

This README file is associated with 143 significantly heritable dietary intake GWAS summary statistic files from the manuscript: J.B. Cole *et al.* “Comprehensive genomic analysis of dietary habits in UK Biobank identifies hundreds of genetic associations” *Nature Communications* 2020.

Brief Overview

Trait transformation: all phenotypes were averaged over multiple FFQs, adjusted for age and sex, and inverse normal transformed

GWAS: all GWAS were run in BOLTlmm software using linear mixed models with 10 genetic PCs and genotyping array as covariates

SNP filters: minor allele count ≥ 20 , minor allele frequency ≥ 0.005 , INFO score ≥ 0.60

GWAS column descriptions

See BOLTlmm v2.3.2 manual for more details (https://data.broadinstitute.org/alkesgroup/BOLT-LMM/downloads/old/BOLT-LMM_v2.3.2_manual.pdf)

Column #	Name	Description
1	SNP	rsID
2	CHR	Chromosome
3	BP	position (GRCh37/hg19)
4	ALLELE1	first allele in UKB bim file, effect allele
5	ALLELE0	second allele in UKB bim file, non-effect allele
6	A1FREQ	frequency of ALLELE1
7	INFO	imputation INFO score
8	BETA	effect size from BOLT-LMM approximation to infinitesimal mixed model
9	SE	standard error of effect size
10	P_BOLT_LMM	non-infinitesimal mixed model association test p-value

Phenotype to File Name Mapper

See manuscript Supplementary Data 1 for phenotype-specific sample size and UK Biobank field

File names: BOLTlmm_UKB_genoQCEURN455146_v3_diet_“\$PHENOTYPE”_BgenSnps_mac20_maf0.005_info0.6.gz

File Phenotype Name “\$PHENOTYPE”	Descriptive Manuscript Phenotype Name
alcoholdrinkerstatus.20117.average_bin	alcohol drinker status: current + former vs. never
alcoholdrinkerstatus.20117.average_bin2	alcohol drinker status: current vs. never
alcohol_usuallywithmeals_amongcurrentdrinkers.1618.average_bin	among current drinkers, drinks usually with meals: yes + it varies vs. no
alcohol_usuallywithmeals_amongcurrentdrinkers.1618.average_bin2	among current drinkers, drinks usually with meals: yes vs. no
nevereatcategories.6144.average_bin	never eat eggs vs. no eggs, dairy, wheat, or sugar restrictions
nevereatcategories.6144.average_bin2	never eat eggs vs. no eggs restrictions
nevereatcategories.6144.average_bin3	never eat dairy vs. no eggs, dairy, wheat, or sugar restrictions
nevereatcategories.6144.average_bin4	never eat dairy vs. no dairy restrictions
nevereatcategories.6144.average_bin5	never eat wheat vs. no eggs, dairy, wheat, or sugar restrictions
nevereatcategories.6144.average_bin6	never eat wheat vs. no wheat restrictions
nevereatcategories.6144.average_bin7	never eat sugar vs. no eggs, dairy, wheat, or sugar restrictions

nevereatcategories.6144.average_bin8	never eat sugar vs. no sugar restrictions
milk_typeused.1418.average_bin	milk type: dairy-based milk vs. never
milk_typeused.1418.average_bin2	milk type: any milk vs. never
milk_typeused.1418.average_bin4	milk type: full cream vs. never
milk_typeused.1418.average_bin5	milk type: full cream vs. any other
milk_typeused.1418.average_bin6	milk type: semi-skimmed vs. never
milk_typeused.1418.average_bin7	milk type: semi-skimmed vs. any other
milk_typeused.1418.average_bin8	milk type: skimmed vs. never
milk_typeused.1418.average_bin9	milk type: skimmed vs. any other
milk_typeused.1418.average_bin10	milk type: soy milk vs. never
milk_typeused.1418.average_bin11	milk type: soy milk vs. any other
milk_typeused.1418.average_bin12	milk type: other milk vs. never
milk_typeused.1418.average_bin13	milk type: other milk vs. any other
spread_typeused.1428.0.nonbutterspread_typeused.2654.combined_bin1	spread type: all spreads vs. never
spread_typeused.1428.0.nonbutterspread_typeused.2654.combined_bin2	spread type: butter + margarine vs. never
spread_typeused.1428.0.nonbutterspread_typeused.2654.combined_bin3	spread type: any oil based spread vs. never
spread_typeused.1428.0.nonbutterspread_typeused.2654.combined_bin4	spread type: butter and butter-like spreads vs. oil-based spreads
spread_typeused.1428.0.nonbutterspread_typeused.2654.combined_bin5	spread type: butter and margarine spreads vs. oil-based spreads
spread_typeused.1428.0.nonbutterspread_typeused.2654.combined_bin6	spread type: butter vs. never
spread_typeused.1428.0.nonbutterspread_typeused.2654.combined_bin7	spread type: butter vs. any other
spread_typeused.1428.0.nonbutterspread_typeused.2654.combined_bin10	spread type: tub margarine vs. never
spread_typeused.1428.0.nonbutterspread_typeused.2654.combined_bin11	spread type: tub margarine vs. any other
spread_typeused.1428.0.nonbutterspread_typeused.2654.combined_bin12	spread type: flora + benecol vs. never
spread_typeused.1428.0.nonbutterspread_typeused.2654.combined_bin13	spread type: flora + benecol vs. any other
spread_typeused.1428.0.nonbutterspread_typeused.2654.combined_bin14	spread type: olive oil spread vs. never
spread_typeused.1428.0.nonbutterspread_typeused.2654.combined_bin15	spread type: olive oil spread vs. any other
spread_typeused.1428.0.nonbutterspread_typeused.2654.combined_bin16	spread type: other oil-based spread vs. never
spread_typeused.1428.0.nonbutterspread_typeused.2654.combined_bin17	spread type: other oil-based spread vs. any other
spread_typeused.1428.0.nonbutterspread_typeused.2654.combined_bin18	spread type: low fat spread vs. never
spread_typeused.1428.0.nonbutterspread_typeused.2654.combined_bin19	spread type: low fat spread vs. any other
bread_typeused.1448.average_bin	bread type: white vs. any other
bread_typeused.1448.average_bin2	bread type: brown vs. any other
bread_typeused.1448.average_bin3	bread type: wholemeal/wholegrain vs. any other
bread_typeused.1448.average_bin4	bread type: white vs. wholemeal/wholegrain + brown
bread_typeused.1448.average_bin5	bread type: wholemeal/wholegrain vs. white + brown
cereal_typeused.1468.average_bin	cereal type: biscuit cereal vs. any other

cereal_typeused.1468.average_bin2	cereal type: bran cereal vs. any other
cereal_typeused.1468.average_bin3	cereal type: oat cereal vs. any other
cereal_typeused.1468.average_bin4	cereal type: muesli vs. any other
cereal_typeused.1468.average_bin5	cereal type: cornflakes/frosties vs. any other
coffee_typeused.1508.average_bin	coffee type: decaffeinated vs. any other
coffee_typeused.1508.average_bin2	coffee type: ground+instant vs. other+decaff
coffee_typeused.1508.average_bin3	coffee type: ground vs. any other
cookedveg_TBSpersday.1289.average_QT	tablespoons of cooked vegetables per day
rawveg_TBSpersday.1299.average_QT	tablespoons of raw vegetables per day
freshfruit_piecesperday.1309.average_QT	pieces of fresh fruit per day
driedfruit_piecesperday.1319.average_QT	pieces of dried fruit per day
bread_slicesperweek.1438.average_QT	slices of bread per week
cereal_bowlsperweek.1458.average_QT	bowls of cereal per week
tea_cupsperday.1488.average_QT	cups of tea per day
coffee_cupsperday.1498.average_QT	cups of coffee per day
water_glassesperday.1528.average_QT	glasses of water per day
champagnewhitewine_glassespermonth.derived.average_QT	champagne/white wine glasses per month
redwine_glassespermonth.derived.average_QT	red wine glasses per month
beercider_pinterspermonth.derived.average_QT	beer/cider glasses per month
spirits_measurespermonth.derived.average_QT	spirits measures per month
fortwine_glassespermonth.derived.average_QT	fortwine glasses per month
otheralcohol_glassespermonth.derived.average_QT	other alcohol glasses per month
anyalcohol_glassespermonth.derived.average_QT	total drinks of alcohol per month
oilyfish_overallfreq.1329.average_QT	overall oily fish intake
nonoilyfish_overallfreq.1339.average_QT	overall non-oily fish intake
processmeat_overallfreq.1349.average_QT	overall processed meat intake
poultry_overallfreq.1359.average_QT	overall poultry intake
beef_overallfreq.1369.average_QT	overall beef intake
lambmutton_overallfreq.1379.average_QT	overall lamb/mutton intake
pork_overallfreq.1389.average_QT	overall pork intake
cheese_overallfreq.1408.average_QT	overall cheese intake
doyouaddsalt.1478.average_QT	frequency of adding salt to food
hotdrinktemp.1518.average_QT	temperature of hot drinks
alcohol_overallfreq.1558.average_QT	overall alcohol intake
alcohol_usuallywithmeals_amongcurrentdrinkers.1618.average_QT3	among current drinkers, drinks usually with meals: yes, it varies, no
milk_typeused.1418.average_QT3	milk type: skimmed, semi-skimmed, full cream (QT)

ffq_median_PC1	PC1
ffq_median_PC2	PC2
ffq_median_PC3	PC3
ffq_median_PC4	PC4
ffq_median_PC5	PC5
ffq_median_PC6	PC6
ffq_median_PC7	PC7
ffq_median_PC8	PC8
ffq_median_PC9	PC9
ffq_median_PC10	PC10
ffq_median_PC11	PC11
ffq_median_PC12	PC12
ffq_median_PC13	PC13
ffq_median_PC14	PC14
ffq_median_PC15	PC15
ffq_median_PC16	PC16
ffq_median_PC17	PC17
ffq_median_PC18	PC18
ffq_median_PC19	PC19
ffq_median_PC20	PC20
ffq_median_PC21	PC21
ffq_median_PC22	PC22
ffq_median_PC23	PC23
ffq_median_PC24	PC24
ffq_median_PC25	PC25
ffq_median_PC26	PC26
ffq_median_PC27	PC27
ffq_median_PC28	PC28
ffq_median_PC29	PC29
ffq_median_PC30	PC30
ffq_median_PC31	PC31
ffq_median_PC32	PC32
ffq_median_PC33	PC33
ffq_median_PC34	PC34
ffq_median_PC35	PC35
ffq_median_PC36	PC36

ffq_median_PC37	PC37
ffq_median_PC38	PC38
ffq_median_PC39	PC39
ffq_median_PC40	PC40
ffq_median_PC41	PC41
ffq_median_PC42	PC42
ffq_median_PC43	PC43
ffq_median_PC44	PC44
ffq_median_PC45	PC45
ffq_median_PC46	PC46
ffq_median_PC47	PC47
ffq_median_PC48	PC48
ffq_median_PC49	PC49
ffq_median_PC50	PC50
ffq_median_PC52	PC52
ffq_median_PC53	PC53
ffq_median_PC54	PC54
ffq_median_PC55	PC55
ffq_median_PC57	PC57
ffq_median_PC58	PC58
ffq_median_PC62	PC62
ffq_median_PC65	PC65
ffq_median_PC67	PC67
ffq_median_PC81	PC81