# 010. Association of body mass index and diastolic function in metabolically healthy obese with preserved ejection fraction

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Rozenbaum Z, Topilsky Y, Laufer-Perl M

Department of Cardiology, Tel Aviv Medical Center, Israel; Affiliated to the Sackler Faculty of Medicine, Tel Aviv University.

**Purpose**
To characterize the relation between BMI and diastolic function in a relatively large cohort of metabolically healthy obese with preserved ejection fraction.

**Methods**
Echocardiograms of metabolically healthy patients between 2011-2016, who had no significant valvulopathies or atrial fibrillation, and had preserved ejection fraction, were retrospectively identified and analyzed. Metabolically healthy was defined as lack of known diabetes mellitus, hypertension, and hyperlipidemia. Patients were categorized into 4 groups according to BMI - normal BMI 18.5-25, overweight 25.01-30, obese 30.01-35, morbidly obese >35 kg/$m^2$.

**Results**
The cohort consisted of 7,057 individuals, 54.9% males, with a mean age 54 years. Patients in higher BMI groups more commonly demonstrated abnormalities in most echocardiographic parameters associated with diastolic dysfunction, including left atrial volume index>34 ml/m2, E/e'>14, e' lateral <7 cm/s, tricuspid regurgitation velocity>2.8 m/s and systolic pulmonary artery pressure≥36 mmHg ($p<0.01$ for all comparisons). Morbidly obese carried the highest risk compared to those with normal BMI. There were no significant differences between the groups in rates of readmission due to heart failure.

**Conclusions**
High BMI is associated with increased risk of diastolic dysfunction even in metabolically healthy patients. Additional trials are needed in order to evaluate whether these echocardiographic findings translate into clinical implications.