

# 2nd International Conference on Obesity and Weight Loss

October 15-16, 2018 Amsterdam, Netherlands

## Metabolic Heterogeneity of Obesity and its Mid and Long-Term Effects

Yimin Zhu\*, Ruizhi Zheng, Qianqian Zheng and Yahan Yao  
Zhejiang University School of Medicine, China

Obesity has heterogeneity. Obesity has different metabolic status as: metabolically abnormal obesity (MAO) and metabolically normal obesity (MNO). This study investigated the prevalence and distribution of MNO in Chinese population and explored the determinants of heterogeneity. Obesity has heterogeneity. Obesity has different metabolic status as metabolically abnormal obesity (MAO) and metabolically normal obesity (MNO). In a cross-sectional investigation on metabolic syndrome in China, The study investigated the prevalence and distribution of MNO in Chinese population and the determinants of heterogeneity. Then in a prospective cohort, we explored the effect on metabolic components in the subjects with MNO and the effect of weight change on the metabolic components. The Long-term effect of MNO on mortality of diabetes, cardiovascular diseases, and cancers were evaluated with meta-analysis. The results indicated the prevalence of MNO of obesity in China was 27.9%, which was lower than those in most of countries in the world. The determinants of metabolic heterogeneity were central obesity, Physical activity, sedentary time, Fruits/vegetables intake and Family history of MD and CVD, respectively. Comparing with the subjects with metabolically health (MNNW), normal weight, MNO increased the risk of the incidences of abnormal metabolic components and mortalities of diabetes and cardiovascular diseases, however, these risks were significantly lower than those in the subjects with MAO. Weight loss could reduce the risk of abnormal metabolic components. In conclusion, obesity has metabolic heterogeneity and MNO increase the risks of mid and long term outcome comparing with the subjects with MNNW and decrease the risks comparing with the subjects with MAO. This finding have significance on public health and provides the evidence on classification and individual management of obesity.

### Biography:

Dr. Yimin Zhu Ph.D, & Professor, vice director of Department of Epidemiology & Biostatistics, School of Public Health, Zhejiang University. His major research interests include molecular epidemiology, genetic susceptibility, epigenetics and metabonomics in obesity, metabolic syndrome. His team has screened multiple biomarkers of these diseases using multi-omics technologies such GWAS, RNA-seq, Medip-seq and metabonomic, and also systematically investigated the metabolic heterogeneity in obesity and its mid and long-term adverse effect.