

# Prevalence of Cardiometabolic Risk Factors in First Episode Psychosis Patients



SUPPORTING HEALTH AND PROMOTING EXERCISE

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## INTRODUCTION

Previous research in patients with schizophrenia have shown a high prevalence of metabolic syndrome and disease progression (~30-40%) which presents an increased risk for cardiovascular disease and long-term mortality (Correll et al. 2014; Mitchell et al. 2013). To date, little is known about the prevalence of existing cardiometabolic risk factors at time of diagnosis. This study presents a clinical overview of the cardiometabolic risk profile in young people presenting with early psychosis from a UK early intervention in psychosis service.

## METHODS

Participants (n=45; age 24.4 ± 4.5 yrs, 71% male, 88.9% White British) clinically diagnosed with a first episode psychosis with <3 months (n=39) or <6 months (n=6) Duration of Untreated Psychosis (DUP) were assessed for anthropometric, lifestyle behaviours and clinical measurements including resting heart rate, blood pressure, blood lipids, HbA1c, and prolactin. The majority (n=38, 84.4%) were in receipt of antipsychotic medication (8.9% Aripiprazole, 28.9% Olanzapine, 31.1% Quetiapine, 4.4% Risperidone, 2.2% Paliperidone, 6.7% Clozapine). Seven participants (15.6%) were not on any antipsychotic medication.

## RESULTS

Table 1 presents the cardiometabolic risk status and self reported lifestyle behaviours at baseline by sex of this first episode psychosis patient sample (n=45).

- Participants had high prevalence of cardiometabolic risk factors due to elevated values for BMI (38.1%), abdominal adiposity (57.5%), high blood pressure (30.8% pre-hypertensive; 20.5% hypertensive), elevated resting heart rate (44.7%), hypercholesterolemia (27.9%), suboptimal HDL levels (25.6%), and hypertriglyceridemia (42.1%).
- Participants also self-reported poor lifestyle habits including: smoking (55.8%), alcohol use (37.2%), substance use (16.3%), poor diet (53.5%), and a sedentary lifestyle (39.5%).

## CONCLUSION

- Young people with psychosis are at increased risk for cardiometabolic disorders due to elevated clinical markers and unhealthy lifestyle behaviours.
- Physical health interventions are needed early in the treatment process to address the increased risk for cardiometabolic disorders in individuals recently diagnosed with psychosis.

**Table 1. Cardiometabolic risk status and self reported lifestyle behaviours at baseline by sex.**

Variable	Threshold	N	Total	N	Males	N	Females
<b>Lifestyle Behaviors</b>							
Smoking	Currently smoke or within past 3 mos.	43	24 (55.8%)	31	19 (61.3%)	12	5 (41.7%)
Alcohol Use		43	16 (37.2%)	31	11 (35.5%)	12	5 (41.7%)
Substance Use		43	7 (16.3%)	31	6 (19.4%)	12	1 (8.3%)
Unhealthy eating	< 5 fruits/veg.d <sup>-1</sup>	43	23 (53.5%)	31	13 (41.9%)	12	10 (83.3%)
Sedentary Lifestyle	< 90 min.wk <sup>-1</sup>	43	17 (39.5%)	31	12 (38.7%)	12	5 (41.7%)
<b>Body Composition</b>							
Weight (kg)		42	88.1 (16.9)	31	87.2 (14.9)	11	90.6 (22.3)
BMI (kg.m <sup>2</sup> )	< 25.0	42	29.1 (5.8)	31	27.9 (4.9)	11	32.5 (6.9)*
<b>Weight Status (%)</b>							
<i>Underweight</i>	> 18.5	42	2 (4.8%)	31	2 (6.5%)	11	0
<i>Normal</i>	18.5 – 24.9	42	9 (21.4%)	31	8 (25.8%)	11	1 (7.7%)
<i>Overweight</i>	25.0 – 29.9	42	15 (35.7%)	31	11 (35.5%)	11	4 (36.4%)
<i>Obese</i>	30.0 – 34.9	42	11 (26.2%)	31	9 (29.0%)	11	2 (18.2%)
<i>Extremely Obese</i>	> 35.0	42	5 (11.9%)	31	1 (3.2%)	11	4 (36.4%)
Waist Circumference (cm)	+0 < 94 < 80	39	96.4 (15.0)	29	94.5 (15.4)	10	101.7 (13.1)
<b>Cardiometabolic measurements</b>							
Systolic (mm Hg)	< 140	39	126.0 (20.7)	29	131.2 (20.9)	10	111.1 (11.2)*
Diastolic (mm Hg)	< 90	39	80.0 (16.5)	29	81.1 (17.8)	10	76.3 (12.0)
<i>Prehypertensive (%)</i>	120/80 - 139/89	39	12 (30.8%)	29	7 (24.1%)	10	5 (50.0%)
<i>Hypertension (%)</i>	>140/90	39	8 (20.5%)	29	8 (27.6%)	10	0
Resting pulse (beats.min <sup>-1</sup> )	< 80	38	78.5 (17.9)	28	79.1 (18.3)	10	76.8 (17.8)
Total Cholesterol (mmol.L <sup>-1</sup> )	< 5.0	40	4.7 (1.1)	29	4.8 (1.1)	11	4.4 (0.7)
HDL Cholesterol (mmol.L <sup>-1</sup> )	+0 < 1.03 < 1.29	39	1.3 (0.7)	29	1.3 (0.9)	10	1.4 (0.3)
Triglyceride (mmol.L <sup>-1</sup> )	< 1.7	19	1.6 (1.0)	13	1.8 (1.1)	6	1.2 (0.7)
HbA1c (mmol.mol)	< 42	28	36.5 (8.1)	21	37.4 (9.2)	7	33.7 (2.8)
Prolactin (mIU.L <sup>-1</sup> )	< 400	33	506.1 (548.0)	23	322.6 (207.8)	10	928.1 (823.6)*

\*, significantly different compared to males (p< 0.05).

### References:

Correll et al. (2014). *JAMA Psychiatry*, 71 (12), 1350-1363.  
Mitchell et al. (2013). *Schizophrenia Bulletin*, 39(2), 306-318.

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