East London NHS Foundation Trust

Summary of Physical Health Monitoring with Mood Stabilisers and Antipsychotics

All patients on admission require a physical assessment as well as baseline observations & investigations. The following tables provide guidance on routine monitoring required with antipsychotics & mood stabilisers. This list is not exhaustive & the need for additional monitoring will be dictated by individual patient risk factors.

All results should be documented in the notes (including refusals) and for community patients they should also be communicated to the GP.

For more information please contact Medicines Information on 020 8510 8295 / 07947681733 or email medicinesinformation@eastlondon.nhs.uk

Amisulpride

Frequency Parameter	Baseline	First 6 months of treatment	Annual Check-up	Comment
Blood Glucose (fasting if possible)	✓	✓	✓	Increase frequency if evidence of elevated levels.
Blood Lipids (fasting if possible)	✓	At 3 months	✓	Increase frequency if evidence of elevated levels.
FBC	✓	✗	✓	Repeat FBC if there are signs and symptoms of a blood dyscrasia.
LFTs	✓	✗	✓	
U&Es	✓	✗	✓	
CPK	✓	✗	✗	Repeat if there are signs and symptoms of NMS.
TFTs	Baseline and annual check-up only required for patients with BPAD & 6 monthly for rapid-cycling BPAD.			
Prolactin	✓	✗	✗	Repeat if there are signs of raised prolactin – refer to "Trust Hyperprolactinaemia Guideline"
ECG	✓ See comments	If an ECG is indicated at baseline repeat at maintenance dose. Where possible offer all patients an annual ECG, especially where other risk factors exist.		Baseline ECG for all inpatients and patients with specific CV risk factors e.g. high BP.
BP & Pulse	✓	See Comments	✓	Monitor BP during titration if there are risk factors for postural hypotension e.g. older adults.
Weight	✓	**Adults:** 3 monthly for first year. **<18 years:** monthly for 6 months, then every 6 months	✓	

Aripiprazole

Frequency Parameter	Baseline	First 6 months of treatment	Annual Check-up	Comment
Blood Glucose (fasting if possible)	✓	✓	✓	Increase frequency if evidence of elevated levels.
Blood Lipids (fasting if possible)	✓	At 3 months	✓	Increase frequency if evidence of elevated levels.
FBC	✓	✗	✓	Repeat FBC if there are signs and symptoms of a blood dyscrasia.
LFTs	✓	✗	✓	
U&Es	✓	✗	✓	Amisulpride is predominantly renally cleared, and so dosage reduction may need to be considered in renal failure.
CPK	✓	✗	✗	Repeat if there are signs and symptoms of NMS.
Prolactin	✓	Considering repeating level 6-12 months after initiation. Amisulpride is associated with hyperprolactinaemia. Repeat if there are signs of raised prolactin – refer to the "Trust Hyperprolactinaemia Guideline".		
ECG	✓	Where possible offer all patients an annual ECG, especially where other risks exist. Baseline ECG for all patients especially if there are specific CV risk factors e.g. high BP. During therapy the need for ECG monitoring should be assessed on an individual patient basis.		
BP & Pulse	✓		✓	Monitor BP during titration if there are risk factors for postural hypotension e.g. older adults.
Weight	✓		✓	

Carbamazepine

Frequency Parameter	Baseline	First 6 months of treatment	Annual Check-up	Comment
Blood Glucose (fasting if possible)	✓	✘	✓	
Blood Lipids (fasting if possible)	✓	✘	✓ See Comments	Only required for patients >40 years
FBC	✓	✓	✓	Monitor for signs of leucopenia, rashes, infection and fever. Repeat FBC if there are sign and symptoms of a blood dyscrasia.
LFTs	✓	✓	✓	
U&Es & Renal Function (RF)	✓	✓	✓	Check U&Es & RF every 6 months
TFTs	Baseline and annual check-up only required for patients with BPAD & 6 monthly for rapid-cycling BPAD.			
Prolactin	Baseline recommended for <18 years	✘	✘	
ECG	If indicated by history or clinical picture	✘	✘	
BP & Pulse	✓	✘	✓	
Weight	✓	✓ **<18 years:** Monthly for 6 months, then every 6 months	✓	

Therapeutic Drug Monitoring For Carbamazepine
Check level 2 weeks after initiation & 2 weeks after every dose change. Once stabilised on carbamazepine treatment check carbamazepine levels every 6 months. **Time to steady state:** Approximately two weeks. Carbamazepine induces its own metabolism. Time to steady state depends on autoinduction. Usual target range is between 7-12 mg/l (refer also to local laboratory for reference range), for affective illness. **Sample time:** Trough levels.

Clozapine

Frequency Parameter	Baseline	First 6 months of treatment	Annual Check-up	Comment
Blood Glucose (fasting if possible)	✓	At 1 & 3 months then every 4 to 6 months	✓	Increase frequency if evidence of elevated levels.
Blood Lipids (fasting if possible)	✓	At 3 months	✓	Increase frequency if evidence of elevated levels.
FBC	FBC must be monitored in accordance with the clozapine monitoring agency (ZTAS) recommendations (weekly for the first 18 weeks, then fortnightly until week 52, then monthly thereafter). Repeat FBC if there are signs and symptoms of blood dyscrasia.			
LFTs	✓	✘	✓	
U&Es	✓	✘	✓	
CPK	✓	✘	✘	Repeat if there are signs and symptoms of NMS.
Prolactin	✓	Repeat if there are signs of raised prolactin – refer to the "Trust Hyperprolactinaemia Guideline".		
ECG	✓	Where possible offer all patients an annual ECG, especially where other risks exist. Baseline ECG for all patients especially if there are specific CV risk factors e.g. high BP. During therapy the need for ECG monitoring should be assessed on an individual patient basis.		
BP & Pulse	✓	See comments	✓	Refer to "Clozapine & Operational Guidelines" for advice during titration period.
Weight	✓	**Adults:** 3 monthly for first year. **<18 years:** monthly for 6 months, then every 6 months	✓	

Haloperidol

Frequency Parameter	Baseline	First 6 months of treatment	Annual Check-up	Comment
Blood Glucose (fasting if possible)	✓	✓	✓	Increase frequency if evidence of elevated levels.
Blood Lipids (fasting if possible)	✓	At 3 months	✓	Increase frequency if evidence of elevated levels.
FBC	✓	✗	✓	Repeat FBC if there are signs and symptoms of a blood dyscrasia.
LFTs	✓	✗	✓	
U&Es	✓	✗	✓	
CPK	✓	✗	✗	Repeat if there are signs and symptoms of NMS.
Prolactin	✓	Consider repeating level 6-12 months after initiation. Haloperidol is associated with hyperprolactinaemia. Repeat if there are signs of raised prolactin – refer to the "Trust Hyperprolactinaemia Guideline".		
ECG	✓	Where possible offer all patients an annual ECG, especially where other risks exist. Baseline ECG for all patients especially if there are specific CV risk factors e.g. high BP. During therapy the need for ECG monitoring should be assessed on an individual patient basis.		
BP & Pulse	✓	See comments	✓	Monitor BP during titration if there are risk factors for postural hypotension e.g. older adults.
Weight	✓	**Adults:** 3 monthly for first year. **<18 years:** monthly for 6 months, then every 6 months	✓	

Lamotrigine **Medical advice should be sought immediately if a rash develops**

Frequency Parameter	Baseline	First 6 months of treatment	Annual Check-up	Comment
Blood Glucose (fasting if possible)	✓	✗	✓	
Blood Lipids (fasting if possible)	✓	✗	✓ See comments	Only required for patients >40 years
FBC	✓	✗	✓	Repeat FBC if there are signs and symptoms of a blood dyscrasia.
LFTs	✓	✗	✓	
U&Es & Renal Function (RF)	✓	✗	✓	
TFTs	Baseline and annual check-up only required for patients with BPAD & 6 monthly for rapid-cycling BPAD			
Prolactin	Baseline recommended for <18 years	✗	✗	
ECG	If indicated by history of clinical picture	✗	✗	
BP & Pulse	✓	✗	✓	
Weight	✓	**<18 years:** monthly for 6 months, then every 6 months	✓	

Lithium **Ensure patient has been given a "Lithium Alert Card" & "Lithium Record Book"**

Frequency Parameter	Baseline	First 6 months of treatment	Annual Check-up	Comment
Blood Glucose (fasting if possible)	✓	✗	✓	Fasting level if possible.
Blood Lipids (fasting if possible)	✓	✗	✓ See comments	Only required for patients >40 years
FBC	✓	✗	✗	Repeat FBC if there are signs and symptoms of a blood dyscrasia.
LFTs	✓	✗	✗	
U&Es & Renal Function (RF)	✓	✓	✓	Check RF every 6 months. Increase monitoring if; abnormal, evidence of deterioration, medications that can affect Li^+ level such as ACE inhibitors, diurectics, NSAIDS are initiated
TFTs	✓	✓	✓	Repeat every 6 months and more often if evidence of deterioration.
Prolactin	Baseline recommended for <18 years	✗	✗	
ECG	✓	The need for further monitoring should be assessed on an individual basis.		
BP & Pulse	✓	✗	✓	
Weight	✓	**<18 years:** monthly for 6 months, then every 6 months	✓	Additional follow-up monitoring for adults only required if there is rapid weight gain.

Therapeutic Drug Monitoring of Lithium Levels
Time to steady state: 5 to 7 days. Check lithium level one week after initiating treatment and every week until lithium level is at desired therapeutic level. Target level will depend on age and illness. Usual therapeutic level is between 0.4 mmol/L (refer also to local laboratory for reference range as the range may differ). A very small number of people may need slightly higher lithium levels. **Follow up:** Once stabilised on Lithium NICE recommended that lithium levels should be checked every 3 months, however 6 months may be adequate for stable, concordant patients who understand the potential risks of toxicity and how to manage those risks. Levels should be checked more frequently in the elderly &/or if there are signs of toxicity, relapse, intercurrent infection or after significant change in sodium/fluid intake. Levels should be monitored 5 to 7 days after every change in dose/brand or after initiating or stopping other medicines which may affect lithium level (e.g. diuretics, NSAIDs, ACEI). **Sample time:** blood should be taken 12 hours post dose.

Olanzapine

Frequency Parameter	Baseline	First 6 months of treatment	Annual Check-up	Comment
Blood Glucose (fasting if possible)	✓	At 1 & 3 months then every 4-6 months	✓	Increase frequency if evidence of elevated levels.
Blood Lipids (fasting if possible)	✓	3 monthly for first year	✓	Increase frequency if evidence of elevated levels.
FBC	✓	✘	✓	Repeat FBC if there are signs and symptoms of a blood dyscrasia.
LFTs	✓	✘	✓	
U&Es	✓	✘	✓	
CPK	✓	✘	✘	Repeat if there are signs and symptoms of NMS.
TFTs	Baseline and annual check-up only required for patients with BPAD & 6 monthly for rapid-cycling BPAD.			
Prolactin	✓	✘	✘	Repeat if there are signs of raised prolactin – refer to the "Trust Hyperprolactinaemia Guideline"
ECG	✓ See comments	If an ECG is indicated at baseline repeat at maintenance dose. Where possible offer all patients an annual ECG, especially where other risk factors exist.		Baseline ECG for all inpatients & patients with specific CV risk factors e.g. high BP.
BP & Pulse	✓	See comments	✓	Monitor BP during titration if there are risk factors for postural hypotension e.g. older adults
Weight	✓	**Adults:** 3 monthly for first year **<18 years:** monthly for 6 months, then every 6 months	✓	

Quetiapine

Frequency Parameter	Baseline	First 6 months of treatment	Annual Check-up	Comment
Blood Glucose (fasting if possible)	✓	✓	✓	Increase frequency if evidence of elevated levels.
Blood Lipids (fasting if possible)	✓	At 3 months	✓	Increase frequency if evidence of elevated levels.
FBC	✓	✗	✓	Repeat FBC if there are signs and symptoms of a blood dyscrasia.
LFTs	✓	✗	✓	
U&Es	✓	✗	✓	
CPK	✓	✗	✗	Repeat if there are signs and symptoms of NMS.
TFTs		Baseline and annual check-up only required for patients with BPAD & 6 monthly for rapid-cycling BPAD. Quetiapine is associated with small (clinically insignificant) decreases in thyroid hormone level so annual monitoring may be advisable.		
Prolactin	✓	✗	✗	Repeat if there are signs of raised prolactin – refer to "Trust Hyperprolactinaemia Guideline"
ECG	✓ See comments	If an ECG is indicated at baseline repeat at maintenance dose. Where possible offer all patients an annual ECG, especially where other risk factors exist.		Baseline ECG for all inpatients & patients with specific CV risk factors e.g. high BP.
BP & Pulse	✓	See comments	✓	Monitor BP during titration if there are risk factors for postural hypotension e.g. older adults
Weight	✓	**Adults:** 3 monthly for first year **<18 years:** monthly for 6 months, then every 6 months	✓	

Risperidone

Frequency Parameter	Baseline	First 6 months of treatment	Annual Check-up	Comment
Blood Glucose (fasting if possible)	✓	✓	✓	Increase frequency if evidence of elevated levels.
Blood Lipids (fasting if possible)	✓	At 3 months	✓	Increase frequency if evidence of elevated levels.
FBC	✓	✗	✓	Repeat FBC if there are signs and symptoms of a blood dyscrasia.
LFTs	✓	✗	✓	
U&Es	✓	✗	✓	
CPK	✓	✗	✗	Repeat if there are signs and symptoms of NMS.
TFTs	Baseline and annual check-up only required for patients with BPAD & 6 monthly for rapid-cycling BPAD.			
Prolactin	✓	Consider repeating level 6-12 months after initiation. Risperidone is associated with hyperprolactinaemia. Repeat if there are signs of raised prolactin – refer to the "Trust Hyperprolactinaemia Guideline".		
ECG	✓ See comments	If an ECG is indicated at baseline repeat at maintenance dose. Where possible offer all patients an annual ECG, especially where other risk factors exist.		Baseline ECG for all inpatients & patients with specific CV risk factors e.g. high BP.
BP & Pulse	✓	See comments	✓	Monitor BP during titration if there are risk factors for postural hypotension e.g. older adults
Weight	✓	**Adults:** 3 monthly for first year **<18 years:** monthly for 6 months, then every 6 months	✓	

Typical Antipsychotics **See separate table for haloperidol**

Frequency Parameter	Baseline	First 6 months of treatment	Annual Check-up	Comment
Blood Glucose (fasting if possible)	✓	✓	✓	Increase frequency if evidence of elevated levels.
Blood Lipids (fasting if possible)	✓	At 3 months	✓	Increase frequency if evidence of elevated levels.
FBC	✓	✗	✓	Repeat FBC if there are signs and symptoms of a blood dyscrasia.
LFTs	✓	✗	✓	
U&Es	✓	✗	✓	
CPK	✓	✗	✗	Repeat if there are signs and symptoms of NMS.
Prolactin	✓	Consider repeating level 6-12 months after initiation. Typical antipychotics are associated with hyperprolactinaemia. Repeat if there are signs of raised prolactin – refer to the ""Trust Hyperprolactinaemia Guideline"".		
ECG	✓ See comments	If an ECG is indicated at baseline repeat at maintenance dose. Where possible offer all patients an annual ECG, especially where other risk factors exist.		Baseline ECG for all inpatients & patients with specific CV risk factors e.g. high BP.
BP & Pulse	✓	See comments	✓	Monitor BP during titration if there are risk factors for postural hypotension e.g. older adults
Weight	✓	**Adults:** 3 monthly for first year **<18 years:** monthly for 6 months, then every 6 months	✓	

Valproate

Frequency Parameter	Baseline	First 6 months of treatment	Annual Check-up	Comment
Blood Glucose (fasting if possible)	✓	✗	✓	Increase frequency if evidence of elevated levels.
Blood Lipids (fasting if possible)	✓	At 3 months	✓ See Comments	Only required for patients >40 years.
FBC	✓	✓	✓	Repeat FBC if there are signs and symptoms of a blood dyscrasia.
LFTs	✓	✓	✓	Periodically monitor LFTs during the first 6 months of therapy, especially in those most at risk, and those with a prior history of liver disease.
U&Es & Renal Function (RF)	✓	✗	✓	
TFTs	Baseline and annual check-up only required for patients with BPAD & 6 monthly for rapid-cycling BPAD			
Prolactin	Baseline recommended for <18 years	✗	✗	
ECG	If indicated by history or clinical picture	✗	✗	
BP & Pulse	✓	✗	✓	
Weight	✓	✓ **Adults:** 3 monthly for first year **<18 years:** monthly for 6 months, then every 6 months	✓	

Therapeutic Drug Monitoring of Valproate Level
Valproate levels are not routinely required. May be of use if evidence of ineffectiveness, poor adherence or toxicity. **Time to steady state:** 2 to 3 days. Usual target range is between 50-100 mg/L (refer to local laboratory for reference range). **Sample time:** Trough levels.