

## Guidelines for monitoring the physical health of patients receiving antipsychotic drug treatment for schizophrenia and bipolar disorder

### Introduction

It is well established that treatment with antipsychotic drugs can increase the propensity for the development of obesity, diabetes and cardiovascular disease. The extent of these metabolic consequences of drug treatment can vary substantially between individuals, and between different drug treatments. However, they may certainly contribute to increased morbidity and reduced life expectancy, as well as decreasing adherence to treatment. An additional factor associated with physical disorder is drug-induced hyperprolactinaemia.

In order to minimise these unwanted consequences of treatment with antipsychotic drugs, patients should be monitored for risk factors contributing to these metabolic, hormonal and cardiovascular pathologies allowing, where appropriate, steps to be taken to reduce subsequent disease risk.

### Baseline data to be collected

Monitoring requires the initial collection of baseline measures. These baseline data should be obtained by the psychiatric team on first contact and initial prescription of antipsychotic drug treatment or ideally within the first 14 days following this.

In addition to the usual medical and psychiatric histories, attention should be given to whether the patient has a personal and/or family history of obesity, diabetes or cardiovascular disease. The following data should be collected (desired normal values in parentheses):

1. Enquire about any personal or family history of obesity, diabetes or

cardiovascular disease and personal history of smoking.

2. Physical measures:  
BMI ( $<25\text{kg/m}^2$ ); blood pressure ( $<140/90\text{mmHg}$ ) (if feasible, waist circumference should be measured with the ideal values being  $<102\text{cm}$  in men or  $<88\text{cm}$  in women).
3. Lipids:  
Total cholesterol ( $<5\text{mmol/L}$ ); LDL ( $<3\text{mmol/L}$ ); HDL ( $>1.0\text{mmol/L}$ ); fasting triglycerides ( $<1.7\text{mmol/L}$ ).
4. Measure of plasma glucose:  
Fasting plasma glucose ( $<6.5\text{mmol/L}$ ) or HbA<sub>1c</sub> ( $<6.5\%$  or  $<48\text{mmol/mol}$ ) (a random plasma glucose is acceptable if fasting is not feasible). Follow-up tests should be carried out if fasting glucose or HbA<sub>1c</sub> are raised.
5. Cardiovascular function:  
ECG should be obtained from at-risk individuals (e.g. those with a history of cardiovascular disease or ECG abnormalities, or with other risk factors for cardiovascular disease) and from those on certain non-psychotropic drugs that may elevate risk of QT changes (e.g. erythromycin, tricyclic antidepressants, anti-arrhythmics and drugs which may affect electrolyte imbalance. See BNF or SmPC for further information). Certain drugs have specific effects on the QT interval (QTc normally 350-450msec) but other ECG abnormalities indicating pathology should not be ignored.
6. Prolactin:  
Serum prolactin (normally  $<23\text{ng/mL}$  males;  $<30\text{ng/mL}$  females). Account should be taken of the particular drug(s) prescribed and the fact that emergence of symptoms (dysmenorrhoea, gynaecomastia, etc.) provides a stronger indication of pathological risk than does the serum prolactin measure.

Variation from these norms pre-treatment, or very early in treatment, may influence the choice of antipsychotic drug (e.g. one with less metabolic risk or that has less effect on QT interval). Clinical management of any variation from these norms should be as per normal guidance. It may be appropriate to provide lifestyle or dietary advice, obtain a specialist opinion on any ECG abnormality and to repeat any abnormal tests.

### **Monitoring and follow-up**

Further measurements to determine any effects of antipsychotic drug treatment should be made after approximately 12 weeks of treatment – between 8 and 16 weeks. Subsequent monitoring, if no abnormality of physical health concern emerges, should be undertaken on an annual basis.

If substantial changes in body weight become evident before this, at routine psychiatric review or from observation by a CPN, then the appropriate measures should be repeated sooner. The same should apply if persistent symptoms suggestive of diabetes or cardiovascular disturbance are reported by the patient at review. Evidence of any persistent abnormality should prompt review of the antipsychotic prescribed.

After the initial 12 week follow-up, further monitoring should ideally be undertaken in primary care. This would follow a request from the psychiatric team who should also provide the baseline data to the GP. The initial one year review in primary care should initiate further annual physical health assessments by the GP.

### **Abnormal results**

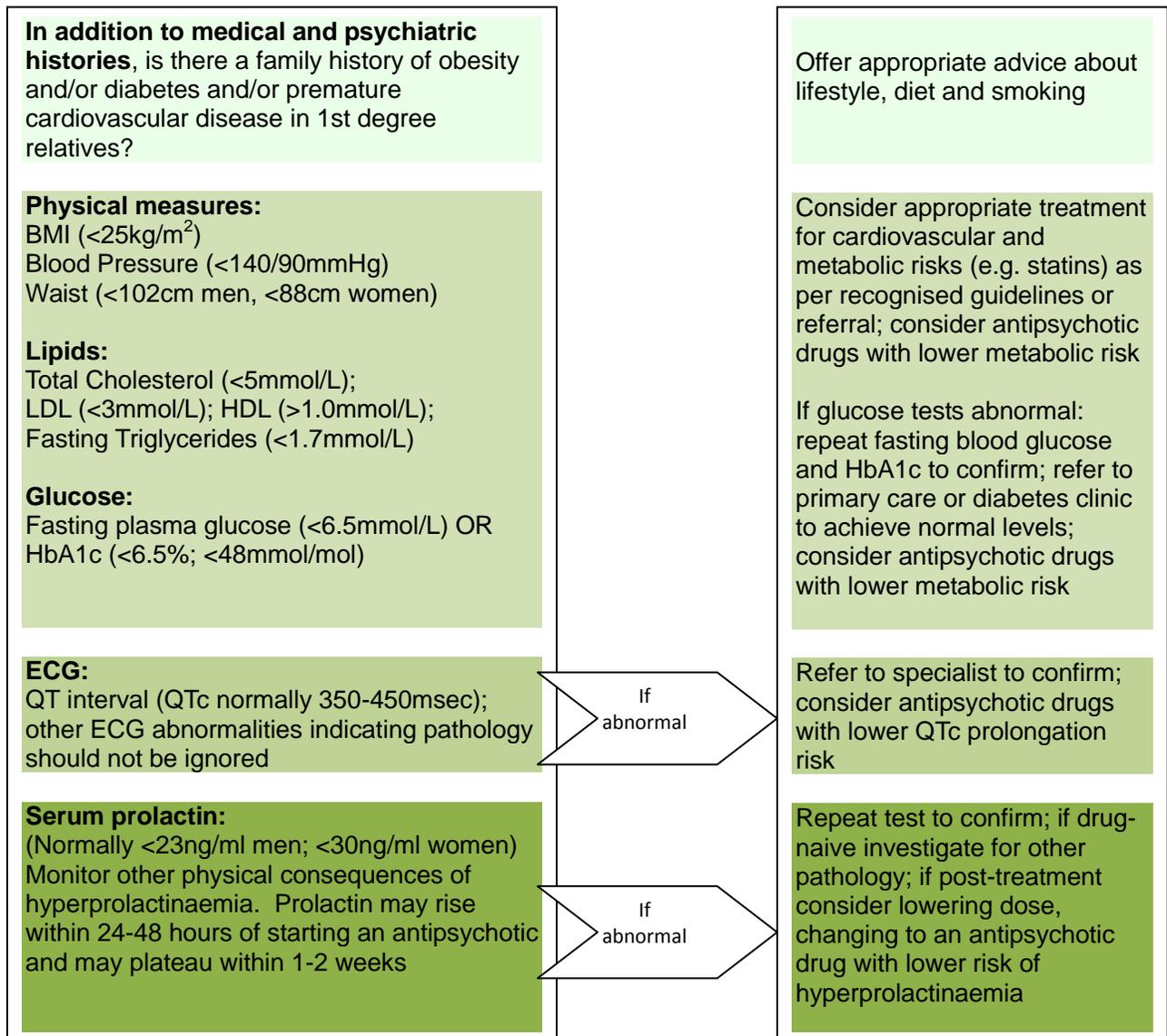
If the results of physical health monitoring identify abnormalities, or unexpected changes (such as an elevation of >7% in body weight), that are potentially related to drug treatment, the psychiatrist should

review the choice of drug. If clinical judgement and patient preference indicates that treatment should continue with the same drug, further monitoring should be undertaken in primary care and be determined by the appropriate clinical considerations. The management of metabolic or other abnormalities should be according to the appropriate existing regional/national guidance for patients not on antipsychotic drugs, for example, addressing the metabolic abnormalities with statins where appropriate or referral to a specialist diabetic clinic.

If a significant change in drug treatment is made then consideration must be given to the further monitoring required and whether investigations should be repeated around the 12 week period.

## Monitoring physical health of patients receiving antipsychotic drug treatment for schizophrenia and bipolar disorder

At first contact, or within 14 days following initiation of antipsychotic drug treatment, baseline measures should be recorded to allow for subsequent monitoring for metabolic and other risk factors.



### Repeat physical and laboratory checks as below:

- **IF ABNORMAL**, or there are any unexpected changes potentially due to antipsychotic drug treatment (e.g. BMI increases by > 7%), consider changing drug treatment and monitor physical health as if from first contact
- **AT 8-16 WEEKS:** Review after 8-16 weeks treatment, or after any significant change in drug treatment, repeat monitoring as above
- **ANNUALLY:** Repeat monitoring on an annual basis, as above (except ECG and serum prolactin unless clinically indicated). Consider after any significant change in drug treatment