National Academies of Medicine Annual Meeting: 
Exploring the Intersection of Obesity and Type 2 Diabetes

Panel 1: 
Key Drivers of Obesity and Type 2 Diabetes and Promising New Directions to Reduce Risk

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The Public Health Problem of Obesity: Prevalence and Associated Health Conditions

17.0% of 2- to 19-year-old children/adolescents and 36.5% of adults are obese (prevalence data from 2011-14, NCHS Data Brief, No. 219. National Center for Health Statistics, CDC, 2015. Image credit: Adapted from image created by Dr. Wei Shen and Dr. Steven Heymsfield, New York Obesity Research Center, St. Luke’s-Roosevelt Hospital, Columbia University, New York.)
NIH/NIDDK Clinical Studies: Type 2 Diabetes

- Normal
- Pre-diabetes
- Type 2 Diabetes
- Complications

- Preclinical state
- Clinical disease
- Complications
Examples of NIH/NIDDK-supported Basic Research Areas at the Intersection of Obesity and Diabetes

Brown & beige fat

Potential target for obesity treatment: fat that burns itself

Microbiome

Our gut companions: Effects on weight? Therapeutic targets?

Bariatric surgery

Reversal of type 2 diabetes--Underlying mechanisms?
Dr. Jose Florez
Can we use insights from genetic studies to reduce obesity and diabetes?

Dr. C. Ronald Kahn
Can recent advances in our understanding of insulin resistance be leveraged for interventions for type 2 diabetes and obesity?

Dr. Ashley Gearhardt
What do we know about how brain reward circuits affect food intake and can we use that knowledge to change diet?

Dr. Kent Thornburg
What do we know about basic mechanisms underlying intergenerational transmission of diabetes risk and can we use that knowledge in interventions?