A meta-analysis identifies new loci associated with body mass index in individuals of African ancestry.

published by arnett on Tue, 10/08/2013 - 9:49am

A meta-analysis identifies new loci associated with body mass index in individuals of African ancestry.

Journal Article

2013

A meta-analysis identifies new loci associated with body mass index in individuals of African ancestry.


Corporate Authors: NABEC Consortium, UKBEC Consortium, BioBank Japan Project, AGEN Consortium.

Journal: Nat Genet
Volume: 45
Issue: 6
Pagination: 690-6
Date Published: 2013 Jun
ISSN: 1546-1718
Keywords: African Americans, Body Mass Index, Case-Control Studies, Gene Frequency, Genetic Loci, Genetic Predisposition to Disease, Genome-Wide Association Study, Humans, Linkage Disequilibrium, Obesity, Polymorphism, Single Nucleotide

Abstract: Genome-wide association studies (GWAS) have identified 36 loci associated with body mass index (BMI), predominantly in populations of European ancestry. We conducted a meta-analysis to examine the association of >3.2 million SNPs with BMI in 39,144 men and women of African ancestry and followed up the most significant associations in an additional 32,268 individuals of African ancestry. We identified one new locus at 5q33 (GALNT10, rs7708584, P = 3.4 × 10(-11)) and another at 7p15 when we included data from the GIANT consortium (MIR148A-NFE2L3, rs10261878, P = 1.2 × 10(-10)). We also found suggestive evidence of an association at a third locus at 6q16 in the African-ancestry sample (KLHL32, rs974417, P = 6.9 × 10(-8)). Thirty-two of the 36 previously established BMI variants showed directionally consistent effect estimates in our GWAS (binomial P = 9.7 × 10(-7)), five of which reached genome-wide significance. These findings provide strong support for shared BMI loci across populations, as well as for the utility of studying ancestrally diverse populations.

DOI: 10.1038/ng.2608
PubMed ID: 23583978
PubMed Central ID: PMC3694490
A meta-analysis identifies new loci associated with body mass index in individuals of African ancestry.

Published on UAB School of Public Health (http://www.soph.uab.edu)
A meta-analysis identifies new loci associated with body mass index in individuals of African ancestry.

Published on UAB School of Public Health (http://www.soph.uab.edu)
A meta-analysis identifies new loci associated with body mass index in individuals of African ancestry.
A meta-analysis identifies new loci associated with body mass index in individuals of African ancestry.