



# The Prevalence of Obesity and Metabolic Syndrome Among Inpatients at a Forensic Hospital in Ireland

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## Introduction

Patients in secure psychiatric units are at high risk of developing obesity. This is likely due to a combination of antipsychotic medications, restrictions on freedom and poor motivation to healthy lifestyle behaviours.

## Aim

We sought to establish the prevalence of obesity and metabolic syndrome in patients of the Central Mental Hospital (CMH). The CMH is Ireland's only secure forensic psychiatric hospital.

## Methods

We compared current metabolic parameters to the same parameters on admission in 76 CMH patients. BMI was used as a surrogate for waist circumference to determine the presence of metabolic syndrome (MetS).

## Conclusions

Obesity and MetS prevalence in the CMH is high. Metabolic parameters worsen during CMH patients' incarceration. Investment in dietetic and physiotherapy services is required to prevent this.

Parameter	On Admission	Currently	P <sup>a</sup>
<b>Age, years</b>	36.3 (33.7-39.0)	---	
<b>Male, n (%)</b>	67 (88.2)	---	
<b>Schizophrenia, n (%)</b>	63 (82.9)	---	
<b>Medical illnesses, n</b>	2.5 (2.0-3.0)	---	
<b>Duration of incarceration, years</b>	10.0 (7.7-12.3)	---	
<b>BMI, kg/m<sup>2</sup></b>	30.0 (28.7-31.4)	32.8 (31.4-34.2)	<.001
<b>Obese, n (%)</b>	35 (46.1)	57 (75.0)	<.001
<b>sBP, mmHg</b>	119 (115-123)	121 (117-125)	0.467
<b>TC, mmol/L</b>	4.6 (4.4-4.9)	4.6 (4.4-4.9)	0.682
<b>Trig, mmol/L</b>	2.1 (1.7-2.5)	2.0 (1.7-2.3)	0.760
<b>HDL-c, mmol/L</b>	1.0 (0.9-1.0)	1.0 (0.9-1.1)	0.227
<b>LDL-c, mmol/L</b>	2.6 (2.4-2.8)	2.8 (2.5-3.0)	0.341
<b>FPG, mmol/L</b>	5.1 (4.9-5.3)	5.8 (5.4-6.1)	<.001
<b>HbA1c, mmol/mol</b>	36.0 (33.7-38.3)	40.6 (37.5-43.7)	<.001
<b>T2DM, n (%)</b>	3 (3.9)	12 (15.8)	0.012
<b>MetS, n (%)</b>	29 (38.2)	44 (57.9)	0.001

Data are expressed as mean (95% confidence interval) or as number (percentage).

a. Probability values were calculated using the paired-samples T Test or Wilcoxon signed-rank test (non-parametric data) for continuous variables or the related-samples McNemar Test for categorical variables.

n, number; BMI, body mass index; sBP, systolic blood pressure; TC, total cholesterol concentration; Trig, triglyceride concentration; HDL-c, high density lipoprotein cholesterol concentration; LDL-c, low density lipoprotein cholesterol concentration; FPG, fasting plasma glucose concentration; T2DM, type 2 diabetes; MetS, metabolic syndrome.

