

List of NEO baseline measurementsMeasurements performed among all participants (n=6,671) ^a:

Questionnaires

- General questionnaire (demography, health and medical history)
- Food frequency questionnaire [FFQ] (dietary intake)
- Brief Illness Perception Questionnaire [IPQ] for overweight
- Short Questionnaire to Assess Health-enhancing physical activity [SQUASH]
- Knee injury and Osteoarthritis Outcome Score [KOOS]
- Australian/Canadian Osteoarthritis Hand Index [AUSCAN]
- Epworth Sleepiness Scale [ESS]
- Pittsburgh Sleep Quality Index [PSQI]
- Berlin questionnaire (sleep)
- Inventory of Depressive Symptoms [IDS]
- Beck Anxiety Inventory [BAI]
- Brugha questionnaire of negative life events
- Short Form 36 [SF-36] (quality of life)
- Visual analog scale [VAS] to assess postprandial responses of appetite and satiety

Physical examination

- Anthropometry (height, weight, BMI, waist & hip circumference)
- Blood pressure
- Examination of joints of knees and hands for symptoms of osteoarthritis

Bioelectrical impedance analysis

- Total body fat
- Fat free mass
- Basal metabolic rate

Resting electrocardiogram [ECG]

- Common ECG parameters
- Minnesota coding
- Cornell voltage criteria
- Sokolow-Lyon index
- Specific ECG-based diagnoses

Ultrasonography

- Carotid artery intima-media thickness [IMT]

Pulmonary function tests

- Forced expiratory volume in 1s [FEV1] (in litres and %predicted)
- Forced vital capacity [FVC] (in litres and %predicted)
- Forced expiratory flow at 25–75% of FVC [FEF25-75%] (in litres and %predicted)
- Peak flow
- Exhaled NO

Morning spot urine collection

- Albumin
- Creatinine

Fasting blood sample

- Glucose
- Insulin
- HbA1c
- Total and HDL cholesterol
- Triglycerides
- Albumin
- Creatinine
- 25-hydroxyvitamin D
- ALT, AST
- Haematology (leukocytes, erythrocytes, thrombocytes, Hb, Ht, RDW, MCV, MCH, MCHC, MPV, PDW)
- Calcium

- Sodium
- Potassium
- Uric acid
- hsCRP
- CETP
- Leptin
- Adiponectin
- Factor VIII, IX, XI
- Fibrinogen
- Brainshake's Biomarker Analysis Platform (> 200 metabolites)
- Biocrates AbsoluteIDQ p150 metabolomics kit (n=176 FPG<6.1, n=186 FPG 6.1-7.0, n=171 FPG≥7.0 mmol/L)

Postprandial blood sample (30 & 150 min after mixed meal)

- Glucose
- Insulin
- Triglycerides
- Brainshake's Biomarker Analysis Platform (> 200 metabolites) (at 150 min)
- Biocrates AbsoluteIDQ p150 metabolomics kit (at 150 min; n=176 FPG<6.1, n=186 FPG 6.1-7.0, n=171 FPG≥7.0 mmol/L)

Genotype data (available for participants of European ancestry, n=6,131)

- Illumina HumanCoreExome Chip
- Imputed genotype by '1000 Genomes' and 'GoNL' reference panel

Biobank

- 24-h urine sample
- Fasting and postprandial blood samples
- DNA

^a Reported numbers are approximates and may change after final data cleaning or depending on the outcome of interest.

Measurements performed in random subsets of participants (see table below for numbers)^a:

Magnetic resonance imaging [MRI] (in random subset without contraindications)	Indirect calorimetry	Dual-energy X-ray absorptiometry [DXA]
- Abdominal subcutaneous and visceral fat	- Resting energy expenditure	- Bone mass density at the hip and lumbar spine (T-scores and Z-scores)
- Pulse wave velocity of the aorta	- RQ coefficient	- Radiographic vertebral fractures assessment (VFA)
- Brain	- Carbohydrate oxidation	- Total body fat
- Cardiac function	- Fat oxidation	- Truncal fat mass
- Osteoarthritis of the knee	ActiHeart combined accelerometer and continuous heart rate measurements for 4 days	- Lean body mass
¹ H-magnetic resonance spectroscopy [¹ H-MRS]	- Physical activity and energy expenditure	- Abdominal aortic calcifications
- Hepatic triglyceride content	- Heart rate variability	Sidestream darkfield [SDF] imaging of the glycolyx
	ActiWatch actigraphy for 7 days	- Sublingual microvasculature
	- Sleep schedule variability	
	- Sleep quantity statistics	

Overlap of subgroup measurements

	MRI abdomen	MRI brain	MRI heart	MRI knee	¹ H-MRS	Indirect calorimetry	AH physical activity	AH HRV	ActiWatch	DXA	Glycolyx (SDF)
MRI abdomen *	2,580	1,196	1,186	22	2083	266	315	186	155	338	419
MRI brain	1,196	1,213	9	12	972	59	154	83	74	123	156
MRI heart	1,186	9	1,205	12	946	74	151	92	79	141	159
MRI knee	22	12	12	1,285	20	282	128	75	61	84	98
¹ H-MRS of the liver	2,083	972	946	20	2,083	209	267	155	132	288	351
Indirect calorimetry	266	59	74	282	209	1,434	174	103	83	189	206
AH physical activity	315	154	151	128	267	174	955	485	22	103	117
AH HRV	186	83	92	75	155	103	485	485	11	33	44
ActiWatch	155	74	79	61	132	83	22	11	376	40	12
DXA	338	123	141	84	288	189	103	33	40	915	523
Glycolyx (SDF)	419	156	159	98	351	206	117	44	12	523	915

* Abdominal MRI was performed to measure (1) abdominal subcutaneous and visceral fat and (2) pulse wave velocity of the aorta.

MRI: magnetic resonance imaging; MRS: magnetic resonance spectroscopy; AH: ActiHeart; DXA: Dual-energy X-ray absorptiometry; HRV: heart rate variability; SDF: sidestream darkfield imaging of sublingual microvasculature. Numbers in **bold** are totals per measurement.

^a Reported numbers are approximates and may change after final data cleaning or depending on the outcome of interest.