

Supplemental Table 1. Components and scoring methods of the Recommended Food Score (RFS)

Dietary Indicator	Indicator food groups¹	Criteria for scoring
1. Fruits	<ol style="list-style-type: none"> 1. Pome fruit (apples, pears) 2. Berry fruit (berry) 3. Citrus fruit (orange, satsuma, grapefruit) 4. Stone fruit (nectarine, peach, plum, cherry, prune) 5. Tropical and subtropical fruit (banana, pineapple, mango) 6. Other fruit (other fruit, grape, melon, dried fruit, stewed fruit) 7. Fruit juice (orange juice, grapefruit juice, pure fruit/vegetable juice) 	<p>Indicator food groups were assigned a score of 1 if they were consumed above the minimum threshold of 15 g/d.</p> <hr/> <p>Fruit juice was assigned a score of 1 if it was consumed above the minimum threshold of 30 g/d.</p>
2. Vegetables	<ol style="list-style-type: none"> 1. Green (lettuce, spinach, sprouts, watercress, cucumber, celery, courgette) and brassica vegetables (cabbage, cauliflower, broccoli) 2. Legumes (pulses, broad bean) 3. Carrot and root vegetables (carrot, turnip/swede, beetroot, parsnip, onion, garlic, leek) 4. Starchy vegetables (boiled/baked potatoes [*butter/margarine added to potatoes, butternut squash], mashed potato, sweet potato, sweetcorn) 5. Tomato and tomato products (fresh tomato, tinned tomato) 6. Peas and beans (green bean, pea) 7. Other vegetables (other vegetables, mushroom, sweet pepper, side salad, olives) 	<p>Indicator food groups were assigned a score of 1 if they were consumed above the minimum threshold of 15 g/d.</p>
3. Whole grains	<ol style="list-style-type: none"> 1. Wholegrain (whole-wheat cereal, sliced bread (wholemeal), baguette (wholemeal), bap (wholemeal), bread roll [wholemeal]) 2. High fibre cereals (porridge, muesli, oat crunch, bran cereal) and wholegrain pasta and brown rice 	<p>Indicator food groups were assigned a score of 1 if they were consumed above the minimum threshold of 15 g/d.</p>
4. Lean meats and alternatives	<ol style="list-style-type: none"> 1. Poultry 2. Fish (tinned tuna, oily fish, white fish, prawns, lobster/crab, shellfish) 3. Alternatives (whole egg, omelette, egg in sandwich, other egg, seed (e.g. unsalted peanuts, unsalted nuts, types of spreads/sauces consumed [peanut butter] seeds), tofu, Quorn) 	<p>Indicator food groups were assigned a score of 1 if they were consumed above the minimum threshold of 15 g/d.</p>
5. Low-fat dairy	<ol style="list-style-type: none"> 1. 2%, 1% or skim milk (type of milk consumed (semi skimmed, skimmed, goat/sheep milk, powdered milk, cholesterol lowering)) 2. Low fat cheese and yogurt (Low fat hard cheese, low fat cheese spread, cottage cheese, yogurt [low fat yogurt consumer], goat's cheese) 	<p>Milk was assigned a score of 1 if it was consumed above the minimum threshold of 30 g/d.</p> <hr/> <p>Indicator food groups were assigned a score of 1 if they were consumed above the minimum threshold of 15 g/d.</p>

1. As available in the UK Biobank

Supplemental Table 2. Components and scoring methods of the Healthy Diet Indicator (HDI)

Dietary Indicator	Indicator foods ¹	Criteria for scoring
1. Saturated fatty acids	Saturated fat	>10% energy intake=0 0-10% energy intake=1
2. Polyunsaturated fatty acids	Polyunsaturated fat	<6 or >10% energy intake=0 6-10% energy intake=1
3. Protein	Protein	<10 or >15% energy intake=0 10-15% energy intake=1
4. Total carbohydrates	Carbohydrates	<50% or >70% energy intake=0 50-70% energy intake=1
5. Dietary fibre	Englyst dietary fibre	<18 or >32 g/day=0 18-32 g/day =1
6. Fruits and vegetables	Mixed vegetable, vegetable pieces, avocado, beetroot, broccoli, butternut squash, cabbage/kale, carrot, cauliflower, celery, courgette, cucumber, garlic, leek, lettuce, mushroom, onion, olives, parsnip, pea, side salad, sweet pepper, spinach, sprouts, sweetcorn, fresh tomato, tinned tomato, green bean, turnip/swede, watercress, other vegetables, homemade soup (vegetables) Stewed fruit, prune, dried fruit, mixed fruit, apple, banana, berry, cherry, grapefruit, grape, mango, melon, orange, satsuma, peach/nectarine intake, pear, pineapple, plum, other fruit	<400 g/day=0 ≥400 g/day=1
7. Pulses and nuts	Baked bean, pulses, broad bean Salted peanuts, unsalted peanuts, salted nuts, unsalted nuts, seeds, types of spreads/sauces consumed (peanut butter)	<30 g/day=0 ≥30 g/day=1
8. Total non-milk extrinsic sugars	Total sugars	>10 % energy intake=0 0-10 % energy intake=1
9. Fish	Tinned tuna, oily fish, white fish, prawns, lobster/crab, shellfish, other fish Homemade soup, ingredients in homemade soup (fish)	<32 g/day=0 ≥32 g/day=1
10. Red meat and meat products	Beef, pork, lamb, other meat Poultry intake (skin removed from poultry (no); fat removed from poultry(no)) Homemade soup, ingredients in homemade soup (meat) Sausage, bacon, ham, liver	>90 g/day=0 ≤90 g/day=1
11. Calcium	Calcium	<700 mg/day=0 ≥700 mg/day=1

1. As available in the UK Biobank

Supplemental Table 3. Components and scoring methods of the Mediterranean Diet Score (MDS)

Dietary Indicator	Indicator foods ¹	Criteria for scoring
1. Vegetables (excluding potatoes, legumes or fruit juice)	Mixed vegetable, vegetable pieces, avocado, beetroot, broccoli, butternut squash, cabbage/kale, carrot, cauliflower, celery, courgette, cucumber, garlic, leek, lettuce, mushroom, onion, olives, parsnip, pea, side salad, sweet pepper, spinach Sprouts, sweetcorn, fresh tomato, tinned tomato, green bean, turnip/swede, watercress, other vegetables, homemade soup (vegetables)	
2. Legumes	Baked bean, pulses, broad bean, homemade soup (pulses)	
3. Fruit and nuts	Stewed fruit, prune, dried fruit, mixed fruit, apple, banana, berry, cherry, grapefruit, grape, mango, melon, orange, satsuma, peach/nectarine, pear intake, pineapple, plum, other fruit Orange juice, grapefruit juice, pure fruit/vegetable juice Unsalted peanuts, unsalted nuts, types of spreads/sauces consumed (Peanut butter), seeds	Sex-specific median intakes used as cut points. Intakes (for indicators 1-6) above median score 1 and intakes below the median score 0.
4. Cereals	Porridge, muesli, oat crunch, plain cereal, bran cereal, whole-wheat cereal, other cereal Bread consumed, sliced bread (mixed; wholemeal; seeded; other), baguette (mixed; wholemeal; seeded; other), bap (mixed; wholemeal; seeded; other), bread roll (mixed; wholemeal; seeded; other), other bread White pasta, wholemeal pasta, white rice, brown rice, couscous, other grain Homemade soup, ingredients in homemade soup (pasta)	
5. Fish and seafood	Tinned tuna, oily fish, white fish, prawns, lobster/crab, shellfish, other fish Homemade soup, ingredients in homemade soup (fish)	
6. Monounsaturated/ saturated fats ratio	Monounsaturated fats, saturated fats	
7. Dairy products	Milk, milk added to cereal Low fat hard cheese, low fat cheese spread, cottage cheese Yogurt (low fat yogurt consumer; full fat yogurt consumer) Goat's cheese, hard cheese, soft cheese, blue cheese, cheese spread, feta, mozzarella, other cheese Dairy smoothie, latte, added milk to instant coffee, added milk to filtered coffee, added milk to espresso, added milk to other coffee type, added milk to standard tea, added milk to rooibos tea, cappuccino	Sex-specific median intakes used as cut points. Intakes (for indicators 7-8) below median score 1 and intakes below the median score 0.
8. Meat and meat products	Beef, pork, lamb, other meat Whole egg, omelette, eggs in sandwiches, scotch egg, other egg Homemade soup, ingredients in homemade soup (meat), sausage, bacon, ham	

9. Alcohol	Red wine, rose wine, white wine Beer/cider Fortified wine, spirits intake, other alcohol	No more than 2 drinks/day = 1; Never drink or over 2 drinks/day = 0.
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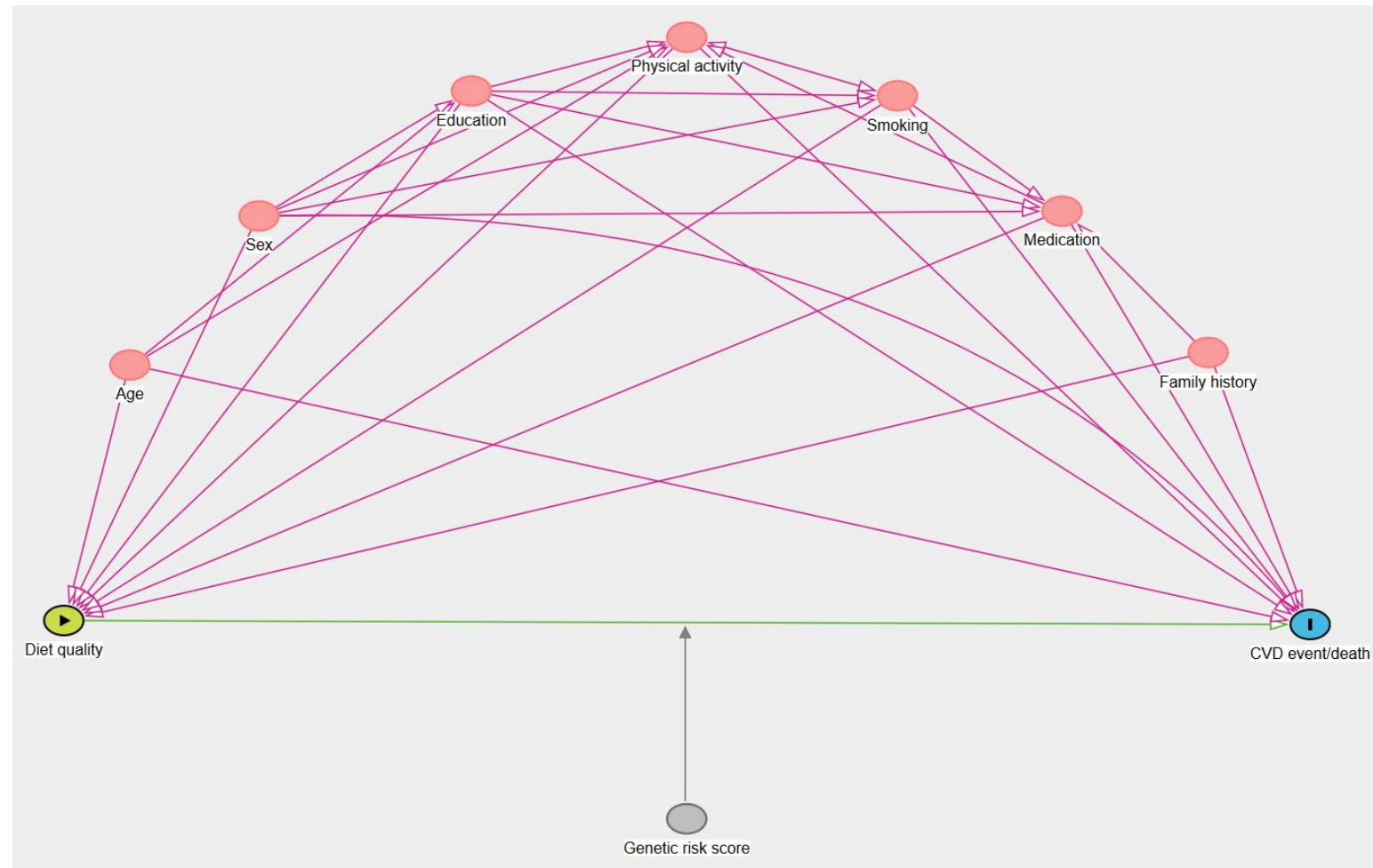
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Supplemental Table 4. Comparison of participant characteristics between the excluded and analytic sample

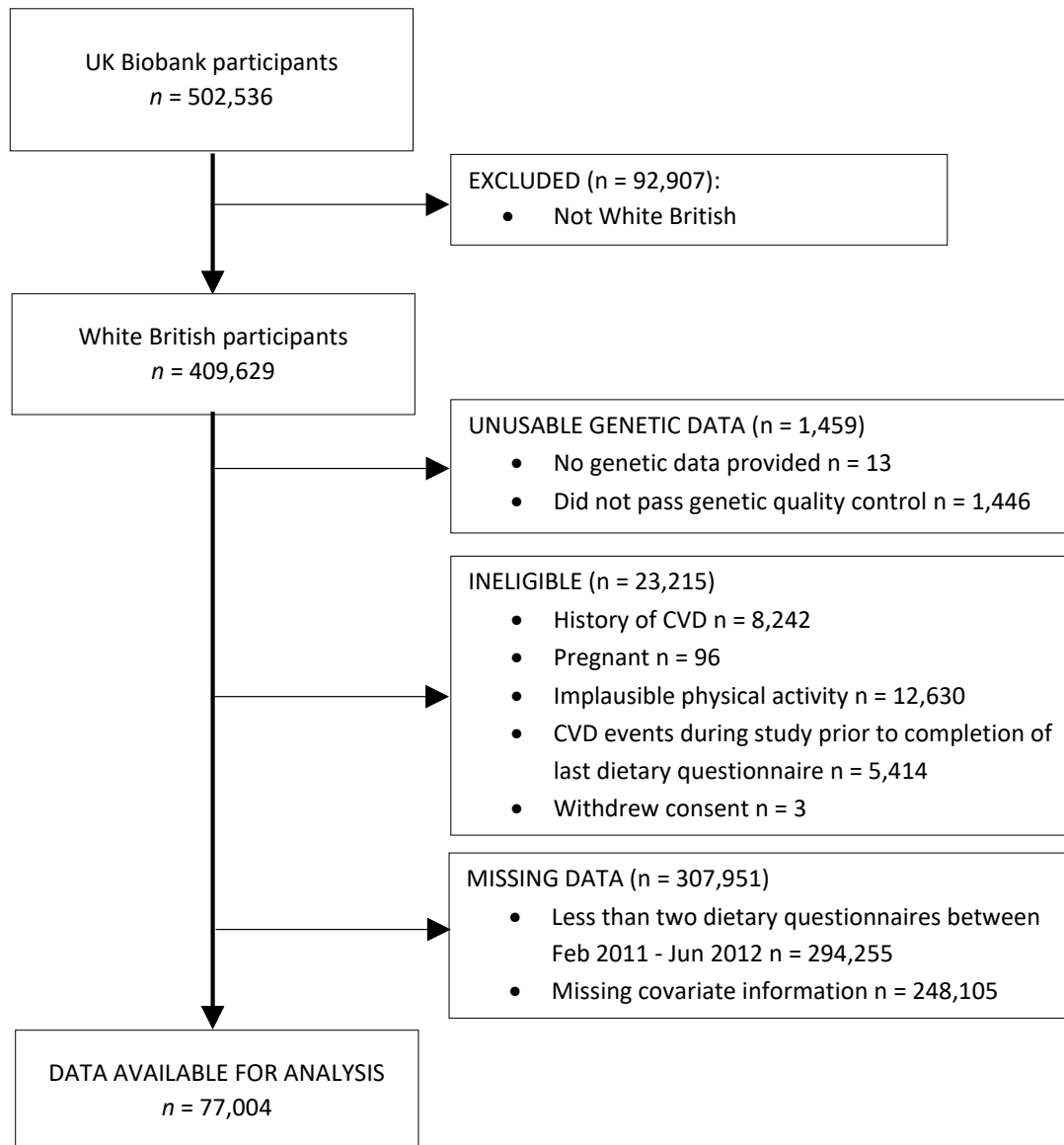
Characteristic	Excluded N (%)	Analytic N (%)
N ¹	425,532	77,004
Sex female	231,382 (54.4)	42,020 (54.6)
Age at recruitment (years), Mean \pm SD	56.6 \pm 8.2	56.2 \pm 7.8
Townsend Deprivation Index		
Least deprived	82,535 (19.4)	18,129 (23.5)
2nd least deprived	82,878 (19.5)	17,227 (22.4)
Medium deprivation	84,323 (19.8)	16,067 (20.9)
2nd most deprived	85,475 (20.1)	14,900 (19.4)
Most deprived	89,698 (21.1)	10,681 (13.9)
Smoking		
Never smoked	228,689 (54.1)	44,856 (58.3)
Ex-smoker	145,891 (34.5)	27,184 (35.3)
Current smoker	48,016 (11.4)	4,964 (6.4)
Body Mass Index (kg/m ²), Mean \pm SD	27.6 \pm 4.9	26.5 \pm 4.4

Townsend Deprivation Index is a composite measure of deprivation based on unemployment, non-car ownership, non-home ownership, and household overcrowding.

1, In the excluded sample, data on Townsend Deprivation Index and smoking were available in n=424,909 and n= 422,596, respectively. Data on Body Mass Index were available in n= 422,530 and n=76,901 in the excluded and analytic sample, respectively.



Supplemental Figure 1. Directed acyclic graph showing relationship between the exposure (diet quality) and outcome (CVD events/death). Confounders are represented by red dots. The moderator (polygenic risk score) is represent by a grey dot.



Supplemental Figure 2. Flow diagram of participants in the UK Biobank