Cardiometabolic Risk Management

Antipsychotics (Mood Stablizers & Antidepressants*)

*Despite less available evidence, similar principles apply to these medication classes

Lifestyle

- Smoking
- Diet
- Activity

- Weight
- Blood Pressure
- Glucose
- Lipids

Lifestyle Intervention (Diet, Physical Activity and Smoking Cessation); Refer for assessment and intervention by appropriate health professional if necessary

DANGER ZONE

Current Smoker	Poor Diet	Physical Inactivity	**Monitor for:** **Weight gain** Rapid early weight gain or >= 7% from baseline **BMI (kg/m2)** 25 -29: Overweight > 30: Obese **Waist Circum:** ≥ 88 cm women ≥102 cm men	> 140/90 mm Hg (over repeated measurements)	Pre-Diabetes: HbA1C 6-6.4% F. Glu 6.1- 6.9 mmol/L Diabetes*: HbA1C ≥ 6.5% F. Glu ≥ 7 mmol/L Rand. ≥ 11.1 mmol/L *2 tests, different days	Estimate 10-year CV risk using an established tool	**Metabolic Syndrome** Any 3 of: **Waist Circum**[1]: ≥ 88 cm women ≥102 cm men **F.Trig**[2,3]: ≥1.7 mmol/L **F. HDL**[2,3]: < 1 mmol/L men < 1.2 women **F.Gluc**[2,3]: ≥ 5.6 mmol/L **BP**[3]: ≥ 130/85 mmHg A1C >=5.7 % [1]Lower threshold for some groups [2]mmol/L [3]or medication Rx

INTERVENTION

Smoking cessation counseling and pharmacotherapy Monitor changes in mental status/ medication efficacy and side-effects (e.g. olanzapine and clozapine) *smoke-free.ca* *knowledge.camh.net*	Eliminate sugary drinks & processed snack foods Increase consumption of fruits, vegetables, & fibre 3 meals/day including breakfast, refer to dietitian if available. *eatrightontario.ca*	Walking is safe; aim for 10,000 steps/day. Progress as appropriate to moderate (sweating, able to talk) to vigorous (increased sweating, difficulty talking) activity Consider medical clearance for those at risk *csep.ca*	Screen for eating disorder, sleep apnea, and NAFLD Reduce daily intake by 500-1000 kcal/day Cognitive behavioural therapy Consider bariatric surgery for BMI >= 40 kg/m2 or >= 35 with comorbid disease See 2006 Canadian Clinical Practice Guidelines on the Management and Prevention of Obesity in Adults and Children [CMAJ 176(8): S1-13	Sodium reduction See 2012 Canadian Hypertension Education Program recommendations for the management of hypertension: BP measurement, diagnosis, assessment of risk and therapy. Can J Cardiol 28(3):270-287	**Pre-diabetes:** Increased frequency of glucose monitoring Consider metformin **Diabetes:** HbA1C q3months Refer to Diabetes Education Program See Canadian Diabetes Association 2013 Clinical Practice Guidelines for the Prevention and Management of Diabetes in Canada. Can J Diabetes 2013;37 (suppl 1):S1-S212.	Interventions are based on 10-year calculated CV risk See 2012 update of the Canadian Cardiovascular Society guidelines for the diagnosis and treatment of dyslipidemia for the prevention of cardiovascular disease in the adult. Can J Cardiol 29(2):151-167	Treat individual factors using relevant guidelines

TARGET

Smoking Cessation	Balanced Diet	150 minutes of activity/ week In increments of at least 10 min. Aerobic: Moderate to vigorous activity Resistance: Muscle-strengthening exercises	BMI of 18.5 – 24.9 kg/m2 Waist circumference in healthy range	**For Most:** <140/90 mmHg **Diabetes/CKD/ CV Disease:** <130/80 mmHg	HbA1C <6.5-7 % reflecting tighter control for the first 5 years Fasting glucose 4-5.9 mmol/L	Non-fasting HDL 2.6 mmol/l Refer to Framingham and Reynolds Risk values: *http://cvdrisk checksecure.com/ Default.aspx*	Treat to individual BMI, BP, glucose, and lipid targets Global CV Risk Management

FPG= Fasting Plasma Glucose; RPG = Random Plasma Glucose; BMI = Body Mass Index; Total Chol = total cholesterol; LDL = Low Density Lipoprotein; HDL = High Density Lipoprotein; BP= Blood pressure

Monitoring: How Often and What to Do

Applies to patients prescribed antipsychotics and metabolically active mood stabilizers and antidepressants

Frequency: As a minimum review those prescribed a new agent at baseline and at least once after 3 months. Weight should be assessed monthly in the first 3 months of taking a new antipsychotic as rapid early weight gain may predict severe weight gain in the longer term. Subsequent review should take place annually unless an abnormality of physical health emerges, which should then prompt appropriate action and/or continuing review at least every 3 months.

	Baseline	4 weeks	8 weeks	12 weeks	Quarterly	Annually
Personal/FHx	X					X
Lifestyle Review[1]	X	X	X	X	X	X
Weight/WC	X	X	X	X	X	X
BP	X			X		X
FPG/HbA1C	X			X		X
Lipid Profile[2]	X			X		X

History: Ask about family history (diabetes, obesity, CVD in first degree relatives <60 yrs), gestational diabetes. Note ethnicity.

[1]Smoking, diet, and physical activity [2]If fasting lipid profile cannot be obtained, a non-fasting sample is satisfactory

Derived from consensus guidelines 2004, j clin. psych 65:2

Investigations

Fasting estimates of plasma glucose (FPG), HbA1c, and lipids (total cholesterol, non-HDL, HDL, triglycerides). If fasting samples are impractical, then non-fasting samples are satisfactory for most measurements except for LDL and triglycerides.

Review of Antipsychotic Medication

Choose lower metabolic liability medication first-line when possible. Response in first episode psychosis is robust independent of agent.

Changing or discontinuing antipsychotic requires careful clinical judgment, balancing metabolic benefits against relapse risk. Ideally psychiatrist supervised. Should be a priority if there is:

- Rapid weight gain (e.g. 5kg <3 months) following antipsychotic initiation.
- Rapid development (<3 months) of abnormal lipids, BP, or glucose.

The psychiatrist should consider whether the antipsychotic drug regimen has played a causative role in these abnormalities and, if so, whether an alternative regimen could be expected to offer less adverse effect:

If clinical judgment and patient preference support continuing with the same treatment then ensure appropriate further monitoring and clinical considerations.

Avoid antipsychotic polypharmacy when possible; Avoid off-label use of antipsychotics.

Specific Adjunctive Pharmalogical Interventions

For mitigation of excess weight gain associated with antipsychotic use, the strongest evidence is for off-label use of Metformin and Topiramate (Mayan, 2010). Consider Metformin first due to better tolerability profile unless there is a co-morbid binge-eating disorder (McElroy, SI, 2009). Please be advised that off-label use requires documented informed consent. Discontinue if no sign of efficacy (continuing weight gain if used for weight loss or stabilization) after 3 months at therapeutic dose.

Metformin:

Weight Gain & Primary Prevention of Diabetes : Start 250 mg po BID, titrate every 1-2 weeks as clinically indicated and tolerated. Dose range is 750 mg - 2 Gm/day

Caution with renal or hepatic impairment. Avoid excessive alcohol use. Monitor for GI side effects. Monitor for B12 deficiency.

Topiramate:

Weight Gain: Start 12.5 mg po BID; titrate by 25-50 mg per day in divided doses every 1-2 weeks as tolerated to a maximum of 100 mg po BID.

Caution with renal or hepatic impairment. Avoid excessive alcohol use. Monitor for cognitive changes. Parasthesias are common but generally well-tolerated.

DON'T JUST SCREEN: INTERVENE!

FOR ALL PATIENTS IN THE *DANGER ZONE*

The primary care provider and psychiatrist will work together to ensure appropriate monitoring and interventions are provided and communicated to avoid over or under monitoring. The primary care provider will usually lead on supervising the provision of physical health interventions. The psychiatrist will usually lead on decisions to significantly change antipsychotic medicines.

The Royal — Mental Health - Care & Research / Santé mentale - Soins et recherche

Ontario Shores — Centre for Mental Health Sciences

The Ottawa Hospital | L'Hôpital d'Ottawa

Waypoint — Centre for Mental Health Care / Centre de soins de santé mentale

camh — Centre for Addiction and Mental Health

EPION — Early Psychosis Intervention Ontario Network

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