup> , g/d	45.0	(35.8, 61.0)	43.1	(28.5, 64.9)	44.1	(32.3, 61.7)
Weight, kg	33.3	(29.4, 40.5)	34.3	(30.7, 39.1)	33.8	(30.2, 39.7)
Fat mass, kg	7.5	(5.8, 10.8)	7.9	(6.1, 9.9)	7.6	(6.1, 10.1)
Fat mass, %	22.9	(19.8, 27.6)	22.5	(20.0, 26.7)	22.7	(19.9, 26.7)
Baseline fasting plasma analytes						
Total AR, nmol/L	42.7	(21.9, 86.8)	44.4	(26.6, 89.5)	43.2	(24.3, 87.3)
Insulin, mU/L	6.5	(4.5, 10.2)	7.1	(5.0, 8.8)	6.8	(4.8, 9.5)
Glucose <sup>3</sup> , mmol/L	4.5	(4.2, 4.7)	4.5	(4.3, 4.7)	4.5	(4.2, 4.7)
LDL cholesterol, mmol/L	2.0	(1.7, 2.4)	2.0	(1.5, 2.5)	2.0	(1.6, 2.4)
HDL cholesterol, mmol/L	1.5	(1.2, 1.7)	1.4	(1.2, 1.7)	1.4	(1.2, 1.7)
TGs, mmol/L	0.6	(0.5, 0.7)	0.6	(0.5, 0.8)	0.6	(0.5, 0.8)
Vitamin C <sup>4</sup> , µmol/L	67.8	(52.6, 84.0)	69.4	(59.6, 81.0)	69.4	(55.8, 82.6)
Baseline fasting HbA1c <sup>5</sup> , mmol/mol	33.1	(31.4, 35.1)	33.2	(31.8, 34.7)	33.1	(31.6, 34.7)

<sup>1</sup>Values represented are median (IQR) or frequency (%)

Missing data: <sup>2</sup> low fiber: n=4; <sup>3</sup> low fiber: n=1, high fiber: n=1; <sup>4</sup> low fiber: n=3, high fiber: n=2; <sup>5</sup> low fiber: n=1;