

Clozapine Blood Results Monitoring System		Recommended Action
Green Range	WBC greater than 3.5 x 10 ⁹ /L AND Neutrophils greater than 2.0 x 10 ⁹ /L	Continue clozapine therapy
Amber Range	WBC 3.0 - 3.5 x 10 ⁹ /L AND/OR Neutrophils 1.5 - 2.0 x 10 ⁹ /L	Continue clozapine therapy with twice-weekly blood tests until return to "green" range
Red Range	WBC less than 3.0 x 10 ⁹ /L AND/OR Neutrophils less than 1.5 x 10 ⁹ /L	Stop clozapine therapy immediately. Contact haematologist and Clozapine Monitoring Centre

Recommencing Therapy after Interruption

Dosing recommendations if clozapine dose is missed for > 48 hours

- Obtain psychiatric review prior to recommencing clozapine
- Recommence at 12.5mg once or twice daily on the first day. If this dose is tolerated, it may be feasible to titrate the dose to the therapeutic level more quickly than is recommended for initial treatment.
- This is a guide only – for further dosing options refer to treating psychiatrist.

Blood Test Monitoring after Interruption of Therapy

Monitoring frequency	Clozapine missed for < 72 hours	Clozapine missed > 72 hours but less than 4 weeks	Clozapine missed > 4 weeks
Weekly	No change in monitoring	Monitor weekly for at least 6 weeks or for as long as necessary to achieve a total of 18 weeks of weekly monitoring	Recommence as for a new patient
Monthly		Monitor weekly for 6 weeks then continue with monthly monitoring if no problems detected	

Side-effects Associated with Clozapine Therapy Modified from Maudsley Prescribing Guidelines 2009

Side-effect	Signs and symptoms	Recommended Action
Neutropenia/ agranulocytosis	WBC < 3.0 x 10 ⁹ /L or Neutrophils < 1.5 x 10 ⁹ /L. Flu-like symptoms such as sore throat & fever. (First 18 weeks – but may occur at any time)	Contact doctor. Stop clozapine. Contact haematologist at Clozapine Monitoring Centre.
Myocarditis/ cardiomyopathy	Fast or irregular heart beat at rest with rapid breathing, dyspnoea, hypotension, raised jugular venous pressure, fatigue, flu-like symptoms, chest pain or fever. (Cardiomyopathy may occur at any time. Myocarditis – within 6-8 weeks of starting)	Contact doctor and team. Withhold Clozapine. Repeat ECG and echocardiogram. Refer to cardiologist. If confirmed contact cardiologist at clozapine monitoring centre.
Fever	> 38° C (First 3 weeks)	Contact doctor. Reduce rate of dose titration of clozapine. Check FBC, WCC, Creatine Kinase, ECG and Echo. DO NOT give paracetamol until doctor notified and agranulocytosis / myocarditis excluded.
Seizures	Increases with high doses, rapid dose titration, concurrent use of drugs that lower seizure threshold and preexisting seizure disorders and concurrent illness. (May occur at any time.)	Contact doctor. Reduction in dose. Check with pharmacist for pharmacological options. Risk of seizures increases with higher plasma levels. Check plasma levels.
Hypersalivation	Excessive drooling – Very troublesome at night. (First few months)	Contact doctor. Check with pharmacist for pharmacological options.
Constipation	Less frequent bowel motions, hard stools, abdominal bloating, cramping or pain, decrease appetite or fatigue. (Usually persists)	Contact doctor. Recommend increased fluid intake and exercise. Treat like opioid-induced constipation, use osmotic laxatives and stimulants.
Nocturnal enuresis	Loss of bladder control, especially at night (bed-wetting). (May occur at any time)	Contact doctor. Avoid fluids after 7pm. Check males for other causes. Continence referral. Check with pharmacist for pharmacological options.
Weight gain	Usually during the first years of treatment.	Dietary counselling before weight gain occurs is essential.
Nausea	First 6 weeks	May give antiemetic. Avoid prochlorperazine and metoclopramide if previously experienced Extra Pyramidal Side Effects (EPSE).

This is not an exhaustive list of side effects. Please see product information for further advice. It is recommended that concurrent use of antipsychotic therapy be avoided where possible as this increases the patient's risk of side-effects.

HOSPITAL NAME CLOZAPINE INITIATION AND TITRATION CHART		SURNAME	UMRN	SEX
Attach ADR Sticker		NOT A VALID PRESCRIPTION UNLESS IDENTIFIERS PRESENT		BIRTHDATE
		PATIENT'S ADDRESS		
ALLERGIES & ADVERSE REACTIONS (ADR) <input type="checkbox"/> Nil Known <input type="checkbox"/> Unknown (tick appropriate box or complete details below)		First prescriber to print patient name and check label correct:		
Drug (or other)	Reaction/Date	Sign		
Sign..... Print Date		Ward/Unit	Consultant	

Tick the applicable box:
 Initiating (complete Pre-commencement screen) Recommencing after interruption of less than 28 day Continuing

Pre-commencement Screen

Pre-commencement Screen is required to be completed: Yes No
 All sections below must be completed prior to clozapine initiation or when clozapine has been discontinued for 3 months or more.

Medical History:
 Patient has been adequately trialled on 2 or more other antipsychotics No Yes
 Patient has chronic medical condition No Yes Details _____
 Patient has a personal or family history of cardiovascular disease No Yes Details _____
 Patient has a history of epileptic seizures No Yes Details _____

Clozapine checklist:
 Psychiatrist has completed and returned Clozapine Registration Form for New Patients to a pharmacist
 PBS eligibility
 Continuation of supply at a registered clozapine centre has been considered
 Patient/carer/family has viewed clozapine Patient Notification Form
 Patient/carer/family has been provided with the Consumer Medication Information and the treatment explained
 Patient has given informed consent or second opinion obtained (if applicable)
 All Pre-Clozapine Baseline Tests have been performed within 10 days before clozapine commencement

Consultant Name: _____ Signature: _____ Date: _____

Monitoring: Refer to hospital procedure. Where this is unavailable the following are recommended monitoring guidelines.
 Day 1 Temperature, respirations, pulse and blood pressure hourly for the first six hours, then every six hours for the first 24 hours
 Day 2 to 7 Temperature, respirations, pulse and blood pressure taken twice daily or more frequently if clinically required.

Initial Observations:
 Observations during first 7 days of therapy **MUST** be documented below **AND** on the Adult Observation and Response Chart

Key: Temp-Black Pulse-Red	Baseline (Prior to 1 st dose):													
	Date	/	/	Time	:	Temp	°C	Pulse	bpm	BP	mmHg	Respiratory Rate	breaths/min	
	Day 1					Day 2	Day 3	Day 4	Day 5	Day 6	Day 7			
Temp														
Write ≥39.5														
39.0-39.4														
38.5-38.9														
38.0-38.4														
37.5-37.9														
37.0-37.4														
36.5-36.9														
36.0-36.4														
35.5-35.9														
35.0-35.4														
Write ≤35.0														
≤40s														
Blood Pressure (Standing)														
Blood Pressure (Lying)														
Respiratory Rate														
Level of Consciousness														

(A=Alert, V=Voice, P=Pain, U=Unresponsive)
ESCALATION REQUIREMENTS:
 Urgent medical team notification required if any of the following observed:
Temperature >38° C Pulse >100bpm Postural drop >30 mmHg Respiratory Rate <8 or >22 breaths/minute
 Or patient is unresponsive
 Maudsley Prescribing Guidelines 11th Edition 2012

DO NOT WRITE IN BINDING MARGIN

DO NOT WRITE IN BINDING MARGIN

BARCODE AREA

XYxxxxx

xxx
11/17

HOSPITAL NAME

Please use ID label or block print

CLOZAPINE INITIATION AND TITRATION CHART

Year 20 ____

SURNAME	UMRN	SEX
NOT A VALID PRESCRIPTION UNLESS IDENTIFIERS PRESENT		
FORENAMES	BIRTHDATE	
PATIENT'S ADDRESS		

Clozapine Dose Orders

⚠ DO NOT prescribe clozapine until approved by Clozapine Monitoring Centre and Patient Clozapine Number allocated. Commence clozapine in the morning to allow hourly monitoring for the first six hours.

Medication Clozapine		Formulation:		Patient Clozapine Number:						
Route: oral		Indication:								
Pharmacy use:				Weekly monitoring until : / /						
Date	Day	Blood test due	Prescriber		Morning dose 08:00hr 	Nurse initials Nurse 1/ Nurse 2	Night dose 20:00hr 	Nurse initials Nurse 1 / Nurse 2	Drug level	Pharmacy
			Name (PRINT)	Signature						
	1									
	2									
	3									
	4									
	5									
	6									
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Clozapine Dose Titration Schedule

This table serves as a guide only and dose titration should be individualised. Patients > 65 years of age may require a slower dose increase titration regimen. **Titration beyond 200mg/day:** If well tolerated, the daily dose may be increased slowly in increments of 25-50mg (maximum 100mg/week).

Day	1	2	3	4	5	6	7	8	9	10	11	12	13	14
Morning	12.5mg	25mg	25mg	25mg	25mg	25mg	25mg	25mg	50mg	50mg	50mg	50mg	50mg	50mg
Evening				25mg	25mg	50mg	75mg	100mg	100mg	100mg	125mg	125mg	125mg	150mg

Monitoring Checklist – Baseline Measurements When Commencing Clozapine

Blood group _____		Height _____ m		Smoking status: <input type="checkbox"/> Smoker <input type="checkbox"/> Non Smoker			
Intervals	Pre-clozapine baseline		Day 7	Day 14	Day 21	Day 28	After 28 days
	Date	Results	Date:	Date:	Date:	Date:	
To be completed by doctor/ nurse/ dietician	Full physical exam (To be completed by doctor)	<input type="checkbox"/> Performed					Annually
	Dietician review	<input type="checkbox"/> Performed					Monthly
	Weight	kg					
	Waist	cm					
To be completed by Doctor	BMI weight (kg)/ height (m ²)						Weekly first 18 weeks - then every 28 days
	Full Blood Count	<input type="checkbox"/> Performed	<input type="checkbox"/> Performed	<input type="checkbox"/> Performed	<input type="checkbox"/> Performed	<input type="checkbox"/> Performed	
	White Blood Count	x10 ⁹ /L	x10 ⁹ /L	x10 ⁹ /L	x10 ⁹ /L	x10 ⁹ /L	
	Neutrophils Absolute	x10 ⁹ /L	x10 ⁹ /L	x10 ⁹ /L	x10 ⁹ /L	x10 ⁹ /L	
	Eosinophils Absolute	x10 ⁹ /L	x10 ⁹ /L	x10 ⁹ /L	x10 ⁹ /L	x10 ⁹ /L	
	Liver function test	<input type="checkbox"/> Performed					6 monthly
	Urea & Electrolytes	<input type="checkbox"/> Performed					6 monthly
	Fasting plasma glucose	mmol/L					6 monthly
	Total cholesterol (fasting)	mmol/L					
	LDL (fasting)	mmol/L					
	HDL (fasting)	mmol/L					When needed
	Triglycerides (fasting)	mmol/L					
Troponin	micograms/L	micograms/L	micograms/L	micograms/L	micograms/L		
C-Reactive Protein (CRP)	mg/L	mg/L	mg/L	mg/L	mg/L	When needed	
ECG (QT interval)						6 monthly	
Cardiac echocardiogram						At 6 months-then annually	
Beta HCG (female)						When needed	

These are suggested guidelines only, refer to the treating psychiatrist for individual monitoring requirements

Reason For Not Administering (codes must be circled)

Absent	(A)	On Leave	(L)	Refused-notify doctor	(R)	Vomiting – notify doctor	(V)
Fasting	(F)	Not Available - obtain Supply and/or notify doctor, consider incident report	(N)	Withheld-enter reason in clinical record	(W)	Self-Administering – observed or claimed	(S)