



# PSYCHIATRIC INVESTIGATIONS

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# Introduction

A person is lying in a hospital bed, partially visible on the right side of the image. A red line graph is overlaid on the image, starting from the top right and extending downwards. The background is dark with some faint, glowing patterns.

- ***Clinical Laboratory Investigation and Psychiatry*** is an invaluable tool that explores day-to-day psychiatric practices
- Investigation are useful to detect alteration in biologic function & to screen for medical disorders causing psychiatric symptoms

# Classification of Investigation

The background of the slide features a dark, atmospheric scene of a patient lying on a table inside an MRI scanner. The patient is positioned horizontally, with their head towards the right. The scanner's gantry is visible as a large, curved structure. In the upper center, there are faint, glowing icons of a gear and a watch, symbolizing precision and time. The overall color palette is dark with highlights from the scanner's interior.

**Routine Investigation**

**Electrophysiological Tests**

**Brain Imaging Tests**

**Neuro - endocrine Tests**

**Genetic Tests**

# 1. Routine Investigation

- A complete hemogram (total & differential blood count, hemoglobin, ESR) & urine analysis are basic routine tests.



Leucopenia & agranulocytosis are associated with certain medications (clozapine). Treatment with lithium & neuroleptic malignant syndrome are often associated



# 1. Routine Investigation

➤ Renal function tests:

Treatment with lithium.

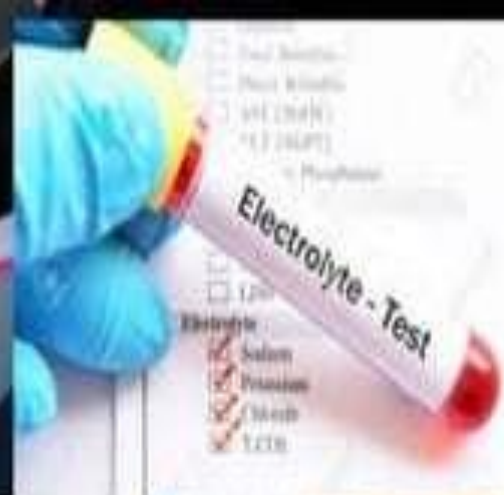
➤ Liver function tests:

For all alcoholic patients  
treatment with  
carbamazepine, valproate  
& benzodiazepines



# 1. Routine Investigation

- Serum electrolytes: Dehydration, treatment with carbamazepine, antipsychotics, lithium•
- Blood glucose: Routine screen above 35 years age
- Thyroid function test: Depression, treatment with lithium &



# 1. Routine Investigation

- Electrocardiogram (ECG): Above 35 years of age, treatment with lithium, antidepressants, ECT,



# 1. Routine Investigation

## □ HIV testing:

IV drug users,  
suggestive sexual  
history, AIDS,  
dementia.

## □ VDRL: Suggestive





# 1. Routine Investigation

- ✓ Serum CPK: Neuroleptic malignant syndrome (markedly increased levels)
- ✓ Chest X-ray: Before treatment with ECT
- ✓ Drug level estimation: Drug levels are indicated to test for therapeutic blood levels, for toxic blood levels & for testing drug compliance. Examples are lithium (0.6-1.6 mEq/L), carbamazepine (6-12mg/ml, valproate (50-100 mg/ml), haloperidol (8-18

C-Reactive protein  
(CRP) test



## 2. Electrophysiological Tests

- Electroencephalogram (EEG):

Measures brain electrical activity, identifies dysrhythmias & asymmetric, used in the diagnosis of seizures, dementia, neoplasm, stroke, metabolic or degenerative disease.





## 2. Electrophysiological Tests

### Polysomnography /sleep studies:

Used in the diagnosis of sleep disorders & seizures.



### 3. Brain Imaging Test

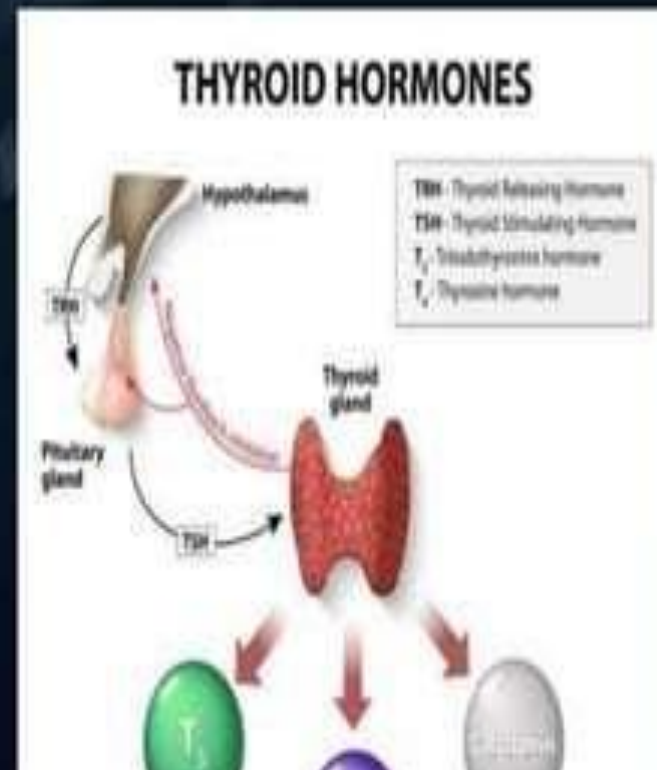
- Computed Tomography (CT) scan: Measures accuracy of brain structure to detect possible lesions, abscesses, areas of infarction or aneurysm. CT scan also identifies various anatomic differences in patients with schizophrenia, organic mental disorder & bipolar disorder.
- Magnetic Resonance Imaging (MRI) scan: Measures the anatomic & biochemical status of various segments of the brain; detects brain edema, ischemia, infection, neoplasm, trauma & other changes such as demyelination used in the diagnosis of



## 4. Neuro-endocrine Test

Commonly used neuro-endocrine tests are

- *Dexamethasone suppression test*
- *TRH stimulation test*
- *Serum prolactin levels*
- *Serum 17-hydroxycorticosteroid*



## 5. Genetic Test

*Cytogenetic work-up is advised in some cases of mental retardation.*



*Thank You*

