

Associations between dietary patterns and metabolic syndrome in older adults in New Zealand: the REACH study.

Supplementary Table 1: Grouping of REACH FFQ food items into food groups for dietary pattern analysis

Food groups (<i>n</i> 57)	Food items (<i>n</i> 109)
Beer	Beer, lager, cider (all varieties)
Other alcohol	Port, sherry, liquors; ready to drink alcoholic beverages; spirits e.g., gin, brandy, whiskey, vodka; white wine
Red wine	Red wine
Bran cereal	Bran based cereals, muesli, porridges – e.g., rolled oats, oat bran, oatmeal, All Bran, Sultana bran
Refined grains	White bread and rolls including sliced and specialty breads such as foccacia, panini, pita, naan, chapatti, ciabatta, Turkish, English muffin, crumpets, pizza bases, wraps, tortilla's, burrito, roti, rewena bread; white pasta, noodles e.g., spaghetti, canned spaghetti, vermicelli, egg noodles, rice noodles, instant noodles; white rice
Snacks	Crackers e.g., crisp bread, water crackers, rice cakes, cream crackers, Cruskits, Mealmates, vitawheat; muesli or cereal bar (all varieties)
Sweetened cereals	Other breakfast cereals e.g., Special K, Light and tasty; sweetened cereals e.g., Nutrigrain, Fruit Loops, Honey Puffs, Frosties, Milo cereal, CocoPops; Weetbix, cornflakes or rice bubbles
Whole grains	Brown rice; couscous, polenta, congee, Bulgur wheat, quinoa e.g., tabbouleh; whole grain or multigrain bread and rolls including sliced and specialty breads; wholemeal or wheatmeal bread and rolls including sliced and specialty breads; wholemeal pasta, noodles
Cheese	Cheese e.g., Cheddar, Colby, Edam, Tasty, blue vein, camembert, parmesan, gouda, feta, mozzarella, brie, processed; cottage cheese, ricotta cheese
Creamy dairy	Cream, sour cream, cream cheese, cheese spreads
Milk	Cow's milk including milk as a drink, milk added to drinks (e.g., milky coffees), milk added to cereal
Other milks (non-dairy)	Soy milk, coconut milk, rice milk, almond milk
Sweetened dairy products	Ice cream; milk-based puddings e.g., rice pudding, custard, semolina, instant puddings, dairy food; smoothies, milk shakes (made from milk, yoghurt, ice cream), flavoured milk
Yoghurt	Yoghurt

Food groups (<i>n</i> 57)	Food items (<i>n</i> 109)
Dried legumes	Beans (canned or dried) e.g., black beans, butter beans, haricot beans, kidney beans, cannellini beans, refried beans, baked beans, chilli beans; peas and lentils e.g., chickpeas, hummus, falafels, split peas, cow peas, dahl
Eggs	Eggs – boiled, poached, raw; eggs - fried, scrambled, egg-based dishes including quiche, soufflés, frittatas, omelettes
Nuts, seeds	Nut butters or spreads e.g., peanut butter, almond butter, pesto; nuts e.g., peanuts, mixed nuts, macadamias, pecan, hazelnuts, brazil nuts, walnuts, cashews, pistachios, almonds; seeds e.g., pumpkin seeds, sunflower seeds, pinenuts, sesame seeds, tahini
Soy-based foods	Tofu, soybeans, tempeh, vegetarian sausages / meat, vegetarian burger patty, textured vegetable protein
Oily fish	Albacore tuna, salmon, sardines, herring, kahawai, swordfish, carp, dogfish, gemfish, alfonsino, rudderfish, anchovies; mackerel, snapper, oreo, barracouta, trevally, dory, trout, eel
Processed fish	Crumbed fish e.g., patties, cakes, fingers, nuggets; fish fried in batter (from fish & chips shop)
White fish, shellfish	Green mussels, squid; shellfish e.g., cockles, kina, oysters, paua, scallops, shrimp/prawn, pipi, roe; tuna (canned), hoki, gurnard, hake, kingfish, cod, tarakihi, groper, flounder
Apples, pears	Apples, pears, nashi pears
Avocados, olives	Avocado; olives
Bananas	Banana
Berries	Strawberries, blackberries, cherries, blueberries, boysenberries, loganberries, cranberries, gooseberries, raspberries (fresh, frozen, canned)
Citrus fruit	Citrus fruits e.g., orange, tangelo, tangerine, mandarin, grapefruit, lemon, lime
Dried fruit	Dried fruit e.g., sultanas, raisins, currants, figs, apricots, prunes, dates
Other fruit	All other fruit e.g., feijoa, persimmon, tamarillo, kiwifruit, grapes, mango, melon, watermelon, pawpaw, papaya, pineapple, rhubarb
Stone fruit	Stone fruit e.g., apricots, nectarines, peaches, plums, lychees
Poultry	Chicken, turkey, or duck e.g., roast, steak, fried, steamed, BBQ, casserole, stew, stir fry, curry, mince dishes, frozen dinners
Processed meat	Corn beef (canned), boil up ^a , pork bones, lamb flaps, povi masima ^b ; ham, bacon, luncheon sausage, salami, pastrami, other processed meat; sausages, frankfurters, cheerios ^c , hot dogs
Red meat	Beef, lamb, hogget, mutton, pork, veal e.g., roast, steak, fried, chops, schnitzel, silverside, casserole, stew, stir fry, curry, BBQ, hamburger meat, mince dishes, frozen dinners; liver, kidney, other offal (including pate)
Butter, coconut	Butter, ghee; coconut cream; coconut oil
Cakes, biscuits, and puddings	Biscuits, chocolate or cream filled; biscuits, plain; cakes, slices, pastries; non-milk-based puddings e.g., pavlova, sweet pastries, fruit pies, trifle; pancakes, waffles, sweet buns, scones, sweet muffins, fruit bread, croissants, doughnuts, brioche

Food groups (<i>n</i> 57)	Food items (<i>n</i> 109)
Chocolate	Chocolate (all other varieties)
Confectionery	Jam, marmalade, honey, syrups, sweet spreads or preserves; sugar (all varieties) added to food/drinks; sweets, lollies
Salad dressings	Creamy dressings e.g., mayonnaise, tartar, thousand island, ranch dressing; light dressings e.g., French and Italian dressing, balsamic vinegar
Meat pies, chips	Hot potato chips, French fries, wedges; meat pies, sausage rolls; potato crisps
Sauces, condiments	Pickles, chutney, mustard; tomato sauce, barbeque sauce, sweet chilli sauce; white sauce, cheese sauce, gravies
Soup	Soup, homemade or canned
Spices	Spices e.g., turmeric, ginger, cinnamon
Vegetable oils	Margarine; vegetable oils
Yeast spreads	Marmite, vegemite
Diet drinks	Diet soft/fizzy drinks e.g., Sprite Zero, Diet Coke, Coke Zero; low calorie cordials
Juices	Fruit and vegetable juices (all varieties)
Sugary drinks	Cordials including syrups, powders e.g., Raro; energy drinks e.g., Red Bull, V; hot chocolate, drinking chocolate, Cocoa, Ovaltine, Nesquik, Milo; soft/fizzy drinks e.g., Sprite, Coke; sports drinks e.g., Powerade
Tea, coffee	Coffee (all varieties); herbal tea, fruit tea; tea
Water	Water including tap, bottled or sparkling water
Alliums	Onions, leeks, garlic
Carrots	Carrots
Cruciferous vegetables	Broccoli, cauliflower, Brussel sprouts, cabbage (all varieties)
Fresh, frozen legumes	Green beans, broad beans, runner beans; peas, green
Leafy cruciferous vegetables	Green leafy vegetables e.g., spinach, silver beet, swiss chard, watercress, puha, whitloof, chicory, kale, chard, collards, Chinese kale, bok choy, taro leaves (palusami)
Other vegetables	All other vegetables e.g., corn, pumpkin, mushrooms, capsicum, peppers, courgette, zucchini, gherkins, marrow, squash, asparagus, radish, eggplant, artichoke
Root vegetables	Kumara, taro, green banana, cassava e.g., boiled, mashed, baked, roasted; other root vegetables e.g., yams, parsnip, swedes, beetroot, turnips; potato e.g., boiled, mashed, baked, jacket, instant, roasted
Salad vegetables	Salad vegetables e.g., lettuce, cucumber, celery, sprouts
Tomatoes	Tomatoes (all varieties)

FFQ, food frequency questionnaire; REACH, Researching Eating, Activity, and Cognitive Health

^a traditional Māori food consisting of boiled meat and vegetables

^b brined beef brisket

^c processed sausage

Supplementary Table 2: Factor loadings^{a, b} for three major dietary patterns identified from the REACH food frequency questionnaire using principal component analysis (n 367)

Food groups (n 57)	Mediterranean style	Prudent	Western
Salad vegetables	0.64		
Leafy cruciferous vegetables	0.57	0.23	
Other vegetables	0.56		
Avocados, olives	0.51		
Alliums	0.47	0.15	
Nuts, seeds	0.45	0.26	
White fish, shellfish	0.45		
Oily fish	0.42		
Berries	0.41		
Water	0.40	0.18	-0.16
Salad dressings	0.39	-0.18	0.35
Cruciferous vegetables	0.39	0.24	
Eggs	0.34		
Cheese	0.33	-0.18	0.34
Tomatoes	0.33		
All other fruit	0.32	0.22	
Dried legumes	0.15	0.68	
Soy-based foods		0.65	
Fresh, frozen legumes		0.54	0.20
Whole grains		0.51	0.24
Carrots	0.28	0.48	
Spices	0.23	0.30	
Processed meats		-0.29	0.59
Sauces, condiments	0.23		0.52
Cakes, biscuits, and puddings	-0.26		0.51
Meat pies, chips	-0.28		0.47
Processed fish			0.41
Confectionery	-0.22		0.39
Vegetable oils			0.36
Beer		-0.21	0.35
Chocolate			0.35
Sweetened cereal	-0.19		0.30
Stone fruit	0.29		0.18

Food groups (<i>n</i> 57)	Mediterranean style	Prudent	Western
Apples, pears	0.26	0.28	
Dried fruit	0.23	0.25	
Butter, coconut	0.23	-0.20	
Yoghurt	0.19	0.16	
Root vegetables	0.17	0.29	0.24
Red wine	0.15	-0.27	0.16
Refined grains		0.29	0.21
Other milks (non-dairy)		0.28	
Poultry		0.21	0.15
Citrus fruit		0.21	
Bran cereal		0.20	
Bananas		0.17	
Tea, coffee		-0.21	0.21
Other alcohol		-0.21	
Red meat			0.29
Diet drinks			0.28
Sugary drinks			0.25
Milk			0.25
Snacks			0.24
Sweetened dairy products			0.20
Yeast spreads			
Creamy dairy			
Juices			
Soup			
Dietary pattern score range	-2.32 to 4.26	-2.49 to 8.31	-1.93 to 3.82
Variance explained %	7.20	5.30	5.60
Eigenvalue	4.12	3.04	3.18

REACH, Researching Eating, Activity and Cognitive Health

^a Loadings between 0.15 and -0.15 excluded for ease in presentation. **Loadings in bold** ≥ 30 are considered significant

^b Positive loadings are positively associated, and negative loadings are negatively associated with the dietary pattern - a higher loading indicates a greater contribution to the dietary pattern.