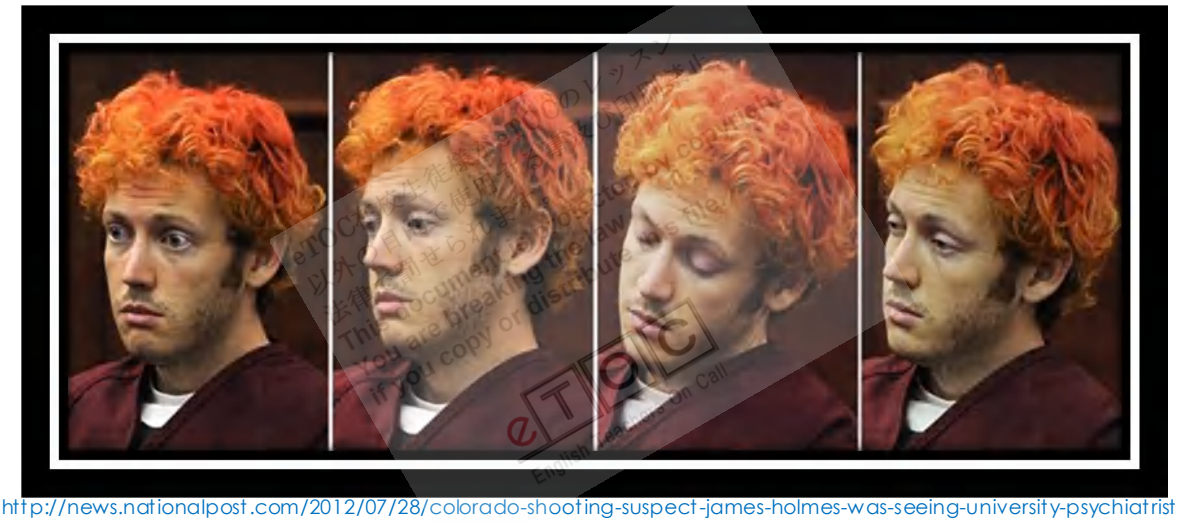
Medical Assessment of the Patient With Mental Symptoms

Medical assessment of patients with mental symptoms seeks to identify 2 things:

- Physical disorders *mimicking* mental disorders
- Physical disorders *accompanying* mental disorders

Numerous physical disorders cause symptoms mimicking specific mental disorders. Other physical disorders may not mimic specific mental syndromes but instead change mood and energy.



http://news.nationalpost.com/2012/07/28/colorado-shooting-suspect-james-holmes-was-seeing-university-psychiatrist/

Table 2

Selected Mental Symptoms Due to Physical Disorders

Mental Symptom	Physical Disorder*
Confusion, delirium, disorientation	Cerebral arteritis, including that caused by SLE CNS infection (eg, encephalitis, meningitis, toxoplasmosis) Complex partial seizures Dehydration Drug overdose, including prescription drug overdose Electrolyte abnormalities Fever Hypoglycemia Hypothermia Hypothyroidism Hypoxia

	Liver failure Mass lesion (eg, tumor, hematoma) Renal failure Sepsis Thyroid disorders Vascular infarct Vitamin deficiency
Cognitive impairment, behavioral instability	Alzheimer's and other dementias HIV/AIDS Lyme disease Mass lesion Multiple sclerosis Neurosyphilis Parkinson's disease Subdural hematoma SLE Thyroid disorders Vascular infarct Vitamin deficiency
Delusions	Multiple sclerosis Polysubstance abuse Seizure disorders
Depression	Brain tumor Cancer treatments, including interferon Cushing's syndrome Dementia Diabetes mellitus Hypothyroidism Multiple sclerosis Sarcoidosis
Euphoria, mania	Brain tumor Multiple sclerosis Polysubstance abuse
Hallucinations	Encephalitis Mass lesion Migraine Seizure disorders
Insomnia	Circadian rhythm disorders Dyspnea or hypoxia Gastroesophageal reflux disease (GERD) Hyperthyroidism Periodic leg movement disorder or restless legs syndrome Pain syndromes
Irritability	Multiple sclerosis Vitamin B_{12} deficiency
Memory impairment	Hypothyroidism Multiple sclerosis SLE Vitamin deficiency

Mood symptoms	HIV/AIDS Multiple sclerosis
Personality change	Mass lesion Multiple sclerosis Seizure disorders SLE
Psychosis (eg, hallucinations)	Brain tumor Dementia Electrolyte abnormalities Migraine Multiple sclerosis Polysubstance abuse Sarcoidosis Sensory loss SLE Syphilis

*In addition, numerous drugs and toxins may cause mental symptoms.

Many drugs cause mental symptoms; the most common drug causes are

- CNS-active drugs (eg, anticonvulsants, antidepressants, antipsychotics, sedative/hypnotics, stimulants)
- Anticholinergics (eg, antihistamines)
- Corticosteroids

Numerous other therapeutic drugs and drug classes have also been implicated; they include some classes that may not ordinarily be considered (eg, antibiotics, antihypertensives). Drugs of abuse, particularly alcohol, amphetamines, cocaine, hallucinogens, andphencyclidine

(PCP), particularly in overdose, are also frequent causes of mental symptoms. Withdrawal from alcohol, barbiturates, or benzodiazepines may cause mental symptoms (eg, anxiety) in addition to symptoms of physical withdrawal.

In addition to the problem of causing mental symptoms, patients with a mental disorder may develop a physical disorder (eg, meningitis, diabetic ketoacidosis) that causes new or worsened mental symptoms. Thus, a clinician should not assume that all mental symptoms in patients with a known mental disorder are due to that disorder. The clinician may need to be **proactive** in addressing possible physical causes for mental symptoms, especially in patients unable to describe their physical health because they have psychosis or dementia.

Patients presenting for psychiatric care occasionally have undiagnosed physical disorders (including substance abuse, diabetes, and hypothyroidism) that are not the cause of their mental symptoms but nonetheless require evaluation and treatment.

Table 3

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Evaluation

Medical assessment by history, physical examination, and often brain imaging and laboratory testing is required for patients with

- New-onset mental symptoms
- Qualitatively different or **atypical** symptoms (ie, in a patient with a known or stable mental disorder)

- Mental symptoms that begin at an atypical age

The goal is to diagnose underlying and **concomitant** physical disorders rather than to make a specific psychiatric diagnosis.

http://www.c-mss.org/programs_old.html

History: History of present illness should note the nature of symptoms and their onset, particularly whether onset was sudden or gradual and whether symptoms followed any possible precipitants (eg, trauma, starting or stopping of a drug or abused substance). The clinician should ask whether patients have had previous episodes of similar symptoms, whether a mental disorder has been diagnosed and treated, and, if so, whether patients have stopped taking their drugs.

Review of systems seeks symptoms that suggest possible causes:

- Vomiting, diarrhea, or both: Dehydration, electrolyte disturbance
- **Palpitations**: **Hyperthyroidism**, drug effects including withdrawal
- **Polyuria** and **polydipsia**: Diabetes mellitus
- Tremors: Parkinson's disease, withdrawal syndromes
- Difficulty walking or speaking: Multiple sclerosis, Parkinson's disease, stroke
- Headache: CNS infection, complex migraine, hemorrhage, mass lesion
- Fever, cough, and **dysuria**: Systemic infection
- Paresthesias and weakness: Vitamin deficiency, stroke, **demyelinating** disease

Past medical history should identify known chronic physical disorders that can cause mental symptoms (eg, thyroid, liver, or kidney disease; diabetes; HIV infection). All prescription and OTC drugs should be reviewed, and patients should be queried about any alcohol or **illicit** substance use (amount and duration). Family history of physical disorders, particularly of thyroid disease and multiple sclerosis, is assessed. Risk factors for infection (eg, unprotected sex, needle sharing, recent hospitalization, residence in a group facility) are noted.

Physical examination: Vital signs are reviewed, particularly for fever, **tachypnea**, and **tachycardia**. Mental status is assessed, particularly for signs of confusion or inattention. A full physical examination is done, although the focus is on signs of infection (eg, **meningismus**, lung congestion, flank tenderness), the neurologic examination (including **gait** testing), and **funduscopy** to detect signs of increased intracranial pressure (eg, **papilledema**, loss of venous pulsations). Signs of liver disease (**eg, jaundice, ascites, spider angiomas**) should be noted. The skin is carefully inspected for self-inflicted wounds or other evidence of external trauma (eg, bruising).

Interpretation of findings: Confusion and inattention (reduced clarity of awareness of the environment, especially if of sudden onset, fluctuating, or both, indicate the presence of a physical disorder. However, the converse is not true (ie, a clear **sensorium** does not confirm that the cause is a mental disorder). Other findings that suggest a physical cause include

- Abnormal vital signs (eg, fever, **tachycardia**, **tachypnea**)
- **Meningeal** signs
- Abnormalities noted during the neurologic examination
- Disturbance of gait, balance, or both
- **Incontinence**

Some findings help suggest a specific cause. **Dilated** pupils (particularly if accompanied by **flushed**, hot, dry skin) suggest **anticholinergic** drug effects. **Constricted** pupils suggest **opioid** drug effects or **pontine** hemorrhage. Rotary or vertical **nystagmus** suggests PCP intoxication, and horizontal nystagmus often accompanies **diphenylhydantoin** toxicity. A preceding history of **relapsing-remitting** neurologic symptoms, particularly when a variety of nerves appear to be involved, suggests multiple sclerosis. Stocking-glove **paresthesias** may indicate thiamin or vitamin B_{12} deficiency. In patients with hallucinations, the type of **hallucination** is not particularly diagnostic except that command

hallucinations or voices commenting on the patient's behavior probably represent a mental disorder.

Symptoms that began shortly after significant trauma or after beginning a new drug may be due to those events. Drug or alcohol abuse may or may not be the cause of mental symptoms; about 40 to 50% of patients with a mental disorder also have substance abuse (dual diagnosis).

Testing: Patients typically should have

- Pulse oximetry
- Fingerstick glucose testing
- Measurement of therapeutic drug levels

If patients with a known mental disorder have an **exacerbation** of their typical symptoms and they have no medical complaints, a normal sensorium, and a normal physical examination (including vital signs, pulse oximetry, and fingerstick glucose testing), they do not typically require further laboratory testing. Most other patients should have

- Blood alcohol level, urine toxicology screens (which may also be required for inpatient admission at certain psychiatric facilities), and HIV testing

Many clinicians also measure

- Serum electrolytes (including Ca and Mg), BUN, and **creatinine**

Electrolyte and renal function tests may be diagnostic and help inform **subsequent** drug management (eg, for drugs that require adjustment in patients with renal insufficiency).

Other tests are commonly done based on specific findings:

- Head CT: Patients with new-onset mental symptoms or with **delirium**, headache, history of recent trauma, or focal neurologic findings (eg, weakness of an extremity)
- Lumbar puncture: Patients with meningeal signs or with normal head CT findings plus fever, headache, or delirium
- Thyroid function tests: Patients taking lithium, those with symptoms or signs of thyroid disease, and those > 40 yr with new-onset mental symptoms (particularly females or patients with a family history of thyroid disease)

- Chest x-ray, urinalysis and culture, CBC, C-reactive protein, and blood cultures: Patients with fever
- Liver function tests: Patients with symptoms or signs of liver disease, with history of alcohol or drug abuse, or with no obtainable history

Less often, findings may suggest testing for SLE, syphilis, demyelinating disorders, or vitamin B_{12} or thiamin deficiency.

Reference: ***http://www.merckmanuals.com***