

Supplementary Table S1: Inclusion and exclusion criteria in the PREVIEW screening.

Inclusion criteria:

- 1) Age: 25 to 70 years
- 2) Body mass index: ≥ 25.0 kg/m²
- 3) Pre-diabetes, assessed immediately during screening by HemoCue™ (Angelholm, Sweden), Reflotron™ (Roche diagnostics, Switzerland) or EML105 Radiometer (Copenhagen, Denmark): The criteria from WHO/IDF (International Diabetes Foundation) for assessing pre-diabetes will be used as the formal inclusion criteria, i.e. having:
 - Impaired Fasting Glucose (IFG): Fasting venous plasma glucose concentration 5.6–6.9 mmol/l or
 - Impaired Glucose Tolerance (IGT): Venous plasma glucose concentration of 7.8–11.0 mmol/l at 2 h after oral administration of 75 g glucose (oral glucose tolerance test, OGTT), with fasting plasma glucose less than 7.0 mmol/l.
- 4) Signed informed consent.
- 5) Smoking is allowed, provided subjects have not recently (within one month) changed habits. However, smoking status is monitored throughout the study and used as a confounding variable.
- 6) Motivation and willingness to be randomized to any of the groups and to do his/hers best to follow the given protocol.
- 7) Able to participate at Clinical Investigation Days during normal working hours.

Exclusion criteria:

A. Medical conditions as known by the subjects:

- 1) Diabetes mellitus (other than gestational diabetes mellitus);
- 2) Significant cardiovascular disease including current angina; myocardial infarction or stroke within the past six months; heart failure; symptomatic peripheral vascular disease;
- 3) Systolic blood pressure above 160 mmHg and/or diastolic blood pressure above 100 mmHg whether on or off treatment for hypertension. If being treated, no change in drug treatment within the last three months. There will be no criteria for blood pressure limits in children and adolescents;
- 4) Advanced chronic renal impairment;
- 5) Significant liver disease, e.g., cirrhosis (fatty liver disease allowed);
- 6) Malignancy which is currently active or in remission for less than five years after last treatment (local basal and squamous cell skin cancer allowed);
- 7) Active inflammatory bowel disease, celiac disease, chronic pancreatitis, or other disorder potentially causing malabsorption;
- 8) Previous bariatric surgery;
- 9) Chronic respiratory, neurological, musculoskeletal or other disorders where, in the judgement of the investigator, participants would have unacceptable risk or difficulty in complying with the protocol (e.g. physical activity program);
- 10) A recent surgical procedure until after full convalescence (investigators judgement);

- 11) Transmissible blood-borne diseases, e.g., hepatitis B, HIV;
- 12) Psychiatric illness (e.g. major depression, bipolar disorder).

B. Medication:

- 13) Use, currently or within the previous three months, of prescription medication that has the potential of affecting body weight or glucose metabolism, such as glucocorticoids (but excluding inhaled and topical steroids; bronchodilators are allowed), psychoactive medication, epileptic medication, or weight loss medications (either prescription, over the counter or herbal). Low-dose antidepressants are allowed if they, in the judgement of the investigator, do not affect weight or participation to the study protocol. Levothyroxine for treatment of hypothyroidism is allowed if the participant has been on a stable dose for at least three months.

C. Personal/Other:

- 14) Engagement in competitive sports;
- 15) Self-reported weight change of >5 % (increase or decrease) within two months prior to screening;
- 16) Special diets (e.g. vegan, Atkins) within two months prior to study start. A lacto-vegetarian diet is allowed;
- 17) Severe food intolerance expected to interfere with the study;
- 18) Regularly drinking >21 alcoholic units/week (men), or >14 alcoholic units/week (women);
- 19) Use of drugs of abuse within the previous 12 months;
- 20) Blood donation or transfusion within the past one month before baseline or CIDs;
- 21) Self-reported eating disorders;
- 22) Pregnancy or lactation, including plans to become pregnant within the next 36 months.
- 23) No access to either phone or Internet (this is necessary when being contacted by the instructor's during the maintenance phase);
- 24) Inadequate understanding of national language;
- 25) Psychological or behavioural problems which, in the judgement of the investigator, would lead to difficulty in complying with the protocol.

Supplementary Table S2: Questionnaires on moderators, mediators, behaviour and social environment.

2a. General Description

Level	Variables (moderators, mediators, confounders)	Instrument	Items
Environmental variables	Recommended physical activity availability and accessibility	Influence on Physical activity Instrument [IPAI subscale environment; Donahue, Mielenz, Sloane, Callahan and Devellis, 2006]	5
	Physical inactivity temptations	Subscale competing demands from the Temptation to not exercise scale [Hausenblas et al. 2001]	6
	Recommended food availability and accessibility	Self-constructed items	7
	Food temptations	Self-constructed items	7
Social/ interpersonal variables	Social support for diet and exercise	Social support for diet and exercise scales [Sallis, Grossmann, Pinski, Patterson and Nader, 1987]	46
	Teachable moments	Social Readjustment Rating Scale [Holmes and Rahe, 1967]	8 + X (Filter)
Individual variables	Socio-demographic and economic status	European Social Survey and International Social Survey (choice of items)	18
	Previous negative attempts of weight reduction	Self-constructed items	2
	Habit strength of physical inactivity and poor diet	Habit strength measure [Wood, Tam and Guerro Witt, 2005]	12
	Intention	Self-constructed items [adapted from Schwarzer and Renner, 2011]	3
	Self-efficacy (physical activity and nutrition)	The nutrition self-efficacy scale and The physical exercise self-efficacy scale [Schwarzer and Renner, 2005]	5 + 5
	Causal attributions (for weight outcomes)	Attributional weight outcome scale [Brubacker, 1988]	15
	Self-regulation goal adjustment	Goal Adjustment Scale [Wrosch et al., 2003]	10
	Coping self-efficacy	Coping self-efficacy for physical activity and healthful nutrition [Schwarzer and Renner, 2000]	11+ 3

Level	Variables (moderators, mediators, confounders)	Instrument	Items
	Perceived stress	Perceived Stress Scale [PSS; Cohen, 1983]	10
	Outcome expectancies	Outcome expectancy of behaviour change (subscale for change of nutrition habits and subscale for exercise [Renner and Schwarzer, 2005]	12 + 13
	Self-regulation of motivation	Treatment self-regulation questionnaire for diet and exercise [TRSQ; Levesque et al., 2007]	15 + 15
Secondary endpoints	Quality of Life	WHOQOL-BREF [The WHOQOL Group, 1998]	26
	Work ability ^{a)}	Work Ability Index [WAI; Tuomi, et al., 1998]	24

a) employees

2b. Questionnaire List “Other Lifestyle Variables” – ADULTS

Variables (moderators, mediators, confounders)	Instrument (Reference)
Recommended physical activity availability and accessibility	Influence on Physical Activity Instrument [IPAI subscale environment; Donahue, Mielenz, Sloane, Callahan and Devellis, 2006]
Physical inactivity temptations	Subscale competing demands from the Temptation to not exercise scale [Hausenblas, Nigg, Dannecker, Symons Downs, Gardner, Fallon, Focht, Loving, 2001]
Recommended food availability and accessibility	Self-constructed items
Food temptations	Self-constructed items
Social support for diet and exercise	Social support for diet and exercise scales [Sallis, Grossmann, Pinski, Patterson and Nader, 1987]
Teachable moments	Social Readjustment Rating Scale [Miller and Rahe, 1997]
Socio-demographic and economic status	European Social Survey and International Social Survey (choice of items)
Previous negative attempts of weight reduction	Self-constructed items
Habit strength of physical inactivity and poor diet	Habit strength measure [Wood, Tam and Guerro Witt, 2005]
Intention	Self-constructed items [adapted from Schwarzer and Renner, 2010]
Self-efficacy (physical activity and nutrition)	The nutrition self-efficacy scale and The physical exercise self-efficacy scale [Schwarzer and Renner]
Causal attributions (for weight outcomes)	Attributional weight outcome scale [Brubaker, 1988]
Self-regulation goal adjustment	Goal Adjustment Scale [Wrosch, Scheier, Miller, Schulz, Carver, 2003]
Coping self-efficacy	Coping self-efficacy for physical activity and healthful nutrition [Schwarzer and Renner, 2000]
Perceived stress	Perceived Stress Scale [PSS; Cohen, 1983]
Outcome expectancies	Outcome expectancy of behaviour change (subscale for change of nutrition habits and subscale for exercise [Renner and Schwarzer, 2010]
Self-regulation of motivation	Treatment self-regulation questionnaire for diet and exercise [TRSQ; Levesque, Williams, Elliot, Pickering, Bodenhamer and Finley, 2007]

2c. Questionnaire List “Secondary Outcomes”—Adults

Questionnaire no	Variables (moderators, mediators, confounders)	Instrument (Reference)
Q-25	Quality of Life	WHOQOL-BREF [The WHOQOL Group, 1998]
Q-26	Work ability ^{a)}	Work Ability Index [WAI; Tuomi, et al., 1998]

References for Supplementary Table S2

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