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## Background

- Obesity prevalence in the U.S. increased dramatically during the 30 year-period beginning in the 1980s
- NHLBI is the second largest funder of obesity research at NIH
- NHLBI funds various types of obesity research, including basic mechanistic research, epidemiology, efficacy trials, and effectiveness studies

## Purpose

We conducted a bibliometric analysis of NHLBI-supported obesity-related publications

- To understand the productivity of NHLBI's obesity-related research funding and the impact of its products
- To describe NHLBI publications over a 30-year timeframe by clustering publications by topic and examining topic growth and citations (as a measure of productivity) over time

## Methods

- Publications linked to HL grants with obesity-related MeSH top terms were identified from the Thomson Reuters InCites database
- Sci2 used to create bibliographic coupling network based on shared references
- Gephi used for clustering publications

## Results

Figure 1. Network of NHLBI-funded obesity-related publications

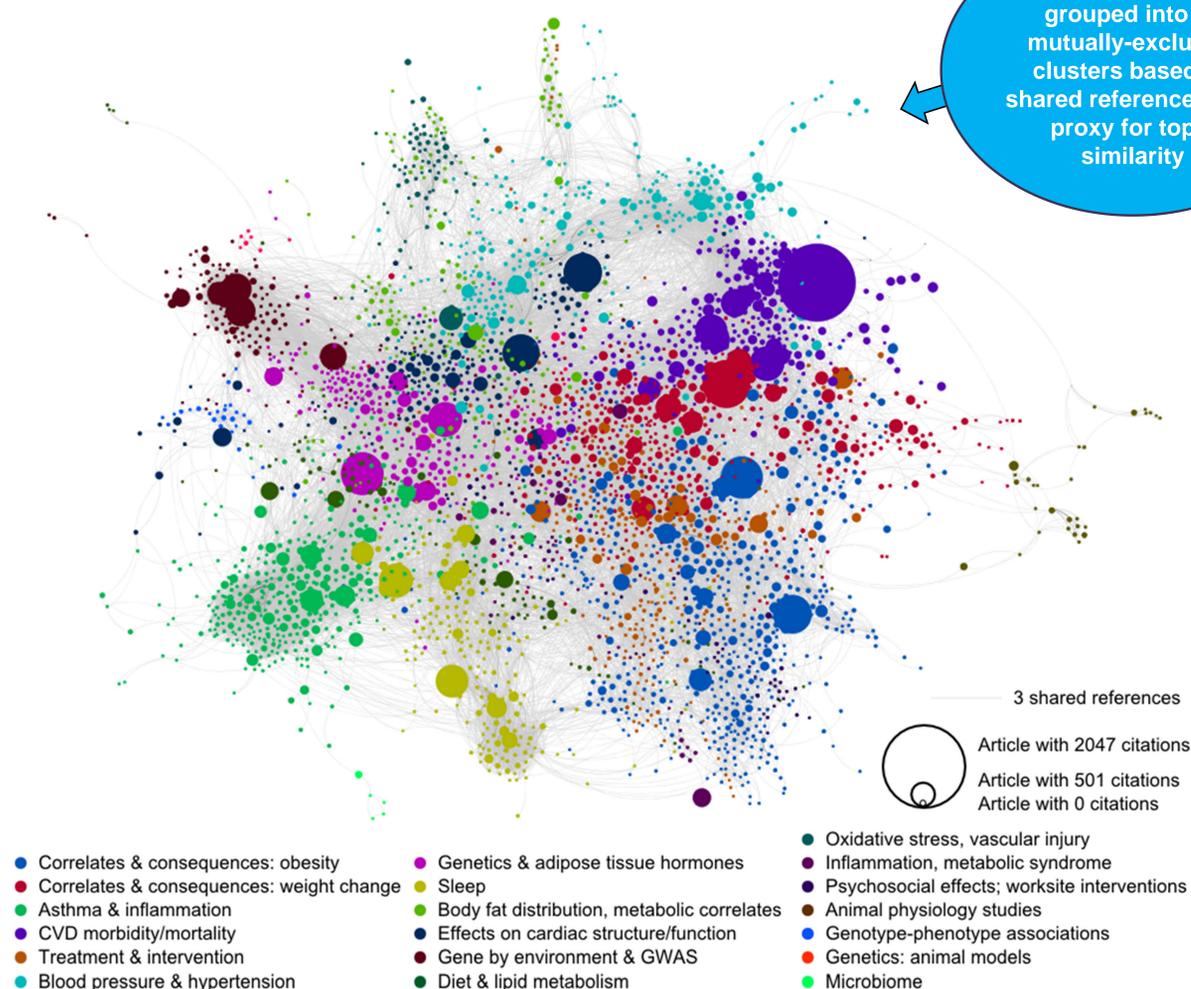


Table 1. Characteristics of clusters

Cluster title	Number of publications,	Number of publications,	Median citation count	Highly cited papers, n (%)
	total	2013		
Correlates & consequences: obesity	588	45	25	205 (35)
Correlates & consequences: weight change	402	18	28	125 (31)
Asthma & inflammation	382	50	20	133 (35)
CVD morbidity/mortality	277	1	44	100 (36)
Treatment & intervention	271	30	16	58 (21)
Blood pressure & hypertension	258	14	26	62 (24)
Genetics & adipose tissue hormones	232	7	28	51 (22)
Sleep	199	24	21	76 (38)
Body fat distribution, metabolic correlates	198	31	15	60 (30)
Effects on cardiac structure/function	188	16	24	62 (33)
Gene by environment & GWAS	167	27	14	45 (27)
Diet and lipid metabolism	105	11	16	33 (31)
Oxidative stress, vascular injury	84	4	22	11 (13)
Inflammation, metabolic syndrome	63	8	16	15 (24)
Psychosocial effects; worksite interventions	54	4	14	7 (13)
Animal physiology studies	34	0	13	3 (9)
Genotype-phenotype associations	28	0	24	4 (14)
Genetics: animal models	11	0	18	1 (9)
Microbiome	5	2	5	2 (40)
<b>Total</b>	<b>3545</b>	<b>292</b>	<b>23</b>	<b>1053 (30)</b>

Figure 2. NHLBI-funded publications, 1983-2013

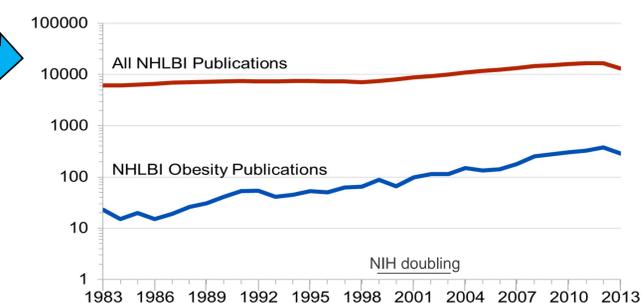
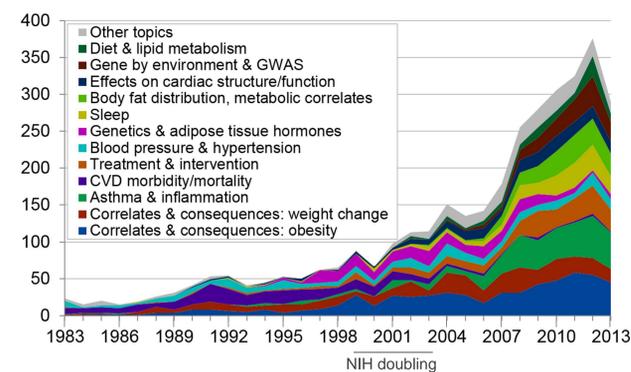


Figure 3. NHLBI obesity publications by year according to topical clusters, 1983-2013



## Conclusions

NHLBI funded studies have produced a large number of diverse obesity-related publications over the past thirty years, with a high proportion of these publications being highly cited. As the obesity epidemic unfolded, a fuller range of topics has been represented.