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MOOD DISORDER

CONCEPTS IN MOOD DISORDERS

A **mood is a description of one's internal emotional state. Both external and** internal stimuli can trigger moods, which may be labeled as sad, happy, angry, irritable, and so on. It is normal to have a wide range of moods and to have a sense of control over one's moods.

Patients with mood *disorders experience an abnormal range of moods and lose* some level of control over them. Distress may be caused by the severity of their moods and their resulting impairment in social and occupational functioning.

Mood disorders have also been called **affective disorders.**

Mood Disorders Versus Mood Episodes

Mood episodes are distinct periods of time in which some abnormal mood is present.

Mood disorders are defined by their patterns of mood episodes.

Types of Mood Episodes

- Major depressive episode
- Manic episode
- Mixed episode
- Hypomanic episode

The Main Mood Disorders

- Major depressive disorder (MDD)
- Bipolar I disorder
- Bipolar II disorder
- Dysthymic disorder
- Cyclothymic disorder

Symptoms of major depression :-

SIG E. CAPS

- Sleep
- Energy
- psychomotor activity
- Interest
- concentration
- Guilt
- Appetite
- Suicidal ideation

MOOD EPISODES

Major Depressive Episode (DSM-IV Criteria)

- Must have at least five of the following symptoms (must include either number 1 or number 2 or both) for at least a 2-week period:

criteria of major depressive episode

1. **Depressed mood**
2. **Anhedonia (loss of interest in pleasurable activities)**
3. **Change in appetite or body weight (increased or decreased)**
4. **Feelings of worthlessness or excessive guilt**
5. **Insomnia or hypersomnia**

   → more (mc terminal insomnia)
6. **Diminished concentration**

7. **Psychomotor agitation or retardation (i.e., restlessness or slowness)**
8. **Fatigue or loss of energy**
9. **Recurrent thoughts of death or suicide**

* it should be primary symptoms

→ hypothyroidism

Symptoms cannot be due to substance use or medical conditions, and they must cause social or occupational impairment.

- **SUICIDE AND MAJOR DEPRESSIVE EPISODES**

A person who has been previously hospitalized for a major depressive episode has a 15% risk of committing suicide later in life.

What's DMS-IV criteria of major depression episode?

QUESTION

SIG E CAPS (at least 5) for 2 weeks or more

1- Depressed mood
2. SIG E. CAPS

DIAGNOSIS AND DSM-IV CRITERIA OF MMD :
least one major depressive episode
No history of manic or hypomanic episode

Sleep - Insomnia or hypersomnia
Interest- Anhedonia (loss of interest in pleasurable activities)
Guilt- Feelings of worthlessness or excessive guilt
Energy- Fatigue or loss of energy
Concentration- Diminished concentration
Appetite - Change in appetite or body weight (increased or decreased)
Psychomotor activity- Psychomotor agitation or retardation (i.e., restlessness or slowness)
Suicidal ideation- Recurrent thoughts of death or suicide

3- Symptoms cannot be due to substance use or medical conditions, and they must cause social or occupational impairment.

Manic Episode (DSM-IV Criteria)

- A period of abnormally and persistently elevated, expansive, or irritable mood, lasting at least 1 week and including at least three of the following (four if mood is irritable):

1. **Distractibility**
2. **Inflated self-esteem or grandiosity**
3. **Increase in goal-directed activity (socially, at work, or sexually)**
4. **Decreased need for sleep**
5. **Flight of ideas or racing thoughts**
6. **More talkative or *pressured speech (rapid and uninterruptible)***
7. **Excessive involvement in pleasurable activities that have a high risk of** negative consequences (shopping sprees, sexual indiscretions)

- These symptoms cannot be due to substance use or medical conditions, and they must cause social or occupational impairment. Seventy-five percent of manic patients have psychotic symptoms. (delusions or hallucinations).

- A manic episode is a *psychiatric emergency;* severely impaired judgment makes patient dangerous to self and others.
- **Symptoms of mania: DIG FAST**

Distractability% Insomnia% Grandiosity %Flight of ideas %Activity/agitation% Speech (pressured) %Thoughtlessness

- **Mixed Episode**

Criteria are met for both manic episode and major depressive episode. These criteria must be present nearly every day for at least 1 week. As with a manic episode, this is a psychiatric emergency.

What's DMS IV criteria of manic episode?

QUESTION

DIG FAST (at least 3) for 1 weeks or more

DIG FAST

(4) If mood is irritable.

1- Distractability
2- Insomnia - Decreased need for sleep
3- Grandiosity - Inflated self-esteem or grandiosity
4- Flight of ideas- Flight of ideas or racing thoughts
5- Activity/agitation- goal directed activities (socially, at work, or sexually)
6- Speech (pressured)- More talkative
7- Thoughtlessness- Excessive involvement in pleasurable activities that have a high risk of negative consequences (e.g., shopping sprees, sexual indiscretions)

These symptoms cannot be due to substance use or medical conditions, and they must cause social or occupational impairment. Seventy-five percent of manic patients have psychotic symptoms. (delusions or hallucinations).

ANS

Mixed episode

QUESTION

Criteria are met for both manic episode and major depressive episode. These criteria must be present nearly every day for at least 1 week.

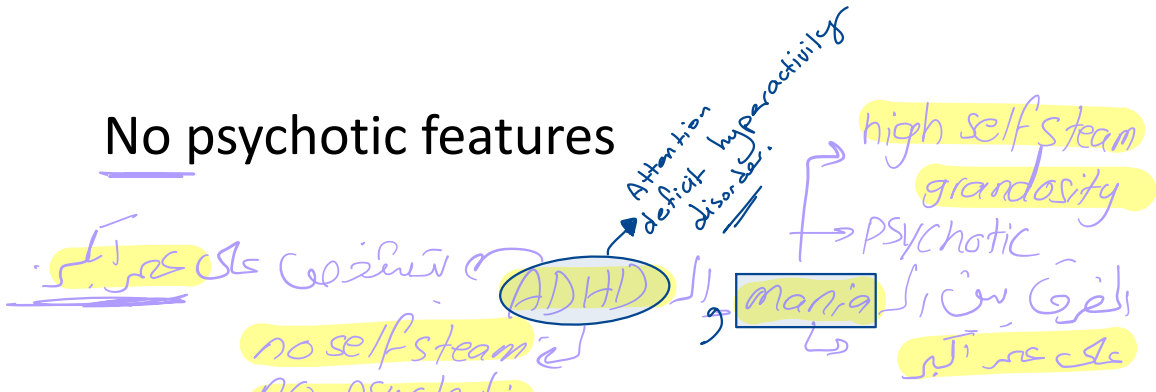
ANSWER

Hypomanic Episode

weaker than mania

- A hypomanic episode is a distinct period of elevated, expansive, or irritable mood that includes at least three of the symptoms listed for the manic episode criteria (four if mood is irritable). There are significant differences between mania and hypomania.
- **Differences Between Manic and Hypomanic Episodes**

Mania	**Hypomania**
1 Lasts at least 7 days	Lasts at least 4 days
2 Causes severe impairment in social or occupational functioning	No marked impairment in social or occupational functioning
3 May necessitate hospitalization to prevent harm to self or others	Does not require hospitalization
4 May have psychotic feature	No psychotic features



MOOD DISORDERS

- Mood disorders often have chronic courses that are marked by relapses with relatively normal functioning between episodes. Like most psychiatric diagnoses, they may be triggered by a medical condition or drug (prescribed or illicit). Always investigate medical or substance-induced causes (see below) before making a diagnosis

- **Differential Diagnosis of Mood Disorders Secondary to General Medical Conditions**

Medical Causes of a Depressive Medical Episode

Cerebrovascular disease

Endocrinopathies (Cushing's syndrome, Addison's disease,hypoglycemia, hyper/ hypothyroidism,hyper/hypocalcemia)

hyperadrenalism

Parkinson's disease/Viral illnesses (e.g., mononucleosis)/Carcinoid syndrome/Cancer (especially lymphoma and pancreatic carcinoma) Collagen vascular disease (e.g.,systemic lupus erythematosus)

Medical Causes of a Manic Episode

Metabolic (hyperthyroidism)/Neurological disorders (temporal lobe seizures, multiple sclerosis)/Neoplasms/HIV

- **Mood Disorders Secondary to Medication or Substance Use**

Medication/Substance-Induced Depressive Episodes

EtOH/Antihypertensives/Barbiturates/Corticosteroids/Levodopa/Sedative/hypnotics/Anticonvulsants/Antipsychotics/Diuretics/Sulfonamides/Withdrawal from psychostimulants/(e.g., cocaine, amphetamines)

Medication/Substance-Induced Mania

Corticosteroids/Sympathomimetics/ Dopamin AgonisT/ Antidepressants /Bronchodilators/ Levodopa

MAJOR DEPRESSIVE DISORDER (MDD)

- MDD is marked by episodes of depressed mood associated with loss of interest in daily activities. Patients may be unaware of their depressed mood or may express vague, somatic complaints. (fatigue, headache abdominal pain, muscle tension)
- **DIAGNOSIS AND DSM-IV CRITERIA**

At least one major depressive episode

No history of manic or hypomanic episode

- ***Seasonal affective disorder*** *is a subtype of MDD in which major depressive* episodes occur only during winter months (fewer daylight hours). Patients respond to treatment with light therapy.

major depressive + mania → bipolar 1 (with drugs.)

major depressive + hypomania bipolar 2

MAJOR DEPRESSIVE DISORDER (MDD)

- **EPIDEMIOLOGY**

Lifetime prevalence: 15%
Onset at any age, but average age of onset is 40
Twice as prevalent in women than men
No ethnic or socioeconomic differences
Prevalence in elderly from 25 to 50%

significant in anxiety.

- **SLEEP PROBLEMS ASSOCIATED WITH MDD**

Multiple awakenings
Initial and terminal insomnia (hard to fall asleep and early morning awakenings)
Hypersomnia
Rapid eye movement (REM) sleep shifted to earlier in night and stages 3 and 4 decreased

MAJOR DEPRESSIVE DISORDER (MDD)

- **ETIOLOGY**

The exact cause of depression is unknown, but biological, genetic, environmental,and psychosocial factors each contribute.

1. *Abnormalities of Serotonin/Catecholamines*
2. High cortisol
3. Abnormal thyroid axis
4. *Psychosocial/Life Events* Loss of a parent before age 11 is associated with the later development of major depression.
5. *Genetic Predisposition* First-degree relatives are two to three times more likely to have MDD. Concordance rate for monozygotic twins is about 50%, and 10 to 25% for dizygotic twins.

- **COURSE AND PROGNOSIS**

If left untreated, depressive episodes are self-limiting but usually last from 6 to 13 months. Generally, episodes occur more frequently as the disorder progresses. The risk of a subsequent major depressive episode is 50% within the first 2 years after the first episode. About 15% of patients eventually commit suicide.

MAJOR DEPRESSIVE DISORDER (MDD)

- **Hospitalization**

Indicated if patient is at risk for suicide,homicide, or is unable to care for self.

- **Pharmacotherapy**

1)Antidepressant Medications

Selective serotonin reuptake inhibitors (SSRIs)—safer and better tolerated than other classes of antidepressants; side effects mild but include headache, gastrointestinal disturbance, sexual dysfunction, and rebound anxiety.

Tricyclic antidepressants (TCAs)—most lethal in overdose; side effects include sedation, weight gain, orthostatic hypotension, and anticholinergic effects. Can aggravate prolonged QTC syndrome.

Monoamine oxidase inhibitors (MAOIs)—useful for treatment of refractory depression; risk of *hypertensive crisis when used with sympathomimetics* or ingestion of tyramine-rich foods (such as wine, beer, aged cheeses, liver, and smoked meats); risk of *serotonin syndrome when* used in combination with SSRIs. Most common side effect is orthostatic hypotension. (Tyramine is an intermediate in the conversion of tyrosine to norepinephrine.)

MAJOR DEPRESSIVE DISORDER (MDD)

2)Adjuvant Medications

Stimulants (such as methylphenidate) may be used in certain patients, such as the terminally ill or patients with refractory symptoms. Though action is rapid, potential for dependence limits use.

Antipsychotics—useful in patients with psychotic features

Liothyronine (T3), levothyroxine (T4), lithium, or L-tryptophan (serotoninprecursor) may be added to convert nonresponders to responders.

- **Psychotherapy**

Behavioral therapy, cognitive therapy, supportive psychotherapy, dynamicpsychotherapy, and family therapy

May be used in conjunction with pharmacotherapy

MAJOR DEPRESSIVE DISORDER (MDD)

- **Electroconvulsive therapy (ECT)**

Indicated if patient is unresponsive to pharmacotherapy, if patient cannot tolerate pharmacotherapy, or if rapid reduction of symptoms is desired (suicide risk, etc.)

- ECT is safe and may be used alone or in combination with pharmacotherapy.
- ECT is performed by premedication with atropine, followed by general anesthesia and administration of a muscle relaxant. A generalized seizure is then induced by passing a current of electricity across the brain (either unilateral or bilateral); the seizure lasts < 1 minute.
- Approximately eight treatments are administered over a 2- to 3-week period, but significant improvement is often noted after the first treatment.
- Retrograde amnesia is a common side effect, which usually disappears within 6 months.

MAJOR DEPRESSIVE DISORDER (MDD)

- **Unique Types and Features of Depressive Disorders**
- **Melancholic—40 to 60% of hospitalized patients with major depression.** Characterized by anhedonia, early morning awakenings, psychomotor disturbance, excessive guilt, and anorexia. For example, you may diagnose "major depressive disorder with melancholic features."
- **Atypical—characterized by hypersomnia, hyperphagia, reactive mood,** leaden paralysis, and hypersensitivity to interpersonal rejection
- **Catatonic—features include catalepsy (immobility), purposeless motor activity,** extreme negativism or mutism, bizarre postures, and echolalia. May also be applied to bipolar disorder.
- **Psychotic—10 to 25% of hospitalized depressions. Characterized by the** presence of delusions or hallucinations.

BIPOLAR I DISORDER

- **DIAGNOSIS AND DSM-IV CRITERIA**

The only requirement for this diagnosis is the occurrence of one manic or mixed episode (10 to 20% of patients experience only manic episodes). Between manic episodes, there may be interspersed euthymia, major depressive episodes, dysthymia, or hypomanic episodes, but none of these are required for diagnosis.

- **EPIDEMIOLOGY**

Lifetime prevalence: 1%

Women and men equally affected

No ethnic differences seen

Onset usually before age 30

- **ETIOLOGY**

Biological, environmental, psychosocial, and genetic factors are all important.First-degree relatives of patients with bipolar disorder are 8 to 18 times more likely to develop the illness. Concordance rates for monozygotic twins are approximately 75%, and rates for dizygotic twins are 5 to 25%.

- **COURSE AND PROGNOSIS**

Untreated manic episodes generally last about 3 months. The course is usually chronic with relapses; as the disease progresses, episodes may occur more frequently. Only 7% of patients do not have a recurrence of symptoms after their first manic episode.

Bipolar disorder has a worse prognosis than MDD, as only 50 to 60% of patients treated with lithium experience significant improvement in symptoms. Lithium prophylaxis between episodes helps to decrease the risk of relapse.

- **TREATMENT**

Pharmacotherapy

Lithium—mood stabilizer

Anticonvulsants (carbamazepine or valproic acid)—also mood stabilizers,

especially useful for rapid cycling bipolar disorder and mixed episodes

Olanzapine—a typical antipsychotic

Psychotherapy

Supportive psychotherapy, family therapy, group therapy (once the acute manic episode has been controlled)

ECT

Works well in treatment of manic episodes

Usually requires more treatments than for depression

BIPOLAR I I DISORDER

- **DIAGNOSIS AND DSM-IV CRITERIA**

History of one or more major depressive episodes and at least one **hypomanic** episode. *Remember: If there has been a full manic episode even in the past,* then the diagnosis is *not bipolar II disorder, but bipolar I.*

- **EPIDEMIOLOGY**

Lifetime prevalence: 0.5%

Slightly more common in women

Onset usually before age 30

No ethnic differences seen

- **ETIOLOGY**

Same as bipolar I disorder

- **COURSE AND PROGNOSIS**

Tends to be chronic, requiring long-term treatment

- **TREATMENT**

Same as bipolar I disorder

DYSTHYMIC DISORDER

< 5 SIG E CAPS

Patients with dysthymic disorder have chronic, mild depression most of the time with no discrete episodes. They rarely need hospitalization.

- **DIAGNOSIS AND DSM-IV CRITERIA**

1. Depressed mood for the majority of time of most days for at least 2 years (in children for at least 1 year)

2. At least two of the following:

1. Poor concentration or difficulty making decisions
2. Feelings of hopelessness
3. Poor appetite or overeating
4. Insomnia or hypersomnia
5. Low energy or fatigue
6. Low self-esteem

3. During the 2-year period:

The person has not been without the above symptoms for > 2 months at a time.

No major depressive episode

- The patient must never have had a manic or hypomanic episode (this would make the diagnosis bipolar disorder or cyclothymic disorder, respectively).

DYSTHYMIC DISORDER

- **EPIDEMIOLOGY**

Lifetime prevalence: 6%

Two to three times more common in women

Onset before age 25 in 50% of patients

- **COURSE AND PROGNOSIS**

Twenty percent of patients will develop major depression, 20% will develop bipolar disorder, and > 25% will have lifelong symptoms.

- **TREATMENT**

Cognitive therapy and insight-oriented psychotherapy are most effective.

Antidepressant medications are useful when used concurrently (SSRIs,TCAs, or MAOIs).

CYCLOTHYMIC DISORDER

criteria. يعني bipolar II الخفيف

- Alternating periods of hypomania and periods with mild to moderate depressive symptoms
- **DIAGNOSIS AND DSM-IV CRITERIA**

Numerous periods with hypomanic symptoms and periods with depressive symptoms for at least 2 years

The person must never have been symptom free for > 2 months during those 2 years.

No history of major depressive episode or manic episode

- **EPIDEMIOLOGY**

Lifetime prevalence: < 1%

May coexist with borderline personality disorder

Onset usually age 15 to 25

Occurs equally in males and females

CYCLOTHYMIC DISORDER

- **COURSE AND PROGNOSIS**

Chronic course; one third of patients eventually diagnosed with bipolar disorder

- **TREATMENT**

Antimanic agents as used to treat bipolar disorder

- **OTHER DISORDERS OF MOOD IN DSM-IV**

Minor depressive disorder—episodes of depressive symptoms that do not meet criteria for major depressive disorder; euthymic periods are also seen, unlike in dysthymic disorder.

Recurrent brief depressive disorder

Premenstrual dysphoric disorder

Mood disorder due to a general medical condition

Substance-induced mood disorder

Mood disorder not otherwise specified (NOS)

MANAGEMENT OF MOOD DISORDER

1- Mood Stabilizers

(anti-manic)

Uses :-

-*to treat acute mania* and to help prevent relapses of manic episodes.

- in treatment of alcoholism because some patients may develop fits. → seziures

- They are used in mental retardation and personality disorders to decrease the aggression and impulsivity

Less commonly, they may be used for:

- Potentiation of antidepressants in patients with major depression refractory to monotherapy
- Potentiation of antipsychotics in patients with schizophrenia
- Enhancement of abstinence in treatment of alcoholism
- Treatment of aggression and impulsivity (dementia, intoxication, mental retardation, personality disorders, general medical conditions)

- Mood stabilizers include :-

1- lithium

2- two anticonvulsants ;

-carbamazepine

-valproic acid.

1-Lithium

1- is the drug of choice in the treatment of acute mania

2- prophylaxis for both manic and depressive episodes in bipolar disorder.

- **MOA** : is unknown, but it has been shown to alter neuronal sodium transport.

-Lithium is secreted by the kidney, and its onset of action takes 5 to 7 days. N*

-Blood levels correlate with clinical efficacy.

The major drawback of lithium is :

** high incidence of side effects

** very narrow therapeutic index:-

Therapeutic range: 0.7 to 1.2

(Individual patients can become toxic even within this range.)

Toxic: > 1.5

Lethal: > 2.0

Side Effects of lithium :-

- fine tremor, sedation, ataxia, thirst, metallic taste, polyuria, edema, weight gain, GI problems, benign leukocytosis, thyroid enlargement, **hypothyroidism, and nephrogenic diabetes insipidus.**

- Lithium is teratogenic in the first trimester. We can give it after that but we should stop if in the last 2 weeks before delivery because it may cause problem with anesthesia.

- **Toxic levels of lithium**

cause altered mental status, coarse tremors, convulsions, and death.

Lithium toxic

1- in pt with kidney problem

2- dehydrated pt (who live in high T , diarrhea)

3- drug interaction with dicofinac or indomethacin

- Clinicians need to regularly monitor blood levels of lithium, thyroid function (thyroid-stimulating hormone), and kidney function (glomerular filtration rate) every 6 weeks

- Management of lithium toxicity:

- Normal saline if the level is acceptable.
- Hemodialysis or peritoneal dialysis if the level is toxic.

2-Carbamazepine (Tegretol)

- is an anticonvulsant

lithium can't be used here

1- especially useful in treating *mixed* episodes and *rapid-cycling bipolar disorder*.

at least 4 episodes in one year

2-used in the management of trigeminal neuralgia , migranie

-- **MOA :-** blocking sodium channels and inhibiting action potentials.

-- Its onset of action is 5 to 7 days.

- **Side effect of tegretol :-**

skin rash, drowsiness, ataxia, slurred speech, **leukopenia, hyponatremia, aplastic anemia, and agranulocytosis.**

It elevates liver enzymes and has teratogenic effects when used during pregnancy **(neural tube defects).**

→ it causes drop in platelet

Pretreatment complete blood count (CBC) and LFTs must be obtained and monitored regularly.

3-Valproic Acid (Depakene)

is an anticonvulsant

1- especially useful in treating mixed manic episodes and rapid-cycling bipolar disorder.

- **MOA :-**

is unknown, but it has been shown to increase central nervous system (CNS) levels of gamma-aminobutyric acid (GABA)

- **Side effect of Depakene :-**

sedation, weight gain, alopecia, hemorrhagic pancreatitis, **hepatotoxicity, and thrombocytopenia. It has teratogenic effects during pregnancy (neural tube defects).**

-Monitoring of LFTs and CBCs is necessary.

- Guide to use one of the previous drugs is a patient state by monitor the side effects and according to it you give one of the three drugs (lithium, carbamazepine, valproic acid)
- even if the patient is pregnant you can give her these drugs if the disease is very sever!

2- Anti-depressants

The major categories of antidepressants are:

1-

2-

3-

4- - Atypical antidepressants

- All antidepressants are considered equally effective in treating major depression but differ in safety and side effect profiles.

- About 70% of patients with major depression will respond to antidepressant medication.

- Antidepressants have **no abuse potential** **and do not *elevate mood.***

- Because of their safety and tolerability, **SSRIs** and **atypical antidepressants** have become the most common agents used to treat major depression.

- However, the choice of a particular medication used for a given patient based on: N*

1- Patient's symptoms 2-Medication side effect

3- Previous treatment responses by the patient or a family member to a particular drug

A- Tricyclic Antidepressants (TCAs)

MOA :-

TCAs inhibit the reuptake of norepinephrine and serotonin, increasing availability in the synapse

They are rarely used as first-line agents because they have a higher incidence of side effects, require greater monitoring of dosing, and can be **lethal in overdose.**

Patients are usually started on low doses to allow acclimation to the common early anticholinergic side effects before achieving therapeutic doses.)

Examples of TCAs :-

- Imipramine (Tofranil) _ used in nocturnal enuresis.
- Amitriptyline (Elavil)
- Trimipramine (Surmontil)
- Nortriptyline (Pamelor) —least likely to cause orthostatic hypotension .
- Desipramine (Norpramin) —least sedating, least anticholinergic side effects .
- Clomipramine (Anafranil) —most serotonin specific, useful in treatment of obsessive compulsive disorder .
- Doxepin (Sinequan) to chronic pain , sleep aid

- **Side effect of TCAs :-**

-due to their lack of specificity and interaction with other receptors.

1. **Antihistaminic properties:** Sedation
2. **Antiadrenergic properties** (CVS effects): Orthostatic hypotension (most life threatening), tachycardia, arrhythmias
3. **Antimuscarinic effects:** Dry mouth, constipation, urinary retention, blurred vision,
4. **Weight gain**
5. **Lethal in overdose—** must assess suicide risk

1 week supply of these drugs can be lethal in overdose.

6. **Major complications—** 3Cs: Convulsions, coma, cardiotoxicity may cause AF - Avoid in patients with preexisting conduction abnormalities -

B- Monoamine Oxidase Inhibitors (MAOIs)

MOA

irreversibly inhibiting the enzymes *MAO-A ,, MAO-B,*

prevent the inactivation of biogenic amines such as ((*norepinephrine, serotonin, dopamine, and tyramine*))

So increase the amount of these transmitters available in synapses.

-MAO-A preferentially deactivates serotonin
- MAO-B preferentially deactivate norepinephrine/epinephrine.
-Both types also act on dopamine and tyramine.

- **Examples:-**

- Phenelzine (Nardil),
- tranylcypromine (Parnate),
- isocarboxazid (Marplan)

- MAOIs are not used as first-line agents because of the increased safety and tolerability of newer agents. And high side effect

- However, MAOIs are considered very effective for certain types of - **refractory depression and in refractory panic disorder and social phobia -**

- **Side effect of MAOIs:-**

Orthostatic hypotension, drowsiness, weight gain, sexual dysfunction, dry mouth, sleep

- **Hypertensive crisis:-**

Risk when **MAOIs** are taken with **tyramine-rich foods** or **sympathomimetics**.

Foods with tyramine (red Chianti wine, cheese, chicken liver, fava beans, cured meats) cause a buildup of stored catecholamines

• Serotonin syndrome

- occurs when **SSRIs** and **MAOIs** are taken together.
- Initially characterized by lethargy, restlessness, confusion, flushing, diaphoresis, tremor, and myoclonic jerks.
- May progress to hyperthermia, hypertonicity, rhabdomyolysis, renal failure, convulsions, coma, and death.

- Wait at least 2 weeks before switching from SSRI to MAOI and this called (washout period)

C- Selective Serotonin Reuptake Inhibitors (SSRIs)

mc used.

MOA :-

SSRIs inhibit presynaptic serotonin pumps, leading to increased availability of serotonin in synaptic clefts.

- SSRIs all have similar efficacy and side effects despite structural differences.

Uses :-

treatment of some anxiety disorders

OCD

premenstrual dysphoric disorder.

SSRIs are the most commonly prescribed antidepressants

due to :

Low incidence of side effects (safe)

No food restrictions

Much safer (not toxic) in overdose N*

acceptable price

Examples of SSRIs :-

- Fluoxetine (Prozac) —longest half-life with active metabolites: Do not need to taper
- Sertraline (Zoloft) —highest risk for (GI) disturbances
- Paroxetine (Paxil) —most serotonin specific, most activating (stimulant)
- Fluvoxamine (Luvox) —currently approved only for use in OCD
- Citalopram (Celexa)
- Escitalopram (Lexapro) — levo enantiomer citalopram; similar efficacy, fewer side effects, much more expensive

- **Side effect of SSRIs :-**

- have fewer side effects than TCAs and MAOIs due to serotonin selectivity (they do not act on histamine, adrenergic, or muscarinic receptors).

1- Sexual dysfunction (25 to 30%)
2- GI disturbance
3- Insomnia
4- Headache
5- Anorexia, weight loss
6- Serotonin syndrome when used with MAOIs

D- Atypical Antidepressants

1- SNRIS

(serotonin –norepinephrine reuptake inhibitors))

Venlafaxine (Effexor)

- useful in treating refractory depression and CAP
- It has a very low drug interaction potential.
- Side effect profiles similar to SSRIs
- venlafaxine can increase BP; do not use in patients with untreated or labile BP.
- Potential withdrawal symptoms can be seen with 1–3 missed doses; not life threatening, but very uncomfortable (including flulike symptoms and electric-like shocks or zaps).

2- NDRIS

((norepinephrine -dopamine reuptake inhibitors))

Bupropion (Wellbutrin)

Uses :

1-smoking cessation

2- treatment of seasonal affective disorder

3-adult attention deficit hyperactivity disorder (ADHD).

- **significant advantage :** is its relative lack of sexual side effects as compared to the SSRIs.

- **Side effects :-** are similar to SSRIs, with increased sweating and increased risk of seizures and psychosis at high doses.
- Bupropion's dopaminergic effect in higher doses can exacerbate psychosis.

- **contraindicated :-** in patients with seizure or active eating disorders and in those currently on an MAOI … and they are not optimal for patients with significant anxiety

3-SARIS

((serotonin antagonist and reuptake inhibitors))

Nefazodone (Serzone)
trazodone (Desyrel)

Uses :-

1- treatment of refractory major depression,
2- major depression with anxiety,
3- insomnia (secondary to its sedative effects).

Side effects :-

include nausea, dizziness, orthostatic hypotension, cardiac arrhythmias, sedation, and priapism (sedation and priapism especially with trazodone).

4- NASAS

((noradrenergic and specific serotonergic))

Mirtazapine (Remeron):

Uses :-

-treatment of refractory major depression ,especially in patients who need to gain weight.

-Side effects :-

include sedation, weight gain, dizziness, somnolence, tremor, and agranulocytosis.

-Maximal sedative effect at doses of 15 mg and less;

-at higher doses, it increases norepinephrine reuptake and is therefore less sedating

3- Anti-psychotic

- **Uses :-**

1- treat psychotic disorders

2-psychotic symptoms associated with other psychiatric and medical illnesses.

Anti-psychotics

Traditional Antipsychotics

Atypical (newer) antipsychotics

Traditional antipsychotics

are classified according to :

1- potency

((potency here refers to the action on dopamine receptors, not the level of efficacy))

2- work by blocking dopamine receptors.

classification according to potency :-

1- Low potency

Chlorpromazine (Thorazine)

Thioridazine (Mellaril)

- Have a lower affinity for dopamine receptors
- Therefore higher dose is required.

2- High potency:

Haloperidol (Haldol)
Fluphenazine (Prolixin)
Trifluoperazine (Stelazine)
Perphenazine (Trilafon)
Pimozide (Orap)

Have greater affinity for dopamine receptors, and therefore a relatively low dose is needed to achieve effect.

- **Side effect of traditional antipsychotics drugs**

1. Antidopaminergic effects :

-**Extrapyramidal side effects** **:-** parkinsonism—masklike face, cogwheel rigidity, pill-rolling tremor.

-**Akathisia**—subjective anxiety and restlessness, objective fidgetiness

-**Dystonia**—sustained contraction of muscles of neck, tongue, eyes (painful) MC young / male

-**Hyperprolactinemia** —leading to decreased libido, galactorrhea, gynecomastia, impotence, amenorrhea, osteoporosis

2. Weight gain

3. Elevated liver enzymes, jaundice

4- Anti-HAM effects:

Caused by actions on histaminic, adrenergic, and muscarinic receptors:

** Antihistaminic—results in sedation

** Anti–alpha adrenergic—results in orthostatic hypotension, cardiac abnormalities, and sexual dysfunction

** Antimuscarinic—anticholinergic effects: Dry mouth, tachycardia, urinary retention, blurry vision, constipation

5. Ophthalmologic problems

(irreversible retinal pigmentation with high doses of Mellaril, deposits in lens and cornea with chlorpromazine)

6. Dermatologic problems:

including rashes and photosensitivity (blue-gray skin discoloration with chlorpromazine)

7. Seizures:

Antipsychotics lower seizure thresholds. Low-potency antipsychotics are more likely to cause seizures than high potency.

8. Tardive dyskinesia:

Choreoathetoid (writhing) movements of mouth and tongue that may occur in patients who have used neuroleptics for more than 6 months. It most often occurs in older women. Though 50% of cases will spontaneously remit, untreated cases may be *permanent.*

- **Treatment**

1- discontinuation of current antipsychotic if clinically possible

2- sometimes administration of anxiolytics or cholinomimetics

9. Neuroleptic malignant syndrome: NMS

- rare, occurs most often in males early in treatment
- It is a medical emergency and has a 20% mortality rate if left untreated.
- It is often preceded by a catatonic state.

characterized by: FALTER

- Fever (most common presenting symptom)
- Autonomic instability (tachycardia, labile hypertension, diaphoresis)
- Leukocytosis
- Tremor
- Elevated creatine phosphokinase (CPK)
- Rigidity (*lead pipe rigidity is considered almost universal)*

- Treatment of neuroeptic malignant syndrome :

1- discontinuation of current medications

2- administration of supportive medical care (hydration, cooling, etc.).

3- Sodium dantrolene, bromocriptine, and amantadine are useful but are infrequently used because of their own side effects.

severe ms spasm

dopamin receptor antagonist

[α receptors.]

?

-- This is not an allergic reaction. Patient is not prevented from restarting the same neuroleptic at a later time.--

Atypical (newer) antipsychotics

- Clozapine (Clozaril) _ used in refractory shichophrenia
- Risperidone (Risperdal)
- Quetiapine (Seroquel)
- Olanzapine (Zyprexa)
- Ziprasidone (Geodon)

MOA :-

block both dopamine and serotonin receptors

however, their effect on dopamine is weaker than traditional , so they are associated with fewer side effects.

As rarely cause :

-EPSEs, extrapyramidal side effect

-tardive dyskinesia,

- neuroleptic malignant syndrome.

- **Side effect of atypical antipsychotic :-**

1 - Some anti-HAM effects
(antihistaminic, antiadrenergic, and antimuscarinic)

2 - 1% incidence of agranulocytosis (cozapine)and 2 to 5% incidence of seizures with clozapine

3 - Olanzapine can cause hyperlipidemia, glucose intolerance, weight gain, and liver toxicity; monitor liver function tests (LFTs).

4 - Quetiapine has less propensity for weight gain but has been shown to cause cataracts in beagle dogs, so periodic (every 6 months) slit lamp examination is recommended.

Both traditional and atypical antipsychotics

- have similar efficacies in treating the presence of positive psychotic symptoms, such as hallucinations and delusions .
- atypical antipsychotics have been shown to be more effective in treating negative symptoms of schizophrenia (such as flattened affect and social withdrawal). because they have fewer side effects

- **Atypical antipsychotic drugs are now first line in the treatment of schizophrenia**

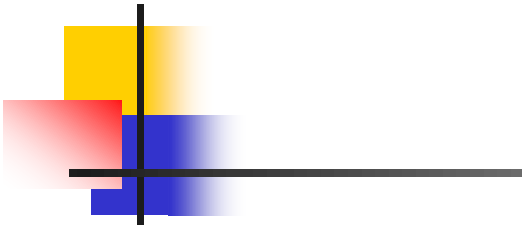
Other treatment strategy

- **Cognitive therapy**: we change patient's ideas, as change his negative ideas to positive ones.

- **Behavioral therapy**: explain to patient the good and bad behaviors.

- **Individual therapy**: for example his colleagues talk to him, explain and give examples to relive him.

- **Group therapy**: patients who have the same disease meet, talk and help each other.



Anxiety Disorders

- panic, OCD, phopia, GAD

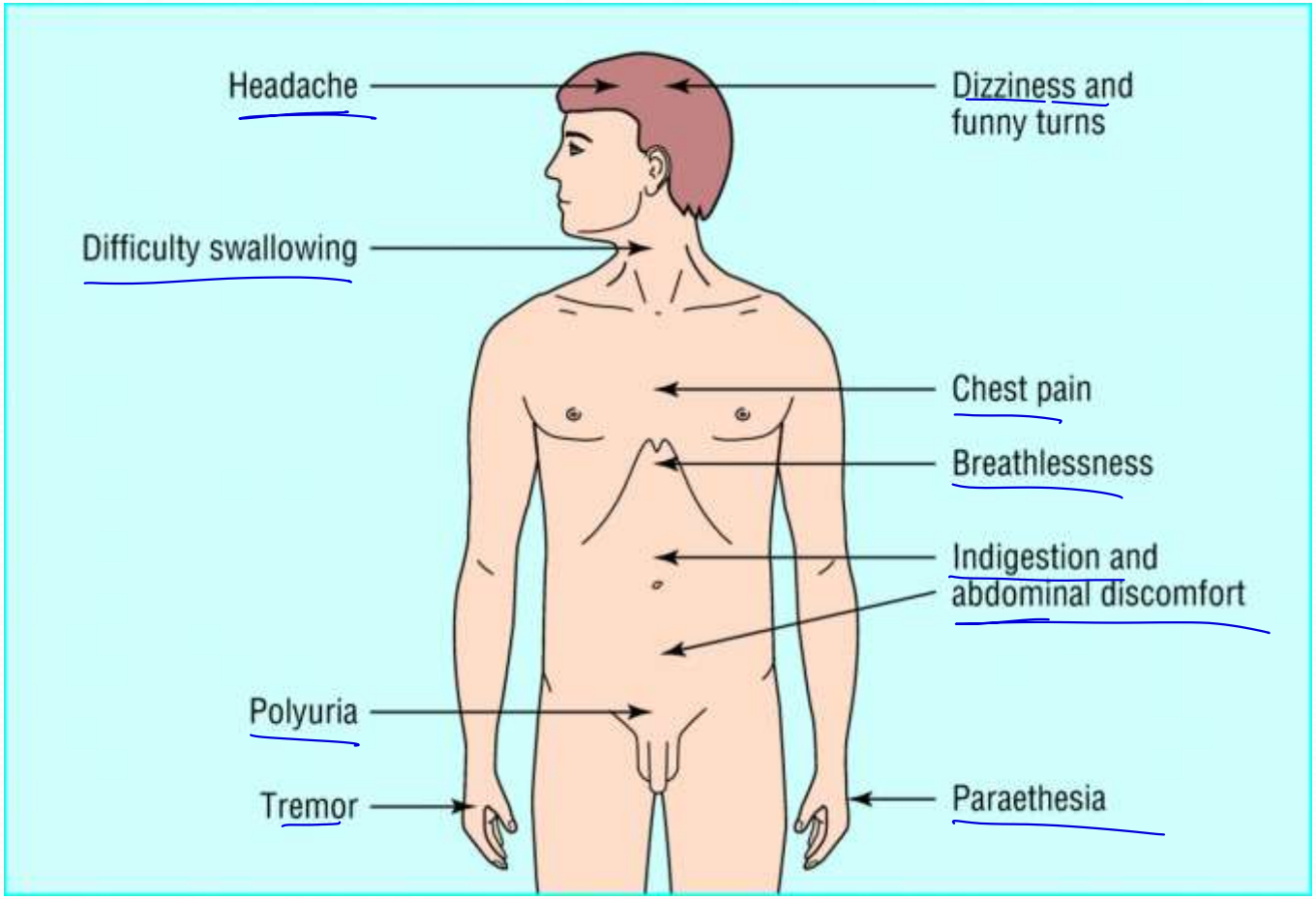
Anxiety

- Anxiety is the subjective experience of fear and its physical manifestations.
- Anxiety is a common, normal response to a perceived threat.

anxiety becomes pathological

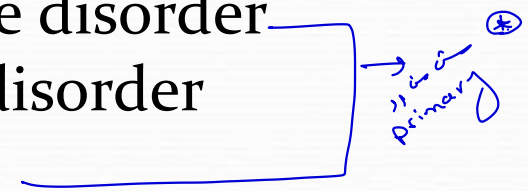
- fear is greatly out of proportion to risk/severity of threat
- response continues beyond existence of threat or becomes generalized to other similar or dissimilar situations
- social or occupational functioning is impaired

(Fight or Flight symptoms)



ANXIETY DISORDERS

- **Types of Anxiety Disorders**
- The primary anxiety disorders are:
- Panic disorder
- Agoraphobia
- Specific and social phobias
- Obsessive–compulsive disorder
- Posttraumatic stress disorder
- Acute stress disorder
- Generalized anxiety disorder
- Anxiety disorder secondary to general medical condition
- Substance-induced anxiety disorder

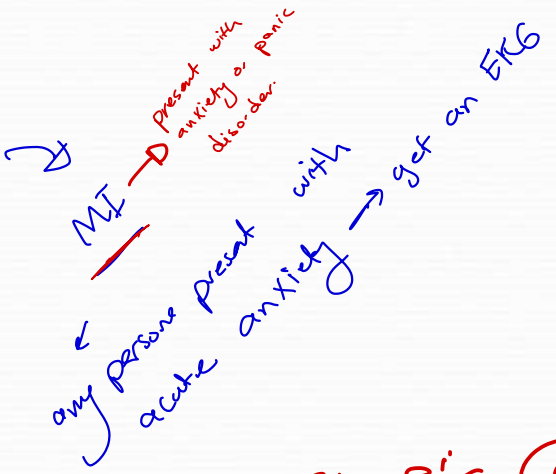


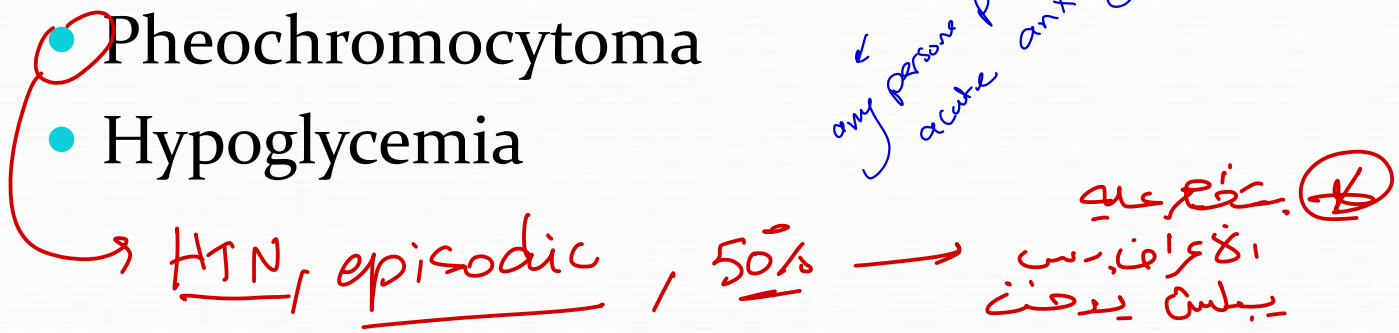
EPIDEMIOLOGY

- Women have a 30% lifetime prevalence rate,
- and men have a 19% lifetime prevalence rate.
- Anxiety disorders develop more frequently in higher socioeconomic groups.

Medical Causes of Anxiety Disorders

- Hyperthyroidism
- Vitamin B12 deficiency
- Hypoxia
- Neurological disorders (epilepsy, brain tumors, multiple sclerosis etc.)
- Cardiovascular disease
- Anemia
- Pheochromocytoma
- Hypoglycemia





Medication- or Substance-Induced Anxiety Disorders

- Caffeine intake and withdrawal
- Amphetamines
- Alcohol and sedative withdrawal
- Other illicit drug withdrawal
- Mercury or arsenic toxicity
- Organophosphate or benzene toxicity
- Penicillin
- Sympathomimetics
- Antidepressants

Panic Attack

- Panic attacks are discrete periods of heightened anxiety that classically occur in patients with panic disorder;
- Panic attacks often peak in several minutes and subside within 25 minutes.
- They rarely last > 1 hour.
- DIAGNOSIS AND DSM-IV CRITERIA
  - A panic attack is a discrete period of intense fear and discomfort that is accompanied
  - by at least four of the following:
    - Palpitations
    - Sweating
    - Shaking
    - Shortness of breath
    - Choking sensation
    - Chest pain
    - Nausea
    - Light-headedness
    - Depersonalization (feeling detached from oneself)
    - Fear of losing control or “going crazy”
    - Fear of dying
    - Numbness or tingling
    - Chills or hot flushes

Panic attack criteria:

- **PANIC**
- **P**alpitations
- **A**bdominal distress
- **N**umbness, nausea
- **I**ntense fear of death + Losing of control..
- **C**hoking, chills, chest pain,
- sweating, shaking,
- shortness of breath

What is the Panic attack criteria ?

QUESTION

panic attack is a discrete period of intense fear and discomfort that is accompanied by at least four of the following:

- [?] PANIC
- [?] Palpitations
- [?] Abdominal distress
- [?] Numbness, nausea
- [?] Intense fear of death + Losing the control
- [?] Choking, chills, chest pain,
- [?] sweating, shaking,
- [?] shortness of breath

Panic attacks often peak in several minutes and subside within 25 minutes.
- They rarely last > 1 hour.

ANSWER

Panic Disorder

- experience of panic attacks accompanied by persistent fear of having additional attacks.

DIAGNOSIS AND DSM-IV CRITERIA

- **1.** Spontaneous recurrent panic attacks (see above) with no obvious precipitant
- **2.** At least one of the attacks has been followed by a minimum of 1
- month of the following:
  - Persistent concern about having additional attacks
  - Worry about the implications of the attack ("Am I out of control?")
  - A significant change in behavior related to the attacks (avoid situations that may provoke attacks)
- **Two types of diagnoses:** Always specify panic disorder **with agoraphobia** or panic disorder **without agoraphobia**

[4 attacks during 4 weeks]
↳ panic disorder

What is DSM-IV CRITERIA of panic disorder?

QUESTION

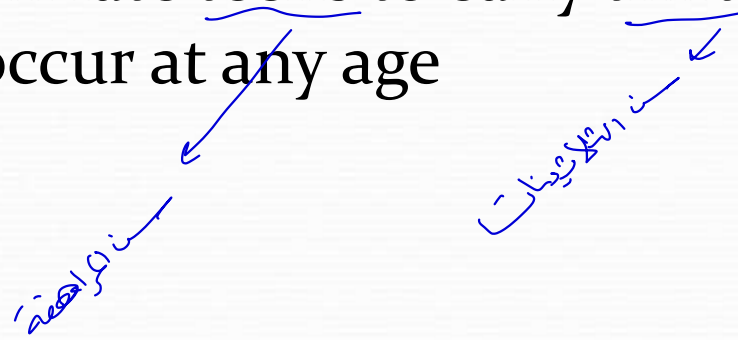
experience of panic attacks accompanied by persistent fear of having additional attacks.

1. Spontaneous recurrent panic attacks with no obvious precipitant .
2. At least one of the attacks has been followed by a minimum of 1 month of the following:
- Persistent concern about having additional attacks
- Worry about the implications of the attack (“Am I out of control?”)
- A significant change in behavior related to the attacks (avoid situations that may provoke attacks)

ANSWER

EPIDEMIOLOGY

- Lifetime prevalence: 2 to 5%
- Two to three times more common in females than males
- Strong genetic component: Four to eight times greater risk of panic disorder if first-degree relative is affected
- Onset usually from late teens to early thirties (average age 25), but may occur at any age



ASSOCIATED CONDITIONS

1. Major depression (depressive symptoms found in 40 to 80% of patients)
2. Substance dependence (found in 20 to 40% of patients)
3. Social and specific phobias
4. Obsessive–compulsive disorder

COURSE AND PROGNOSIS

- is often chronic. Relapses are common
- 10 to 20% of patients continue to have significant symptoms that interfere with daily functioning.
- 50% continue to have mild, infrequent symptoms.
- 30 to 40% remain free of symptoms after treatment

Q. panic disorder

TREATMENT(Pharmacological)

- *Acute Initial Treatment of Anxiety*
  - Benzodiazepines (only short course if necessary, as dependence may occur with long-term use); Dose should be tapered as treatment with selective serotonin reuptake inhibitors (SSRIs) is instituted.
- *Maintenance*
- SSRIs, especially paroxetine and sertraline, are the drugs of choice for long term treatment of panic disorder. These drugs typically take 2 to 4 weeks to become effective, and higher doses are required than for depression. Clomipramine, imipramine, or other antidepressants may also be used
- Treatment should continue for at least 8 to 12 months, as relapse is common after discontinuation of therapy.

Other Treatments

- Relaxation training
- Biofeedback
- Cognitive therapy
- Insight-oriented psychotherapy
- Family therapy

is a form of depth psychology, the primary focus of which is to reveal the unconscious content of a client's psyche in an effort to alleviate psychic tension

Agoraphobia

- fear of being alone in public places.
- 50 to 75% of patients have coexisting panic disorder.

DIAGNOSIS AND DSM-IV CRITERIA

- The following criteria must be met for diagnosis:
  - Anxiety about being in places or situations from which escape might be difficult, or in which help would not be readily available in the event of a panic attack
  - The situations are either avoided, endured with severe distress, or faced only with the presence of a companion.
  - These symptoms cannot be better explained by another mental disorder

agoraphobia

- TREATMENT
- Since agoraphobia is usually associated with panic disorder, SSRIs are also considered first-line treatment. Behavioral therapy may also be indicated. As coexisting panic disorder is treated, agoraphobia usually resolves. When ago-raphobia is not associated with panic disorder, it is usually chronic and debilitating.

What is DMS 4 criteria of Agoraphobia?

QUESTION

- Anxiety about being in places or situations from which escape might be difficult, or in which help would not be readily available in the event of a panic attack

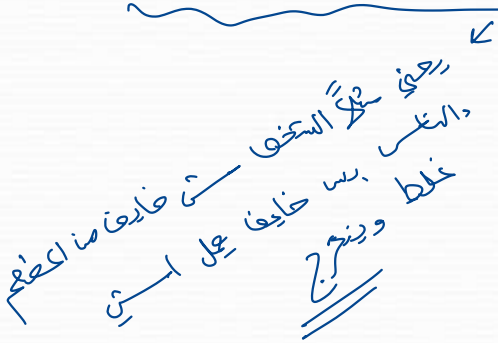
- The situations are either avoided, endured with severe distress, or faced only with the presence of a companion.

- These symptoms cannot be better explained by another mental disorder

ANSWER

Specific and Social Phobias

- A *phobia* is defined as an irrational fear that leads to avoidance of the feared object or situation.
  - A *specific phobia* is a strong, exaggerated fear of a specific object or situation;
  - a *social phobia* (also called **social anxiety disorder**) is a fear of social situations in which embarrassment can occur



DIAGNOSIS AND DSM-IV CRITERIA

- The diagnostic criteria for **specific phobias** is as follows:

1. Persistent excessive fear brought on by a specific situation or object
2. Exposure to the situation brings about an immediate anxiety response.
3. Patient recognizes that the fear is excessive.
4. The situation is avoided when possible or tolerated with intense anxiety.
5. If person is under age 18, duration must be at least 6 months.

What is DSM-IV CRITERIA for specific phobias ?

QUESTION

1. Persistent excessive fear brought on by a specific situation or object
2. Exposure to the situation brings about an immediate anxiety response.
3. Patient recognizes that the fear is excessive.
4. The situation is avoided when possible or tolerated with intense anxiety.
5. If person is under age 18, duration must be at least 6 months.

ANSWER

EPIDEMIOLOGY

- Phobias are **the most common mental disorders** in the United States. At
- least 5 to 10% of the population is afflicted with a phobic disorder, and is mid-teens.
- Women are two times as likely to have specific phobia as men; social phobia occurs equally in men and women.

ETIOLOGY

- The cause of phobias is most likely multifactorial, with the following components playing important parts:
- *Genetic:*
  - Fear of seeing blood often runs in families and may be associated with an inherited, exaggerated vasovagal response.
  - First-degree relatives of patients with social phobia are three times more likely to develop the disorder.
- *Behavioral:*
  - Phobias may develop through association with traumatic events. For example, people who were in a car accident may develop a specific phobia for driving.
- *Neurochemical:*
  - An overproduction of adrenergic neurotransmitters may contribute to anxiety symptoms. This has led to the successful treatment of some phobias. (Most notably, performance anxiety is often successfully treated with beta blockers).

TREATMENT

- **Specific Phobia**
  - Pharmacological treatment has not been found effective.
  - **Systemic desensitization** (with or without hypnosis) and supportive psychotherapy are often useful.
  - If necessary, a short course of benzodiazepines or beta blockers may be used during desensitization to help control autonomic symptoms.
  - **Systemic desensitization:** Gradually expose patient to feared object or situation while teaching relaxation and breathing techniques.
- **Social Phobia**
  - Paroxetine (Paxil), an SSRI, is FDA approved for the treatment of social anxiety disorder.
  - Beta blockers are frequently used to control symptoms of performance anxiety.
  - Cognitive and behavioral therapies are useful adjuncts.

cognitive behavioral therapy

pharmacotherapy effective

fortic colles

side effect

Obsessive–Compulsive Disorder (OCD)

OBSESSIONS AND COMPULSIONS

- **Obsession**—a recurrent and intrusive thought, feeling, or idea
- **Compulsion**—a conscious repetitive behavior linked to an obsession that, when performed, functions to relieves anxiety caused by the obsession

DIAGNOSIS AND DSM-IV CRITERIA

- **1.** Either obsessions or compulsions as defined below:
  - **Obsessions**
    - Recurrent and persistent intrusive thoughts or impulses that cause marked anxiety and are not simply excessive worries about real problems
    - Person attempts to suppress the thoughts.
    - Person realizes thoughts are product of his or her own mind.
  - **Compulsions**
    - Repetitive behaviors that the person feels driven to perform in response to an obsession
    - The behaviors are aimed at reducing distress, but there is no realistic link between the behavior and the distress.
- **2.** The person is aware that the obsessions and compulsions are unreasonable and excessive.
- **3.** The obsessions cause marked distress, are time consuming, or significantly interfere with daily functioning.

What's DMS-IV criteria of OCD ?

QUESTION

1.Eitherobsessionsorcompulsionsasdefinedbelow:
Obsession:
- Recurrent and persistent intrusive thoughts or impulses that cause marked anxiety and are not simply excessive worries about real problems
- Person attempts to suppress the thoughts.
- Person realizes thoughts are product of his or her own mind
Compulsions
- Repetitive behaviors that the person feels driven to perform in response to an obsession
- The behaviors are aimed at reducing distress, but there is no realistic link between the behavior and the distress.
2. The person is aware that the obsessions and compulsions are unreasonable and excessive.
3. The obsessions cause marked distress, are time consuming, or significantly interfere with daily functioning.

ANSWER

COMMON PATTERNS OF OBSESSIONS AND COMPULSIONS

- **1.** Obsessions about **contamination**
- **2.** Obsessions of **doubt**
- **3.** Obsessions about **symmetry**
- **4. Intrusive thoughts**

* Form of obsessions → thought, idea, feelings doubt
* compulsion → cleaning checking, counting dressing.

- obsessions of rumination
- obsessions of impulse → امساك البت
- obsessions of image
- obsessional phobia → فكرة امساك السكين وانتل حد وهو في المطبخ فبطل يدخل المطبخ.

EPIDEMIOLOGY

- Lifetime population prevalence: 2 to 3%
- Onset is usually in early adulthood, and men are equally likely to be affected as women.
- OCD is associated with major depressive disorder, eating disorders,
- other anxiety disorders, and obsessive–compulsive personality disorder.
- The rate of OCD is higher in patients with first-degree relatives who have *Tourette's disorder*.

ETIOLOGY

- *Neurochemical*: OCD is associated with abnormal regulation of serotonin.
- *Genetic*: Rates of OCD are higher in first-degree relatives and monozygotic twins than in the general population.
- *Psychosocial*: The onset of OCD is triggered by a stressful life event in approximately 60% of patients.

COURSE AND PROGNOSIS

- The course is variable but usually chronic,
- with only about 30% of patients showing significant improvement with treatment.
- 50% of patients have moderate improvement,
- and 20 to 40% remain significantly impaired or experience worsening of symptoms.

TREATMENT

- **Pharmacologic**
  - SSRIs are the first line of treatment, but higher-than-normal doses may be required to be effective.
  - Tricyclic antidepressants (TCAs) (clomipramine) are also effective.
- **Behavioral Treatment**
- Behavioral therapy is considered as effective as pharmacotherapy in the treatment of OCD; best outcomes are often achieved when both are used simultaneously.
- The technique, called *exposure and response prevention* (ERP), involves prolonged exposure to the ritual-eliciting stimulus and prevention of the relieving compulsion (e.g., the patient must touch the dirty floor without washing his or her hands). Relaxation techniques are employed to help the patient manage the anxiety that occurs when the compulsion is prevented.

#+Last Resort: In severe,treatment-resistantcases,electro convulsive therapy(ECT)or surgery (cingulotomy) may be effective.

Generalized Anxiety Disorder (GAD)

- Patients with GAD have persistent, excessive anxiety and hyperarousal for at least 6 months. They worry about general daily events, and their anxiety is difficult to control.

DIAGNOSIS AND DSM-IV CRITERIA

- Excessive anxiety and worry about daily events and activities for at least 6 months
- It is difficult to control the worry.
- Must be associated with at least three of the following:
  - Restlessness
  - Fatigue
  - Difficulty concentrating
  - Irritability
  - Muscle tension
  - Sleep disturbance

What’s criteria DMS-IV for GAD ?

QUESTION

- Excessive anxiety and worry about daily events and activities for at least 6 months

- It Is difficult to control the worry.

- Must be associated with at least three of the following:
- [?] Restlessness
- [?] Fatigue
- [?] Difficulty concentrating
- [?] Irritability
- [?] Muscle tension
- [?] Sleep disturbance

ANSWER

EPIDEMIOLOGY

- Lifetime prevalence: 45%
- GAD is very common in the general population.
- Women are two times as likely to have GAD as men.
- Onset is usually before the age of 20; many patients report lifetime of “feeling anxious.”

COMORBIDITIES

- Fifty to 90% of patients with GAD have a coexisting mental disorder, especially
- major depression, social or specific phobia, or panic disorder.

PROGNOSIS

- GAD is chronic, with lifelong, fluctuating symptoms in 50% of patients. The
- other half of patients will fully recover within several years of therapy.

TREATMENT

- The most effective treatment approach is a combination of psychotherapy and pharmacotherapy.
- **Pharmacological**
- Buspirone
- Benzodiazepines (usually clonazepam or diazepam)—should be tapered
- off as soon as possible because of risk of tolerance and dependence
- SSRIs
- Venlafaxine (extended release)
- **Other**
- Behavioral therapy
- Psychotherapy

Posttraumatic Stress Disorder (PTSD)

- TREATMENT
- Pharmacological

>>TCAs—imipramine and doxepin

>>SSRIs, MAOIs

>> Anticonvulsants (for flashbacks and nightmares)

- Other
- ☐ Psychotherapy
- ☐ Relaxation training
- ☐ Support groups, family therapy

Addictive substances (benzodiazepines, etc.) should be avoided (if possible) in the treatment of PTSD because of the high rate of substance abuse in these patients.

Acute Stress Disorder (ASD)

- TREATMENT
- Same as treatment for PTSD

MANAGEMENT OF ANXIETY DISORDERS

2-10-2012

Anxiety disorders

- Panic disorder
- Agoraphobia
- Specific and social phobias
- Obsessive compulsive disorder (OCD)
- Posttraumatic stress disorder (PTSD)
- Acute stress disorder (ASD)
- Generalized anxiety disorder (GAD)
- Anxiety disorder secondary to general medical condition
- Substance-induced anxiety disorder

Management

- Pharmacological
- Non-pharmacological therapy

Pharmacotherapy

1- Benzodiazepine

2- Buspirone (BuSpar)

3- Selective Serotonin Reuptake Inhibitors **SSRI** *(Discussed)*

4- Tricyclic Antidepressatns **TCA**

5- Monoamine Oxidase Inhibitors **MAOI**

6- Beta blockers

7- Anti-convulsant

8- Atypical anti-depressant

Barbiturate !!!

ANXIOLYTICS/HYPNOTICS

- **Benzodiazepines (BDZs)**
- **Propranolol**
- **Buspirone**

- Anxiolytics, including benzodiazepines, barbiturates, and buspirone, are themost widely prescribed psychotropic medications. In general, they all work bydiffusely depressing the CNS, causing a sedative effect.
- Common indicationsfor anxiolytics/hypnotics include:
- Anxiety disorders
- Muscle spasm
- Seizures
- Sleep disorders
- Alcohol withdrawal
- Anesthesia induction

Benzodiazepines (BDZs)

- Benzodiazepines are first-line anxiolytics.
- Advantages include *safety at high doses* (as opposed to barbiturates).
- A significant limitation is imposed on the duration of BDZ use due to their potential for tolerance and dependence after prolonged use.
- Benzodiazepines work by *potentiating the effects of GABA*.

Examples of BDZs

Long Acting (1 to 3 Days)

- *Chlordiazepoxide (Librium)*—used in alcohol detoxification, presurgery anxiety
- *Diazepam (Valium)*—rapid onset, used in treatment of anxiety and seizure control
- *Flurazepam (Dalmane)*—rapid onset, treatment of insomnia

Intermediate Acting (10 to 20 Hours)

- *Alprazolam (Xanax)*—treatment of panic attacks
- *Clonazepam (Klonopin)*—treatment of panic attacks, anxiety
- *Lorazepam (Ativan)*—treatment of panic attacks, alcohol withdrawal
- *Temazepam (Restoril)*—treatment of insomnia

Short Acting (3 to 8 Hours)

- *Oxazepam (Serax)*
- *Triazolam (Halcion)*—rapid onset, treatment of insomnia

Side effects of BDZ

- Drowsiness,
- impairment of intellectual function,
- reduced motor coordination.

- *Toxicity: Respiratory depression in overdose, especially when combined with* alcohol
- Maysethina graves , suppresed respiration

BDZs can be lethal when mixed with alcohol.

SSRI

- MOA: inhibits the presynaptic serotonin pumps increasing the availability in the synaptic clefts.
- The most commonly prescribed anti-depressant due to:
  - Low incidence of side effects.
  - No food restrictions.
  - Much safer in overdose.
  - Can be given in pregnancy, lactation, safe in young and elderly.

Examples

- **Fluoxetine** (longest half life and the most activating)
- **Sertraline** (GI disturbance)
- **Paroxetine** (most serotonin specific)
- **Fluvoxamine**
- **citalopram**
- **Escitalopram**

Uses of SSRI

1- depression in children above 6 years (fluoxetine) and adults

2- some anxiety disorder

- **for OCD→ all are effective. But if a child has OCD our first choice will be sertraline then fluvoxamine and finally citalopram.**
- **panic disorder → paroxetine and sertraline**
- **agoraphobia, social anxiety, PTSD,GAD**

  →paroxetine

3- premensrual dysphoric disorder (sertraline)

4- impulse control disorder

5- hypochondriasis and body dysmorphic disorder (fluoxetine)

6- premature ejaculation (fluoxetine/sertraline)

7- autisim and ADHD/obesity/eating disorder/migraine/IBS

SSRI

- **SSRI have significantly fewer side effects than TCA & MAOI due to serotonin selectivity (they don't act on histamine, adrenergic, or muscarinic receptors).**

- **Side effects**
  - Sexual dysfunction
  - GI disturbance
  - Akathesia (internal restlessness)
  - Insomnia
  - Headache
  - Anorexia, weight loss
  - In elderly: hyponatremia, prolonged bleeding time and cognitive impairment (conc.)
  - Serotonin syndrome when used with MAOI (symptom: nausea, diarrhea, palpitations, chills, rigor, restlessness, confusion and lethargy)

Management of side effects:

- **For sexual dysfunction:**

  maintain the drug and take Viagra OR switch to mertazapine.
- **For GI upset: take the dug after a meal**
- **for akathesia: BDZ or B-blocker or anticholinergic**

- serotonin syndrome:

1- stop the drug
2- ABC
3- gastric lavage if overdose
4- IV fluid and $NaHCO_3$
5- BDZ (calm the pt, muscle relaxant and prevent seizure)
6- mertazapine
7-B-blocker
8-ECT

TCA

- *Inhibit reuptake of norepinephrine & serotonin, increasing availability in the synapse.*
- Rarely used as first line due to:
  - Higher incidence of side effects,
  - Require more monitoring of dosing,
  - Can be lethal in overdose,
  - The most cardiotoxic anti-depressant. (avoid in elderly and children)
- Usually started on low dose, then increase to the therapeutic dose (that to avoid the anticholinergic side effects).

Uses of TCAs:

1. Depression
2. Anxiety disorder
   OCD→ clomipramine
   PTSD→ imipramine and doxepin
3. Pain syndrome
4. Nocturnal enuresis
5. Eating disorder
6. ADHD
7. Insomnia
8. Summarization
9. Compulsive behaviors in children

Examples of TCAs:

- **Imipramine** (activating so used in retarded MDD): GAD, panic disorder, PTSD
- **Amitriptyline** (sedating so used in agitated MDD)
- **Trimipramine**
- **Nortriptyline**
- **Desipramine** (most epinephrine selective)
- **Clomipramine :** used in OCD because it is the most serotonin specific
- **Doxepin:** PTSD

- **Side Effects**
  - Anti-histamine properties (sedation)
  - Anti-adrenergic properties (arrhythmias, tachycardia, orth-hypotension)
  - Antimuscarinic effects (dry mouth, constipation, urinary retention, blurred vision)
  - Weight gain
  - Major complications 3Cs (Convulsion, Coma, Cardiotoxicity)
  - Lethal in overdose
  - The most one decreasing the threshold of sezuire and the most cardiotoxic (caues sudden death in children and elderly).
- Ci : glaucoma . Prostate hypertrophy …in pregnant bn36e

MAOI

- MOA: prevents the inactivation of biogenic amines as norepinephrine, serotonin, dopamine and tyramine.
- Drugs: phenelzine, tranylcypromine, isocarboxazid
- Uses: depression, panic disorder, PTSD, ASD

Side effects:

- Orthostatic hypotension, drowsiness, wt gain, sexual dysfunction, dry mouth, sleep dysfunction
- Serotonin syndrome if taken with SSRI
- Hypertensive crisis: when taken with tyramine rich food or sympathomimetics.

- Sever anxiety

Buspirone

- MOA: partial agonist on 5HT-1A receptor
- It has a slower onset of action than benzodiazepine
- Low potential for abuse
- Not given with SSRI: serotonin syndrome

- Uses:

  1- useful in alcoholics

  2- alternative to BDZ or venlafaxine for treating generalized anxiety disorder

B-blockers

- Useful for treating the autonomic effects of panic attacks or performance anxiety, as palpitations, sweating and tachycardia.
- It also can be used for treating akathesia (SE of typical antipsychotics)

miscellaneous

1- Topiramate (topamax) : an anticonvulsant

- MOA: **blocks sodium channel**, enhance GABA and inhibit glutamate
- One of the new generation of mood stabilizers
- useful for treating the flashbacks and nightmares associated with PTSD

2- Venlafaxine (atypical antidepressant) useful in treating **generalized anxiety disorder, panic disorder and social anxiety**

- It is a SNRI, so increasing sertonin and norepinephrine availability in the synaptic cleft
- Main SE: increase the BP and stomach

هذا كطلب

autism , Asperger's , elimination disorders , ADHD)

Child Psychiatry

Child Psychiatry (outlines..)

1. **Mental Retardation**

2. **Learning disorder**

3. **Disruptive behavioral disorder**
   - Conduct disorder
   - ODD

4. **ADHD**

5. **Pervasive Developmental Disorder**
   - ❖Autism
   - ❖Rett disorder
   - ❖Asperger Syndrome
   - ❖Childhood disintegrative disorder

6. **Eliminiation disorder**
   - ✔Enuresis
   - ✔Encopresis

7. **Tourett disorder & Tic disorder**

8. **Other ..**
   - ❑Selective Mutism
   - ❑Separation Anxiety disorder
   - ❑Child Abuse

Mental Retardation

Definition (by DSM-IV)	✔**IQ 70** or below ✔↓ **adaptive skill** (appropriate for age grp) ✔Onset: **before age of 18**
Epidemiology	▪2.5% of population ▪85% -- mild cases ▪**Males 2x**
Subclassification	Profound, Severe, Moderate, Mild
Causes	--mostly no identifiable cause 1. **Genetic** – DS, Fragile X Syndrome 2. **Prenatal**—TORCH infection (Toxoplasmosis, Other (syphilis, AIDS, alcohol/illicit drugs), Rubella (German measles, Cytomegalovirus (CMV), Herpes simplex) 3. **Perinatal** (anoxia,prematurity, birth trauma) 4. **Postnatal** (hypothyroidisim, malnutrition, toxin exposure, trauma)

- unlike MR there is a significant disturbance in the patient's cognitive abilities but it's in a particular area of learning (reading, writing, mathematics.) it's limited to that area.

LEARNING DISORDER

- No other abnormalities necessary present → - hearing impairment. - visual ".

Definition (by DSM-IV)	Achievement in reading, math & written expression that's significantly lower than expected for **chronological age**, **level education** & **level intelligent**	
Types & Epidemiology (..disorder)	**Reading**	4%, **Boys 3-4x !**
	Math	5%, **Girls**
	Written expression	3-10%, Unknown ratio
	Non otherwise specified (NOS)	--
Etiology	Maybe due to gen, abnormal dev, perinatal injury, neuro /MD condition	
Treatment	Remedial education tailored to the child's specific needs	

medical condition

التعليم العلاجي

3

Disruptive behavioral disorder

Conduct disorder

Oppositional defiant disorder (ODD)

CONDUCT DISORDER -1

it diagnosed before 18years old

Dx & DSM-IV Criteria	Pattern of behav. --**violation of the basic rights of others or social norms & rules**, with **at least 3 acts** within the following categories during the past year : 1. **Aggression** (people & animals) 2. **Destruction** of property 3. **Deceitfulness** "untruthful" — the action of keeping the truth hidden, especially to get an advantage 4. Serious **violation of rules**
Epidemiology	Boys : **6-16%** Girls : **2-9%**
	Up **to 40% ris**k of dev. **antisocial personality dis.** in adulthood
	↑ incidence comorbid ADHD & learning disorder
	↑ incidence comorbid mood dis.,substance abuse & criminal behav. in adulthood
Etiology	Genetic & psychosocial factors
Treatment	Multimodal treatment approach ✔ Structure the **child's environment** with firm rules (consistently enforced) ✔ Individual **psychotherapy** ✔ Adjuvant **pharmacotherapy** (anti-psycho-lithium, SSRIs)

2- Oppositional Defiant Disorder (ODD)

Dx & Definition (by DSM-IV)	At least **6m of negativistic, hostile & defiant behav.**, with **at least 4** of : 1. Frequent **loss of temper** 2. **Arguments** with adults 3. **Defying** adult's rules 4. Deliberately **annoying** people 5. Easily **annoyed** 6. **Anger** & resentment 7. **Spiteful** 8. **Blaming others**
Epidemiology	**16-22%** children > 6 years old, usually **begin at 8**
	Onset **before puberty** (**boys**), **after puberty** (**equal**)
	↑ incidence comorbid mood dis.,substance abuse & ADHD
	Remits in 25% of children, may progress □ conduct disorder
Treatment	✔ Individual psychotherapy ✔ Parental skills training

Attention Deficit Hyperactivity Disorder (ADHD)

Inattention—problems listening, concentrating, paying attention to details, or organizing tasks; easily distracted, often forgetful
Hyperactivity–impulsivity—blurting out, interrupting, fidgeting, leaving seat, talking excessively,

to say something suddenly and without thinking, usually because you are excited or nervous

6x6

3 types:
1- inattention only
2- hyperactivity only
3. both hyperactivity and inattention

Dx & Definition (by DSM-IV)	☐ **At least 6 symptoms** involving **inattentiveness**, **hyperactivity** or both that have persisted for **at least 6 month** in two different places (situation) - home record - schole record. ☐ Onset : **before age 7** changeable ☐ **Behavior inconsistent** with age & development
Epidemiology	**3-5%** school-age children
	Boys 3-5x !
	↑ incidence comorbid mood dis, personality dis, conduct dis & ODD
	Mostly remit in adolescence; 20% hv symptoms into adulthood
Etiology	**Multifactorial ..** • Genetic • Prenatal trauma/ toxin exposure • Neurochemical factors • Neurophysiological factors • Psychosocial factors
Treatment	✔ Pharmacotherapy – **CNS stimulant, SSRIs/TCAs** ✔ Individual **psychotherapy** ✔ Parental **counseling** ✔ **Group therapy**

↑ substance abuse

methylphenidate
amphetamine

DIAGNOSIS AND DSM-5 CRITERIA

- Two symptom domains: inattentiveness and hyperactivity/impulsivity
- At least **six inattentive symptoms**
  - Fails to give close attention to details or makes careless mistakes.
  - Has difficulty sustaining attention.
  - Does not appear to listen.
  - Struggles to follow through on instructions.
  - Has difficulty with organization.
  - Avoids or dislikes tasks requiring a lot of thinking.
  - Loses things.
  - Is easily distracted.
  - Is forgetful in daily activities.

and/or

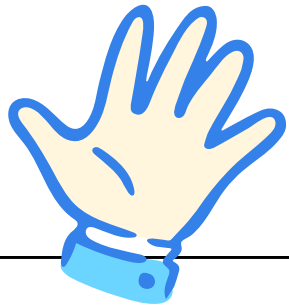
- At least **six hyperactivity/impulsivity symptoms**
  - Fidgets with hands or feet or squirms in chair.
  - Has difficulty remaining seated.
  - Runs about or climbs excessively in childhood; extreme restlessness in adults.
  - Difficulty engaging in activities quietly.
  - Acts as if driven by a motor; may be an internal sensation in adults.
  - Talks excessively.
  - Blurts out answers before questions have been completed.
  - Difficulty waiting or taking turns.
  - Interrupts or intrudes upon others.
- Symptoms >6 months and present in two or more settings (e.g., home, school, work)
- Symptoms interfere with or reduce quality of social/academic/occupational functioning
- Onset **prior to age 12, but** can be diagnosed retrospectively in adulthood
- Symptoms not due to another mental disorder

5 Pervasive Developmental Disorder

spreading widely.

- Autism
- Rett disorder
- Childhood disintegrative disorder
- Asperger syndrome

1- Autism



Dx & Definition (by DSM-IV)	At least 6 symptoms from the following categories: 1. **Problem with social interaction** (at least 2) 2. **Impairments in communication** (at least 1) 3. **Repetitive & stereotype patterns of behavior & activities** (at least 1)
Epidemiology	✔**0.02-0.05%** children under age 12 ✔**Boys** 3-5x !, some familial inheritance, begin before age 3 ✔Some associate with **FXS, tuberous sclerosis, MR** & **seizures** ✔Apparent at early age due to delayed dev. milestones ✔**70% of them are MR**, only 1-2% can function completely independently as adults
Etiology	**Multifactorial..** 1. Prenatal neurological insults 2. Genetics factors 3. Immunological & biochemical factors
Treatment	**No cure !** –but to help manage symptoms & improve social skills: ▪ Remedial education ▪ Behavioral therapy ▪ Neuroleptics ▪ SSRIs ▪ Stimulants (some children)

- **1. Problems with social interaction (at least two):**
- Impairment in nonverbal behaviors (facial expression, gestures, etc.)
- Failure to develop peer relationships
- Failure to seek sharing of interests or enjoyment with others
- Lack of social/emotional reciprocity

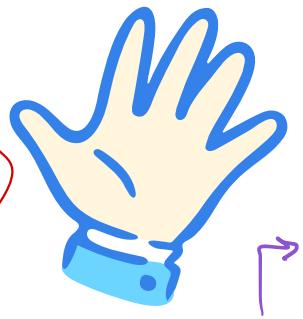
- **2. Impairments in communication (at least one)**
- Lack of or delayed speech
- Repetitive use of language
- Lack of varied, spontaneous play, and so on

- **3. Repetitive and stereotyped patterns of behavior and activities (at least one)**
- Inflexible rituals
- Preoccupation with parts of objects, and so on

RETT DISORDER -2

Characteristics	1. Normal **prenatal & perinatal dev.** 2. Normal **psychomotor dev.** (1st 5m) 3. Normal **HC** (but then ↓ between 5-48 moths old) 4. **Loss** prev. **learned purposeful hand skills** (5-30m) □ dev. of stereotype hand movement 5. Early loss **social interaction** □ subsequent improvement 6. Severe impaired **language** & **psychomotor dev.** 7. Seizures 8. Cyanotic spells 9. Problems with gait or trunk movement
Epidemiology	Rare, onset : age 5-48 months old, **Girls** predominantly
	Boys : variable phenotype, dev. delay, many die *in utero*
	Genetic testing is available
Etiology	**MECP2 gene mutation** on X chromosome
Treatment	Supportive

ASPERGER SYNDROME -3



Dx & DSM-IV Criteria	**1. Impaired social interaction (at least 2)** - Failure to develop peer relationships - Impaired use of nonverbal behaviors (facial expression, gestures) - Lack of seeking to share enjoyment or interests with others - Lack of social/emotional reciprocity **1. Restricted / stereotype behaviors, interest or activities** (inflexible routines, repetitive movements, preoccupations,
Epidemiology	Incidence : unknown
	Boys > girls
Etiology	Unknown, may involve gen, infectious, perinatal factors
Treatment	✔ Supportive ✔ Social training & behavioral modification techniques

CHILDHOOD DISINTEGRATIVE DISORDER -4

[Disintegrative]

Dx & DSM-IV Criteria	❑Normal dev. in **1st 2 years of life** ❑**Loss of prev. acquired skills** (at least 2) : (Language, Social skill, Bowel/ bladder control, Play, Motor skills) ❑At least 2 of : -Impaired **social interaction** -Impaired use of **language** -**Behaviors & interest** (restricted, repetitive & stereotype)
Epidemiology	✔ Rare, onset : 2-10 years old ✔ **Boys** 4-8x !
Etiology	unknown
Treatment	Supportive

6 TOURETTE'S DISORDER

Tourette's disorder is the most severe of the tic disorders. It is characterized by **multiple motor tics and at least one vocal tic lasting for at least 1 year**. Vocal tics may appear many years after the motor tics, and they may wax and wane in frequency. The most common **motor tics** involve the face and head, such as eye blinking and throat clearing.

Examples of **vocal tics**:

- *Coprolalia*—utterance of obscene, taboo words as an abrupt, sharp bark or grunt
- *Echolalia*—repeating others' words

Tics : involuntary movements & vocalization

Tourette's dis. : **most severe tic disorder**

vocal tics may 1st appear may years after motor tics

Motor tics : most common –**face & head** (e.g eyes blinking)

Vocal tics : ***Coprolalia*** & ***Echolalia***

Dx & DSM-IV Criteria	**Multiple motor & vocal tics** (**both must present !**) (? at least one) Tics : occur many time a day, almost **every day for >1 year** (no tic-free period >3 months)
	Onset **prior to age 18**
	Distress/ impairment in social/occupational functioning
Epidemiology	✔ **0.05%** of children ✔ Onset : 7-8 y/o, **Boys 3x !** ✔ High co-morbidity with OCD & ADHD
Etiology	▯ Genetics factors (50% monozygous) ▯ Neurochemical factors
Treatment	**Pharmacotherapy (**haloperidol, pimozide) Supportive **psychotherapy**

⑦ Elimination disorder

① enuresis

② encopresis

ENURESIS-1

Urinary continence : normally establised before age 4

Enuresis : **involuntary voiding of urine** (bedwetting), r/o MD conditons

..1⁰, 2⁰, diurnal, nocturnal..

always exclude medical causes

Dx & DSM-IV Criteria	•Involuntary voiding **after age 5** •Occurs **at least 2x a week for 3 months** or with marked impairment of function.
Epidemiology	**7%** of 5 years old, prevalence ↓ with age
Etiology	✔ **Genetic** predisposition ✔ **Small bladder**/ low nocturnal levels of **ADH** ✔ Psychological **stress**
Treatment	○ Behavioral modification ○ Pharmacotherapy – antidiuretics, TCAs

↑ desmopressin

ENCOPRESIS-2

1x3

Bowel control : normally achieved by age of 4

Bowel incontinence: result in rejection by peers & impairment of social dev.

Must r/o metabolism abn, lower GI prob & dietary factors.

Dx & DSM-IV Criteria	Involuntary/ intentional **passage of feces** in inappropriate places
	At least **4 years of age**
	At least **1x a month for 3 month**
Epidemiology	✔ **1%** of 5-year-old children ✔ Incidence ↓ with age ✔ Associated with other **psychiatric condition** (e.g conduct dis & ADHD)
Etiology	Psychosocial stressors Lack of sphincter control Constipation with overflow incontinence
Treatment	**Therapy** (psycho, family, behavioral)
	Stool softener (if constipate)

Mgoh magnesium hydroxide

Selective Mutism

- **Rare** condition
- **Girls**
- **Not speaking** in certain situations (such as in school)
- Onset : **5-6 years old**
- Maybe preceded by **stressful life event**
- Tx : **psychotherapy** (supportive, family, behavioral)

Separation Anxiety disorder

- ✔Excessive **fear of leaving** one's parents or other major attachment figures
- ✔May **refuse** to go to **school** (avoid it by complain of physical symptoms, refuse to **sleep** alone
- ✔Become extremely **distressed** & **worry** excessively about losing their parents for ever

- **4%** of school-age children
- **Equal** boys-girls
- Onset : around **age 7,** may be preceded by stressful life event
- Parents : afflicted by anxiety dis & may express excessive concern about their children
- Tx : **psychotherapy** (supportive, family) & **low-dose antidepressant**

10 Child Abuse

- Physical, emotional, sexual & neglect
- Doctors are legally report cases
- Children may be admitted to the hospital **without** parental consent in order to protected them
  - Adults who were abused as children have an increased risk of developing anxiety disorders, depressive disorders,, substance abuse disorders, and posttraumatic stress disorder. They also have an increased risk of subsequently abusing their own children.

SEXUAL ABUSE:

- Child sexual abuse most often involves a male who knows the child.
- Children are most commonly sexually abused between the ages 9-12
- 25%of women and 12% of men report having been sexually abused as children.

Evidence of sexual abuse in a child:

1. Sexually transmitted
   diseases
2. Anal or genital trauma
3. Knowledge about specific sexual acts (inappropriate for age)
4. Initiation of sexual activity with others
5. Sexual play with dolls (inappropriate for age)

Neurochemicals involved in sleep

- **Serotonin (increased)**
  - Involved in sleep initiation
- **Acetylcholine (increased)**
  - Involved in REM sleep
- **Norepinephrine (decreased)**
  - Involved in REM sleep
- **Dopamine (increased)**
  - Involved in arousal and wakefulness, but is ***increased*** during sleep
    - Dopamine agonists (Parkinson's drugs – bromocriptine, pramipexole) will produce arousal making it harder to sleep
    - Dopamine antagonists (Antipsychotics – haloperidol, risperidone, etc.) will block dopamine and thus reduce arousal making it easier to sleep.

Serotonin ↑ → Serotonin levels will make you drowsy.

Acetylcholine ↑ / Norepinephrine ↓ → most energy pair at sleep

Dopamine ↑ → decrease quality of sleep

Neurochemicals involved in sleep

- **Alcohol and barbiturates REDUCE REM sleep!**
  - On acute withdrawal, there will be an increase in REM sleep (REM rebound)

* Sleep: Narcolepsy > definition & criteria (sudden attack of sleep in the daytime) / cataplexy, short REM latency, hypnagogic, hypnopompic

Sleep disorders

Sleep- wake Disorders

Notes: primary and secondary causes

Organization of sleep : NREM AND REM

NREM (Non-rapid eye movemat sleep.)	REM (rapid eye movemt)
75% of sleep	25% of sleep
Divided into 4 parts (NREM 1, 2,3,4) (Theta wave → Delta wave)	—
Body active (there is a muscular tone) and brain is inactive (no conscious thoughts) , no eye movement and high muscular tone	Body is inactive while the brain in active . Rapid eye movement. No muscular tone. Dreams are actually remembered in this phase.

having thoughts this is when you actually are having your dreams that you remember in morning.

* REM latency → Falling asleep to onset of REM, average 90min, shorter in depression + Narcolepsy
* sleep latency → Time it take to Fall asleep, average 15min, longer → insomnia, shorter → narcolepsy

- Causes of sleep disorders include:

-medical conditions:pain ,endocrine disorder,metabolic condition.
-physical condition: obesity.
-sedative withdrawal.
-Use of stimulants : caffiene ,amphetamine.
-Major depression. sleep changes: one of the SIG E CAPS symptoms
-anxiety or mania.
-neurotransmitters abnormality:
1.elevated dopamine and norepinephrene.
2.elevated serotonin (delta wave)
3.elevated acetylcholine (REM)

classification

- Sleep disorders are classified as either:
  -primary:
    1 -DYSSOMNIA: disturbance in amount , quality or timing.
      2 -primary insomnia. (initation)
      3 -primary hypersomnia
      4 -narcolepsy (REM)
      5 -breathing –related disorders → obstructive sleep apnea (all phases)
      6 -circadian rhythm sleep disorder
    7 -PARASOMNIA:abnormal events in behavior or physiology during sleep: → things that happen while we are sleeping
      -nightmare disorder
      -night terror disorder.
      -sleep walking disorder
  -secondary.

- sleepwalking (NREM 3-4)
- Night terrors (NREM 3-4)
- Nightmares (REM)

Primary insomnia

- Difficulty initiating or maintaining sleep, resulting in daytime drowsiness or difficulty fulfilling tasks. Disturbance occurs three or more times per week for at least 1 month.

- EPIDEMIOLOGY/ETIOLOGY

- Affects 30% of the general population

-Often exacerbated by anxiety and preoccupation with getting enough sleep.

treatment

- **1. Sleep hygiene measures (first line):**
  - Maintain regular sleep schedule.
  - Limit caffeine intake.
  - Avoid daytime naps.
  - Exercise early in day.
  - Soak in hot tub prior to bedtime.
  - Avoid large meals near bedtime.
  - Remove disturbances such as TV and telephone from bedroom (bedroom for sleep and sex only).

- **2. Pharmacotherapy (for short-term use): Benadryl, Ambien (zolpidem),** Sonata (zaleplon), Desyrel (trazodone)

Primary hypersomnia:

- DIAGNOSIS

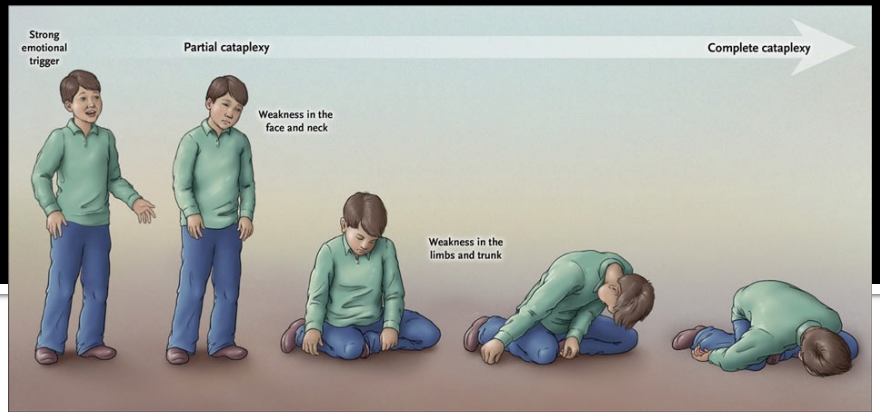
- At least 1 month of excessive daytime sleepiness or excessive sleep not attributable to medical condition, medications, poor sleep hygiene, insufficient sleep, or narcolepsy Usually begins in adolescence.

- Treatment

-stimulant drugs:amphetamines are first line.

-SSRI may be useful in some patients

Narcolepsy:



- DIAGNOSIS

-Repeated, sudden attacks of sleep in the daytime for at least 3 months, associated with:

1. ***Cataplexy—collapse due to sudden loss of muscle tone (occurs in 70%*** of patients); associated with emotion, particularly laughter
2. **Short REM latency**
3. **Sleep paralysis—brief paralysis upon awakening (in 50% of patients)**
4. **Hypnagogic** (as patient falls asleep or is falling asleep); **hypnopompic** (as patient wakes up; dream persists); hallucinations (in approximately 30% of patients)

Epidemiology/etiology

- Occurs in 0.02 to 0.16% of adult population
- Equal incidence in males and females
- Onset most commonly during childhood or adolescence
- May have genetic component
- Patients usually have poor nighttime sleep.

- **Treatment:**
- Timed daily naps plus stimulant drugs (amphetamines and methylphenidate) give also in hypersomnia
- SSRIs or sodium oxalate for cataplexy.

Breathing-related Disorders:

- Sleep disruption and excessive daytime sleepiness (EDS) caused by abnormal sleep ventilation from either obstructive or central sleep apnea.

- EPIDEMIOLOGY

- Up to 10% of adults
- More common in men and obese persons
- Associated with headaches, depression, pulmonary hypertension, and sudden death in elderly and infants
- Obstructive sleep apnea (OSA): Strong correlation with snoring
- Central sleep apnea (CSA) correlated with heart failure

- ***OSA RISK FACTORS:***

1. Male gender
2. Obesity
3. Male shirt collar size ≥ 17
4. Prior upper airway surgeries
5. Deviated nasal septum
6. "Kissing" tonsils
7. Large uvula, tongue
8. Retrognathia

- TREATMENT

1. *OSA: Nasal continuous positive airway pressure (nCPAP), weight loss,* nasal surgery, or uvulopalatoplasty
2. *CSA: Mechanical ventilation (such as b-PAP) with a backup rate*

Circadian rhythm sleep disorder:

_Disturbance of sleep due to mismatch between circadian sleep–wake cycle and environmental sleep demands. Subtypes include jet lag type, shift work type , and delayed sleep or advanced sleep phase type.

TREATMENT:

1. Jet lag type usually remits untreated after 2 to 7 days(no need to treat possible diet or light)
2. Light therapy may be useful for shift work type(non changing scheduals,clock wise dirction)
3. For shift life, delayed/advanced phase is better
4. Melatonin can be given 51⁄2 hrs before desired bedtime

Nightmare disorder:

- DIAGNOSIS

- Repeated awakenings with recall of extremely frightening dreams
  Occurs during REM sleep and causes significant distress

- **EPIDEMIOLOGY**

- Onset most often in childhood
- May occur more frequently during times of stress or illness

- **TREATMENT**

-Usually none, but tricyclics or other agents that suppress total REM sleep may be used.

Night terror disorder:

- **DIAGNOSIS**

-Repeated episodes of apparent fearfulness during sleep, usually beginning with a scream and associated with intense anxiety. Episodes usually occur during the first third of the night during stage 3 or 4 sleep (non-REM). Patients are not awake and do not remember the episodes.

- **EPIDEMIOLOGY/ETIOLOGY**

- Usually occurs in children
- More common in boys than girls
- Prevalence: 1 to 6% of children
-Tends to run in families
- High association with comorbid sleepwalking disorder

EEG → to rule out epilepsy

- **TREATMENT**

Usually none, but small doses of diazepam at bedtime may be effective (if nec

Sleep walking disorder (somnambulism):

- Repeated episodes of getting out of bed and walking, associated with blank stare and difficulty being awakened. Other motor activity may occur, such as getting dressed, talking, or screaming. Behavior usually terminates with patient returning to bed, but patient may awaken with confusion for several minutes. Episodes occur during the first third of the night during stages 3 and 4 sleep and are never remembered.

- EPIDEMIOLOGY/ETIOLOGY

-Onset usually between ages 4 and 8; peak prevalence at age 12
More common in boys than girls and tends to run in families

- TREATMENT

-Measures to prevent injury in surrounding environment

Eating disorders

Done by maram ismat alyaqoup
group B3

835339

:Include

- Anorexia nervosa
- Bulimia nervosa
- Bing eating

- Anorexia nervosa and bulimia pts have distorted body image and use extensive measures to avoid gaining weight.

- Bing eating disorder is associated with distress feeling but pt do nothing to avoid gaining weight.It can be seen in all other eating disorders

Anorexia nervosa

- Eating disorder in which pt is preoccupied with their weight,body image and with being thin.

- Subdivided into 2 main divisions:
  -restrictive type : pt eat very little and may vigorously exercise, often withdrawn with OC traits .

  -purging type/binge eating: eat in binges followed by purging, laxatives ,excessive exercise and or diuretics, associated with increased incidence of major depression and substance abuse.

Diagnosis and DSM-IV criteria

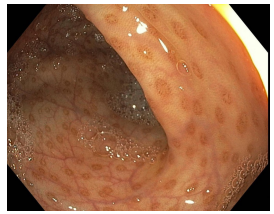
1. Body weight at least 15% below normal.
2. Intense fear of gaining weight or becoming fat.
3. Disturbed body image.
- Amenorrhea.

:Physical findings and complications

- Amenorrhea , arrhythmia , cardiac arrest, electrolyte abnormality (hypochloremic hyperkalemic alkalosis) hypercholesterolemia , osteoporosis , melanosis coli and lanugo .

def in gastric lipase.

thermoregulation problem



- Epidemiology:

1. 10 to 20 times more common in women
2. occure in up to 4%od adolescents and young adults.
3. onset usually between 10 and 30.

Differential diagnosis

anroxia nervosa :-
1- bing eating
2 I'm still obese

how to differentiate ?
1 - loss of appitite.
2 - concerne about his low weight → بكون خايف انه وزنه يزيد

- Medical condition like cancer,major depression,bulimia,other mental disorders like somatization or schizophrenia .

delusion → اكل مسحور مثلاً

- Disorder has a variable coarse-may completely recover,have fluctuating symptoms with relapses,or progressivey deteriorate.

- Mortality rate about 10% due to starvation,electrolyte disturbances and suicide,

:Treatment

- If patient is 20% below ideal weight he should be hospitalized otherwise treat as outpatient.

- Treatment involve :
  -behavioural therapy.
  -family therapy
  -supervised programme for weight gaining
  -some antidepressent may be used as adjunctive therapy like paroxetine or mirtazapine.

Bulimia nervosa

- Binge eating combined with behaviors intented to counteract weight gainsuch as vomiting,diuretics,excessive exercise .bulimic patients usually maintain normal weight or are ever over weight.

Subcategories of bulimia

1. Purging type :involve vomiting,diuretics or laxatives.

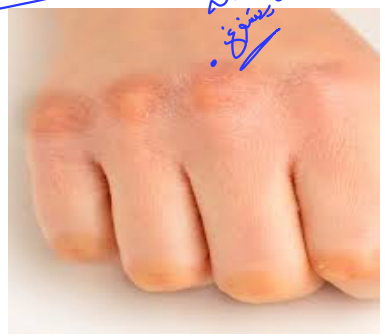
2. Non purging type:involve excess exercise or fasting.

:Diagnosis and DSM-IV criteria

1. Recurrent episodes of binge eating.
2. Recurrent inappropriate attempts to compensate for overeating and prevent weight gaining.
3. Binge eating and compensatory behaviors occur at least twice a week for 3 months.
4. Perception of self-worth is excessively influenced by body weight and shape

:Physical findings and complications

- Hypochloremic hypokalemic alkalosis , esophagitis , dental erosions , salivery gland hypertrophy , calloused knuckles.



- Epidemiology:
  -affect 1%-3% of adolescent and young females.
  -significantly more common on females than males.
  -high incidence of comorbid mood disorder,impulse control disorder and alcohol dependance or abuse.

Prognosis and treatment

- -have much better prognosis than anorexia.
- -symtoms usually exacerbated by stressful condition.
- -1/2 fully recover with treatment and ½ have chronic course with fluctuating symptoms.

- Treatment:

  -individual psychotherapy.
  -cognitive-behavioral therapy.
  -group therapy.
  -Pharma:SSRI as first line then TCAs

  → Fluoxetine (↓appetite)

Binge eating disorder

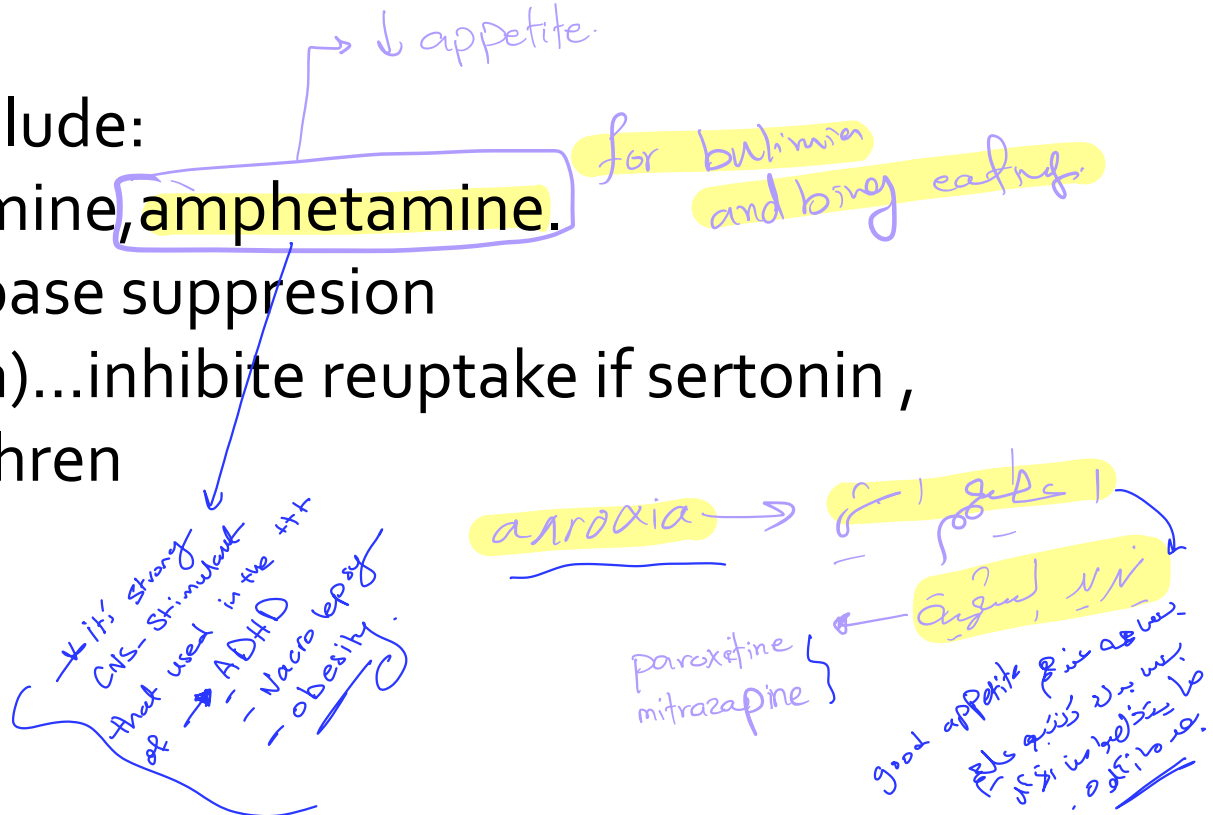
- Can be defined by excessive food intake within 2 hours period accompanied by a sense of lack of control.
- Patients with this disorder suffer emotioanl distress over their binge eating,but they do not try to control their weight by purging or restricting calories as do anoroxic or bulimics.

Diagnosis and DSM-IV criteria

1. Recurrent episodes of binge eating.
2. Sever distress over binge eating.
3. Binging occurs at least twice a week for 6 months and is not associated with compensatory behaviors.
4. Three or more of the following:
   -eating very rapidly.
   -eating until uncomfortably full.
   -eating large amount when not hungry.
   -eating alone due to embarrassment over eating habits.
   -feeling disgusted, depressed ,or guilty after overeating.

:Treatment

- Individual psychotherapy.
- Behavioral therapy.
- Strict diet and exercise program.
- Comorbide mood disorder or anxiety disorders should be treated as necessary.
- Pharmacotherapy include:
  -stimulants :phentermine,amphetamine.
  -orlistat (xenical) ...lipase suppresion
  -sibutramine (Meridia)...inhibite reuptake if sertonin , dopamine,norepinephren



Adjustment disorders

Post traumatic stress disorder.

it's got some similarities with PTSD in that there was a problematic event that's happened in the patient's life / But there's no flashbacks and nightmares it's fully more depressive symptoms or anxious symptoms or behavioral changes "not good changes"

- anytime you have a behavioral changes or symptoms of depression or anxiety in a patient after something bad has happened → Those are maladaptive symptoms.
  - → disorder of your adjusment period ⇒ (adjusment disorder)

Describtion:

→ diagnosis of exclusion

- flashbacks
- nightmares
- panic symptoms
- avoidance

→ PTSD + acute stress disorder.

SIG E CAPS
- Sleep
- interest
- Guilt
- Energy
- concentration
- Appetite
- Psychomotor activity
- Suicidal ideations

more than 5 for minimum of 2 week

⇒ major depression

- any psychotic symptoms → brief psychotic event or schizophrenic

- Maladaptive emotional or behavioral symptoms that begin within 3 months of stressful life event, and subside within 6 months after cessation of stressful event. Such symptoms cause significant impairment of daily functioning or interpersonal relationships.

→ you are going to see this in kids who after their parents get divorced → such start wetting the bed again at old

Subtypes:

- Symptoms are being coded based on predominance of :

1. Depressed mood.

2. Anxiety .

3. Mixed anxiety and depressed mood.

4. Disturbance of conduct (aggression).

5. Mixed disturbance of emotion and conduct.

6. Unspecified .

- Adjustment disorder with depressed mood:

  -depressed mood.

  -feeling of hopelessness.

  -tearfulness and uncontrolled bouts of crying

- Adjustment disorder with anxiety:

  -nervousness.

  -worry

  -jitteriness(unable to control thoughts of doom)

  -fear of seperation from major attachment figure.

- Adjustment disorder with mixed anxiet and depressed mood:

  -have symptoms of both anxiety and depressed mood.

- Adjustment disorder with disturbance of conduct:

  -violation of the right of others.

  -violation of social norms and rules with no concern or guilt. (reckless driving, shoplifting,..)

- Adjustment disorder with mixed disturbance of emotions and conduct:

  -sudden change in behavior combined with feeling of anxiety and depression.
  -pt might experience guilt about the behavior but repeat it short after.

- Unspecified adjustment disorder:
  -the condition don't fit in any of the other categories.

  -pt might have physical illness and pull away from social contact

Diagnosis and DSM-IV criteria:

1. Development of emotional or behavioral symptom within 3 months after a stressful life event. These symptoms produce:
   -sever distress in excess of what would be expected after such an event.
   -significant impairment of daily functioning.

2. The symptoms are not those of bereavement.

3. Symptoms resolve within 6 months after stressor has terminated.

The 5 stages of grief

According to Kübler-Ross, the five stages of grief are:

- denial
- anger
- bargaining
- depression
- acceptance

Epidemiology:

- Adjustment disorders are extremely common.
- Twice as often in females.
- Most frequently diagnosed in adolescents but may occur at any age

Treatment:

- Supportive psychotherapy.(most effective)
- Group therapy
- Pharmacotherapy for associated symptoms (insomnia,anxiety,depression) SSRI's

notes

- In adjustment disorder the stressful condition is not life threatening (unlike PTSD) like divorce, loss of job, death of beloved one.
- Etiology :usually triggered by psychosocial factor.

PSYCHOSIS

Wesam Musleh

→ Schizophrenia

→ Delusional disorder

PSYCHOSIS

- Psychosis is a break from reality involving delusions, perceptual disturbances, and/or disordered thinking.

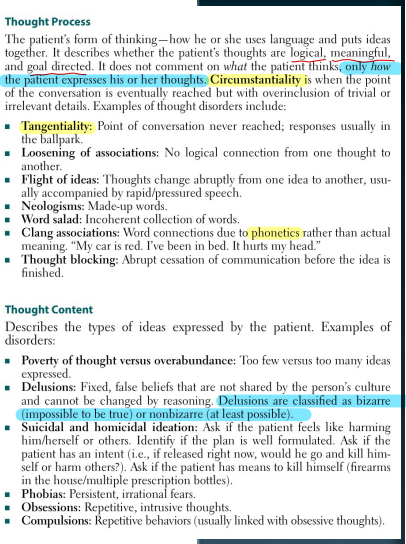
- Schizophrenia and substance-induced psychosis are examples of commonly diagnosed psychotic disorders.

DISORDERED THOUGHT

- Includes disorders of thought *content and thought process (see chapter on Examination* and Diagnosis for further clarification):

- Disorders of thought *content reflect the patient's beliefs, ideas, and interpretations* of his or her surroundings. (*Examples: Paranoid delusions*, ideas of reference, and loss of ego boundaries)

- Disorders of thought *process involve the manner in which the patient* links ideas and words together. (*Examples: Tangentiality, circumstantiality*, loosening of associations, thought blocking, perseveration, etc.)



Thought Process

The patient's form of thinking—how he or she uses language and puts ideas together. It describes whether the patient's thoughts are logical, meaningful, and goal directed. It does not comment on *what* the patient thinks, only *how* the patient expresses his or her thoughts. **Circumstantiality** is when the point of the conversation is eventually reached but with overinclusion of trivial or irrelevant details. Examples of thought disorders include:

- **Tangentiality:** Point of conversation never reached; responses usually in the ballpark.
- **Loosening of associations:** No logical connection from one thought to another.
- **Flight of ideas:** Thoughts change abruptly from one idea to another, usually accompanied by rapid/pressured speech.
- **Neologisms:** Made-up words.
- **Word salad:** Incoherent collection of words.
- **Clang associations:** Word connections due to phonetics rather than actual meaning. "My car is red. I've been in bed. It hurts my head."
- **Thought blocking:** Abrupt cessation of communication before the idea is finished.

Thought Content

Describes the types of ideas expressed by the patient. Examples of disorders:

- **Poverty of thought versus overabundance:** Too few versus too many ideas expressed.
- **Delusions:** Fixed, false beliefs that are not shared by the person's culture and cannot be changed by reasoning. Delusions are classified as bizarre (impossible to be true) or nonbizarre (at least possible).
- **Suicidal and homicidal ideation:** Ask if the patient feels like harming him/herself or others. Identify if the plan is well formulated. Ask if the patient has an intent (i.e., if released right now, would he go and kill himself or harm others?). Ask if the patient has means to kill himself (firearms in the house/multiple prescription bottles).
- **Phobias:** Persistent, irrational fears.
- **Obsessions:** Repetitive, intrusive thoughts.
- **Compulsions:** Repetitive behaviors (usually linked with obsessive thoughts).

DELUSIONS

- Fixed, false beliefs that cannot be altered by rational arguments and cannot be accounted for by the cultural background of the individual

- **Types**
  1. **Paranoid delusion—irrational belief that one is being persecuted** (“The CIA is after me and taps my phone.”)
  2. **Ideas of reference—belief that some event is uniquely related to the** individual (“Jesus is speaking to me through TV characters.”)
  3. **Thought broadcasting—belief that one’s thoughts can be heard by others**
  4. **Delusions of grandeur—belief that one has special powers beyond** those of a normal person (“I am the all-powerful son of God and I shall bring down my wrath on you if I cannot have a smoke.”)
  5. **Delusions of guilt—false belief that one is guilty or responsible for** something (“I caused the flood in Mozambique.”)

PERCEPTUAL DISTURBANCES (*HALLUCINATIONS VERSUS ILLUSIONS*)

- **Hallucination**
  - Sensory perception without an actual external stimulus
- **Types**
  - Auditory hallucination—most commonly exhibited by schizophrenic patients
  - Visual hallucination—commonly seen with drug intoxication
  - Olfactory hallucination—usually an aura associated with epilepsy
  - Tactile hallucination—usually secondary to drug abuse or alcohol withdrawal

- **Illusion**
  - Misinterpretation of an existing sensory stimulus (such as mistaking a shadow for a cat)

DIFFERENTIAL DIAGNOSIS OF PSYCHOSIS

in general → these are disorde of one's ability to interpret reality

- Psychosis secondary to general medical condition
- Substance-induced psychotic disorder
- Delirium/Dementia
- Bipolar disorder
- Major depression with psychotic features
- Brief psychotic disorder → (1 day - 1 month)
- Schizophrenia > 6 month of psychotic symptoms
- Schizophreniform disorder (1-6) month
- Schizoaffective disorder → psychotic and mood disorder combined
- Delusional disorder → disorder simply of delusions.

exact same Symptom But For shorter period of time

PSYCHOSIS SECONDARY TO GENERAL MEDICAL CONDITION

- Medical causes of psychosis include:

1. ***CNS disease (cerebrovascular disease, multiple sclerosis, neoplasm,*** Parkinson's disease, Huntington's chorea, temporal lobe epilepsy, encephalitis, prion disease)
   - ↳ auditory cortex in temporal lobe
   - So epilepsy can lead to → auditory delusions.
   - ↳ If patient has toxic symptoms fever, low Blood pressure -
2. ***Endocrinopathies (Addison's/Cushing's disease, hyper/hypothyroidism,*** hyper/hypocalcemia, hypopituitarism)
3. ***Nutritional/Vitamin deficiency states (B12, folate, niacin)***
   - Nicotinic acid
   - Vit. B_3
4. ***Other (connective tissue disease [systemic lupus erythematosus, temporal*** arteritis], porphyria)

* Diagnostic and Statistical manual of mental disorder.

- **DSM-IV criteria for psychotic disorder secondary to a general medical condition** include:
  - Prominent hallucinations or delusions (1)
  - Symptoms do not occur only during episode of delirium (2)
  - Evidence to support medical cause from lab data, history, or physical (3)

PSYCHOSIS SECONDARY TO MEDICATION OR SUBSTANCE USE

several drugs can causes hallucination or delusions, so rule this out immediatly with urine tox screen.

- Causes of medication/substance-induced psychosis include antidepressants, antiparkinsonian agents, antihypertensives, antihistamines, anticonvulsants, digitalis, beta blockers, antituberculosis agents, corticosteroids, hallucinogens, amphetamines, opiates, bromide, heavy metal toxicity, and alcohol.

- **DSM-IV Criteria**
  - Prominent hallucinations or delusions
  - Symptoms do not occur only during episode of delirium
  - Evidence to support medication or substance-related cause from lab data, history, or physical
  - Disturbance is not better accounted for by a psychotic disorder that is not substance-induced.

schizophrenia

SCHIZOPHRENIA

- Schizophrenia is a psychiatric disorder characterized by a constellation of abnormalities in thinking, emotion, and behavior.

- There is no single symptom that is pathognomonic, and the disease can produce a wide spectrum of clinical pictures.

- It is usually chronic and debilitating.

※ 2 or more symptoms of 6 month or more. → if symptom for week or 3 months (it's not schizophrenia yet)

- **Positive and Negative Symptoms**
  - In general, the symptoms of schizophrenia are broken up into two categories:
  - **Positive symptoms**—hallucinations, delusions, bizarre behavior, or thought disorder
  - **Negative symptoms**—blunted affect, anhedonia, apathy, and inattentiveness. → inability to feel pleasure. / mutism ...
    - Although negative symptoms are the less dramatic of the two types, they are considered by some to be at the "core" of the disorder.

THREE PHASES

- Symptoms of schizophrenia usually present in three phases:

1. **Prodromal—decline in functioning that precedes the first psychotic** episode. The patient may become socially withdrawn and irritable. He or she may have physical complaints and/or newfound interest in religion or the occult.

2. **Psychotic—perceptual disturbances, delusions, and disordered thought** process/content

3. **Residual—occurs between episodes of psychosis. It is marked by flat affect,** social withdrawal, and odd thinking or behavior (negative symptoms). Patients can continue to have hallucinations even with treatment.

DIAGNOSIS OF SCHIZOPHRENIA

- **DSM-IV Criteria**
  - *Two or more of the following must be present for at least 1 month:*
    1. **Delusions**
    2. **Hallucinations**
    3. **Disorganized speech**
    4. **Grossly disorganized or catatonic behavior**
    5. **Negative symptoms (such as flattened affect)**

- Must cause significant social or occupational functional deterioration
- Duration of illness for at least 6 months (including prodromal or residual periods in which above criteria may not be met)
- Symptoms not due to medical, neurological, or substance-induced disorder

SUBTYPES OF SCHIZOPHRENIA

- Patients are further subdivided into the following five subtypes:

1. **Paranoid type—highest functioning type, older age of onset. Must** meet the following criteria:
   - Preoccupation with one or more delusions or frequent auditory hallucinations
   - No predominance of disorganized speech, disorganized or catatonic behavior, or inappropriate affect

2. **Disorganized type—poor functioning type, early onset. Must meet the** following criteria:
   - Disorganized speech
   - Disorganized behavior
   - Flat or inappropriate affect

Worst Prognosis

3. Catatonic type—rare. Must meet at least two of the following criteria:

- Motor immobility
- Excessive purposeless motor activity
- Extreme negativism or mutism
- Peculiar voluntary movements or posturing
- **Echolalia or echopraxia**

4. Undifferentiated type—characteristic of more than one subtype or none of the subtypes

5. Residual type—prominent *negative symptoms (such as flattened affect* or social withdrawal) with only minimal evidence of positive symptoms (such as hallucinations or delusions)

PSYCHIATRIC EXAM OF SCHIZOPHRENICS

- The typical findings in schizophrenic patients on exam include:
  - Disheveled appearance
  - Flattened affect
  - Disorganized thought process
  - Intact memory and orientation
  - Auditory hallucinations
  - Paranoid delusions
  - Ideas of reference (feel references are being made to them by the television or newspaper, etc.)
  - Concrete understanding of similarities/proverbs
  - Lack insight into their disease

EPIDEMIOLOGY

- Schizophrenia affects approximately 1% of people over their lifetime.
- Men and women are equally affected but have different presentations and outcomes:
- Men tend to present around 20 years of age.
- Women present closer to 30 years of age.
- The course of the disease is generally more severe in men, as men tend to have more negative symptoms and are less able to function in society.
- Schizophrenia rarely presents before age 15 or after age 45.
- There is a strong genetic predisposition:
  - 50% concordance rate among monozygotic twins
  - 40% risk of inheritance if both parents have schizophrenia
  - 12% risk if one first-degree relative is affected
- There is a strong association with substance use which may be a form of self medication and depression.
- Postpsychotic depression occurs in 50% of patients.

* Severly impact daily life : social life, occupation
Downward drift (Lower SES)

DOWNWARD DRIFT

- Lower socioeconomic groups have higher rates of schizophrenia.

- This may be due to the **downward drift hypothesis, which postulates that people suffering** from schizophrenia are unable to function well in society and hence enter lower socioeconomic groups.

* يعني ممكن يكون شغل حتى على ناجح بس بعد ٢-٤ سنين بسبب هاد المرض رح يصير مش.

- Many homeless people in urban areas suffer from schizophrenia.

PATHOPHYSIOLOGY OF SCHIZOPHRENIA: THE DOPAMINE HYPOTHESIS

- Though the exact cause of schizophrenia is not known, it appears to be partly related to increased dopamine activity in certain neuronal tracts.

- Evidence to support this hypothesis is that most antipsychotics that are successful in treating schizophrenia are dopamine receptor antagonists.

- In addition, cocaine and amphetamines increase dopamine activity and can lead to schizophrenic-like symptoms.

- **Theorized Dopamine Pathways Affected in Schizophrenia**
  - *Prefrontal cortical—responsible for negative symptoms*
  - *Mesolimbic—responsible for positive symptoms*
  - **Other Important Dopamine Pathways Affected by Neuroleptics**
    - *Tuberoinfundibular—blocked by neuroleptics, causing hyperprolactinemia*
    - *Nigrostriatal—blocked by neuroleptics, causing extrapyramidal side effects*

Neuroleptics, also known as antipsychotic medications, are **medications that block dopamine receptors in the nervous system**.

OTHER NEUROTRANSMITER ABNORMALITIES IMPLICATED IN SCHIZOPHRENIA

- **Elevated serotonin—some of the atypical antipsychotics (such as risperidone** and clozapine) antagonize serotonin (in addition to their effects on dopamine).

- **Elevated norepinephrine—long-term use of antipsychotics has been** shown to decrease activity of noradrenergic neurons.

- **Decreased gamma-aminobutyric acid (GABA)—recent data support the**hypothesis that schizophrenic patients have a loss of GABAergic neurons in the hippocampus; this loss might indirectly activate dopaminergic and noradrenergic pathways.

PROGNOSTIC FACTORS

- Schizophrenia is usually chronic and debilitating.
- Forty to 50% of patients remain significantly impaired after their diagnosis, while only 20 to 30% function fairly well in society with medication.
- Several factors are associated with a better or worse prognosis:

- **Associated with Better Prognosis**
  - Later onset
  - Good social support
  - Positive symptoms
  - Mood symptoms
  - Acute onset
  - Female sex
  - Few relapses
  - Good premorbid functioning

- **Associated with Worse Prognosis**
  - Early onset
  - Poor social support
  - Negative symptoms
  - Family history
  - Gradual onset
  - Male sex
  - Many relapses
  - Poor premorbid functioning (social isolation, etc.)

TREATMENT

- A multimodality approach is the most effective, and therapy must be tailored to the needs of the specific patient. **Pharmacologic treatment consists primarily** of antipsychotic medications, otherwise known as neuroleptics. (For more detail, see Psychopharmacology chapter.)

- **Typical neuroleptics: *Chlorpromazine*, *thioridazine*, *trifluoperazine*,** *haloperidol*. *These are dopamine (mostly D2) antagonists. They are classically* better at treating positive symptoms than negative. They have important side effects and sequelae such as extrapyramidal symptoms, neuroleptic malignant syndrome, and tardive dyskinesia (see below).

- **Atypical neuroleptics: *Risperidone*, *clozapine*, *olanzapine*, *quetiapine*,** *aripiprazole, ziprosidone. These antagonize serotonin receptors (5-HT2)* as well as dopamine receptors. Atypical neuroleptics are classically better at treating negative symptoms than traditional neuroleptics. They have a much lower incidence of extrapyramidal side effects.

- medications should be taken for at least 4 weeks before efficacy is determined.

- If the medication fails, it is appropriate to switch to another medication in a different class.

- **Behavioral therapy attempts to improve patients' ability to function in society.**
- Patients are helped through a variety of methods to improve their social skills, become self-sufficient, and act appropriately in public.
- **Family therapy** and **group therapy are also useful adjuncts.**

IMPORTANT SIDE EFFECTS AND SEQUELAE OF ANTIPSYCHOTIC MEDICATIONS

- Side effects of antipsychotic medications include:

1. Extrapyramidal symptoms (especially with the use of high-potency traditional antipsychotics):

- Dystonia (spasms) of face, neck, and tongue
- Parkinsonism (resting tremor, rigidity, bradykinesia)
- Akathisia (feeling of restlessness)
- *Treatment: Antiparkinsonian agents (benztropine, amantadine, etc.),* benzodiazepines

2. Anticholinergic symptoms (especially low-potency traditional antipsychotics

- and atypical antipsychotics):
- Dry mouth, constipation, blurred vision
- *Treatment: As per symptom (eyedrops, stool softeners, etc.)*

3. Tardive dyskinesia (high-potency antipsychotics):

- Darting or writhing movements of face, tongue, and head
- *Treatment: Discontinue offending agent and substitute atypical neuroleptic.*
- Benzodiazepines, beta blockers, and cholinomimetics may be
- used short term. The movements often persist despite withdrawal of
- the offending drug.

4. **Neuroleptic malignant syndrome (high-potency antipsychotics):**
   - Confusion, high fever, elevated blood pressure, tachycardia, “lead pipe” rigidity, sweating, and greatly elevated creatine phosphokinase (CPK) levels
   - Can be life-threatening. Is not an “allergic” reaction to a drug.

5. **Weight gain, sedation, orthostatic hypotension, electrocardiogram** changes, hyperprolactinemia (leading to gynecomastia, galactorrhea, amenorrhea, diminished libido, and impotence), hematologic effects (agranulocytosis may occur with *clozapine, necessitating weekly blood* draws when this medication is used), ophthalmologic conditions (*thioridazine* may cause irreversible retinal pigmentation at high doses; deposits in lens and cornea may occur with *chlorpromazine)*, *dermatologic* conditions (such as rashes and photosensitivity), hyperlipemia, and glucose intolerance.

SCHIZOPHRENIFORM DISORDER

- DIAGNOSIS AND DSM-IV CRITERIA
  - The diagnosis of schizophreniform disorder is made using the same DSM-IV criteria as schizophrenia.
  - The only difference between the two is that in schizophreniform disorder the symptoms have lasted between 1 and 6 months, whereas in schizophrenia the symptoms must be present for more than 6 months.
- PROGNOSIS
  - One third of patients recover completely; two thirds progress to schizoaffective disorder or schizophrenia.
- TREATMENT
  - Hospitalization, 3- to 6-month course of antipsychotics, and supportive psychotherapy

SCHIZOAFFECTIVE DISORDER

- DIAGNOSIS AND DSM-IV CRITERIA
  - The diagnosis of schizoaffective disorder is made in patients who:
    - Meet criteria for either major depressive episode, manic episode, or mixed episode (during which criteria for schizophrenia are also met)
    - Have had delusions or hallucinations for 2 weeks in the absence of mood disorder symptoms (this condition is necessary to differentiate schizoaffective disorder from mood disorder with psychotic features)
    - Have mood symptoms present for substantial portion of psychotic illness
    - Symptoms not due to general medical condition or drugs

- PROGNOSIS
  - Better than schizophrenia but worse than mood disorder

- TREATMENT
  - Hospitalization and supportive psychotherapy
  - Medical therapy: Antipsychotics as needed for short-term control of psychosis; mood stabilizers, antidepressants, or electroconvulsive therapy
  - (ECT) as needed for mania or depression

BRIEF PSYCHOTIC DISORDER

- DIAGNOSIS AND DSM-IV CRITERIA
  - Patient with psychotic symptoms as defined for schizophrenia; however, the symptoms last from 1 day to 1 month.
  - Symptoms must not be due to general medical condition or drugs.
  - This is a rare diagnosis, much less common than schizophrenia.
- PROGNOSIS
  - Fifty to 80% recovery rate; 20 to 50% may eventually be diagnosed with schizophrenia or mood disorder.
- TREATMENT
  - Brief hospitalization, supportive psychotherapy, course of antipsychotics for psychosis itself and/or benzodiazepines for agitation

Comparing Time Courses and Prognoses of Psychotic Disorders

- **Time Course**
  - < 1 month—brief psychotic disorder
  - 1–6 months—schizophreniform disorder
  - > 6 months—schizophrenia

- **Prognosis from Best to Worst**
  - Mood disorder > brief psychotic disorder > schizoaffective disorder > schizophreniform disorder > schizophrenia

DELUSIONAL DISORDER

- Delusional disorder occurs more often in older patients (after age 40), immigrants, and the hearing impaired.

- DIAGNOSIS AND DSM-IV CRITERIA
  - To be diagnosed with delusional disorder, the following criteria must be met (see Table 3-1):
    - Nonbizarre, fixed delusions for at least 1 month
    - Does not meet criteria for schizophrenia
    - Functioning in life not significantly impaired

TABLE 3-1. Schizophrenia vs. Delusional Disorder

Schizophrenia	Delusional Disorder
▪ Bizarre delusions (or nonbizarre)	▪ Nonbizarre delusions (never bizarre)
▪ Daily functioning significantly impaired	▪ Daily functioning not significantly impaired

▪ Must have two or more of the following:
  ▪ Delusions
  ▪ Hallucinations
  ▪ Disorganized speech
  ▪ Disorganized behavior
  ▪ Negative symptoms
	▪ Does not meet the criteria for schizophrenia as described in left column

TYPES OF DELUSIONS

- Patients are further categorized based on the types of delusions they experience:

1. Erotomanic type—delusion revolves around love (Eros is the goddess of love)
2. Grandiose type—inflated self-worth
3. Somatic type—physical delusions
4. Persecutory type—delusions of being persecuted
5. Jealous type—delusions of unfaithfulness
6. Mixed type—more than one of the above
7. - unspecified.

- PROGNOSIS
  - 50% full recovery, 20% decreased symptoms, and 30% no change

- TREATMENT
  - Psychotherapy may be helpful. Antipsychotic medications are often ineffective, but a course of them should be tried (usually a high-potency traditional antipsychotic or one of the newer atypical antipsychotics is used).

SHARED PSYCHOTIC DISORDER

- DIAGNOSIS AND DSM-IV CRITERIA
  - Also known as *folie à deux, shared psychotic disorder is diagnosed when a patient* develops the same delusional symptoms as someone he or she is in a close relationship with.
  - Most people suffering from shared psychotic disorder are family members.

- PROGNOSIS
  - Twenty to 40% will recover upon removal from the inducing person.

- TREATMENT
  - The first step is to separate the patient from the person who is the source of shared delusions (usually a family member with an underlying psychotic disorder).
  - Psychotherapy should be undertaken, and antipsychotic medications should be used if symptoms have not improved in 1 to 2 weeks after separation.

CULTURE-SPECI FIC PSYCHOSES

These are psychoses seen only within certain cultures:

	Psychotic Manifestation	Culture
Koro	Patient believes that his penis is shrinking and will disappear, causing his death.	Asia
Amok	Sudden unprovoked outbursts of violence of which the person has no recollection. Person often commits suicide afterwards.	Malaysia, Southeast Asia
Brain fag	Headache, fatigue, and visual disturbances in male students	Africa

QUICK AND EASY DISTINGUISHING FEATURES

- **Schizophrenia—lifelong psychotic disorder**
- **Schizophreniform—schizophrenia for < 6 months**
- **Schizoaffective—schizophrenia + mood disorder**
- **Schizotypal (personality disorder)—paranoid, odd or magical beliefs,** eccentric, lack of friends, social anxiety. Criteria for true psychosis are not met.
- **Schizoid (personality disorder)—withdrawn, lack of enjoyment from social** interactions, emotionally restricted

ANTIPSYCHOTICS

- Antipsychotics are used to treat psychotic disorders and psychotic symptoms associated with other psychiatric and medical illnesses.

- *Traditional antipsychotics* are classified according to potency and work by blocking dopamine receptors.

- *Atypical (newer) antipsychotics block both dopamine and serotonin* receptors; however, their effect on dopamine is weaker, so they are associated with fewer side effects.

TRADITIONAL ANTIPSYCHOTICS

- **Low potency: Have a lower affinity for dopamine receptors and therefore a** higher dose is required. Remember, *potency refers to the action on dopamine* receptors, not the level of efficacy.
  - **Chlorpromazine (Thorazine)**
  - **Thioridazine (Mellaril)**

- These antipsychotics have a higher incidence of anticholinergic and antihistaminic side effects than high-potency traditional antipsychotics.
- They have a lower incidence of extrapyramidal side effects (EPSEs) and neuroleptic malignant syndrome. (See below for detailed description of side effects.)

- **High potency: Have greater affinity for dopamine receptors, and therefore a** relatively low dose is needed to achieve effect.
  - **Haloperidol (Haldol)**
  - **Fluphenazine (Prolixin)**
  - **Trifluoperazine (Stelazine)**
  - **Perphenazine (Trilafon)**
  - **Pimozide (Orap)**

- These antipsychotics have a higher incidence of **EPSEs and neuroleptic malignant** syndrome than low-potency traditional antipsychotics (see below).
- They have a lower incidence of anticholinergic and antihistaminic side effects.
- Both traditional and atypical neuroleptics have similar efficacies in treating the presence of *positive psychotic symptoms, such as hallucinations and delusions;* atypical antipsychotics have been shown to be more effective in treating *negative symptoms (such as flattened affect and social withdrawal)*.

- Side effects and sequelae of traditional antipsychotics include:

1. Antidopaminergic effects:

- **Extrapyramidal side effects**
  - *Parkinsonism—masklike face, cogwheel rigidity, pill-rolling tremor.*
  - *Akathisia—subjective anxiety and restlessness, objective fidgetiness*
  - *Dystonia—sustained contraction of muscles of neck, tongue, eyes* (painful)
  - *Hyperprolactinemia—leading to decreased libido, galactorrhea,*
  - gynecomastia, impotence, amenorrhea, osteoporosis

- Treatment of EPSEs includes reducing dose of antipsychotic and administering antiparkinsonian, anticholinergic, or antihistaminic medications, such as amantadine (Symmetrel), Benadryl, or benztropine (Cogentin).

2. **Anti-HAM effects: Caused by actions on histaminic, adrenergic, and muscarinic receptors:**
   - *Antihistaminic—results in sedation*
   - *Anti-alpha adrenergic—results in orthostatic hypotension, cardiac abnormalities,* and sexual dysfunction
   - *Antimuscarinic—anticholinergic effects: Dry mouth, tachycardia, urinary* retention, blurry vision, constipation

3. **Weight gain**
4. **Elevated liver enzymes, jaundice**
5. **Ophthalmologic problems (irreversible retinal pigmentation with high** doses of Mellaril, deposits in lens and cornea with chlorpromazine)
6. **Dermatologic problems, including rashes and photosensitivity (bluegray** skin discoloration with chlorpromazine)
7. **Seizures: Antipsychotics lower seizure thresholds. Low-potency antipsychotics** are more likely to cause seizures than high potency.

8. **Tardive dyskinesia: Choreoathetoid (writhing) movements of mouth** and tongue that may occur in patients who have used neuroleptics for more than 6 months. It most often occurs in older women. Though 50% of cases will spontaneously remit, untreated cases may be *permanent*.
   - **Treatment involves discontinuation of current antipsychotic if clinically possible** (and sometimes administration of anxiolytics or cholinomimetics).

9. **Neuroleptic malignant syndrome: Though rare, occurs most often in** males early in treatment with neuroleptics. It is a **medical emergency** and has a 20% mortality rate if left untreated. It is often preceded by a catatonic state. It is characterized by:
    - **Fever (most common presenting symptom)**
    - **Autonomic instability (tachycardia, labile hypertension, diaphoresis)**
    - **Leukocytosis**
    - **Tremor**
    - **Elevated creatine phosphokinase (CPK)**
    - **Rigidity (*lead pipe rigidity is considered almost universal)***

- **Treatment involves discontinuation of current medications and administration** of supportive medical care (hydration, cooling, etc.). Sodium dantrolene, bromocriptine, and amantadine are also useful but are infrequently used because of their own side effects. This is *not an allergic reaction*.
- *Patient is not* prevented from restarting the same neuroleptic at a later time.

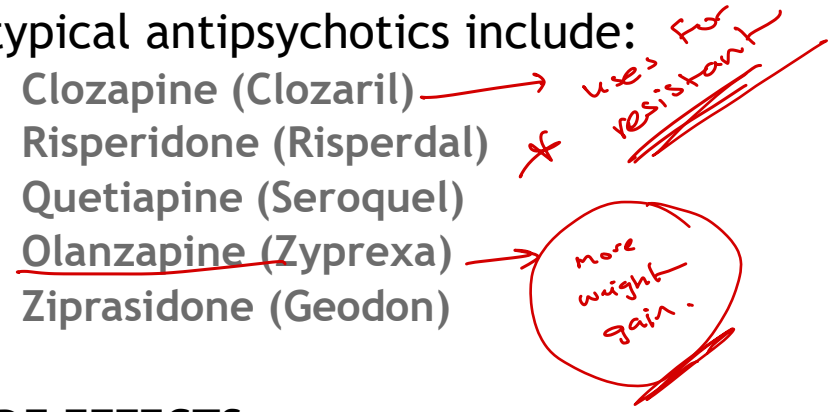
ATYPICAL ANTIPSYCHOTICS

- Atypical antipsychotics block both dopamine and serotonin receptors and are associated with **fewer side effects than traditional antipsychotics; in particular,** they rarely cause EPSEs, tardive dyskinesia, or neuroleptic malignant syndrome.

- They are more effective in treating **negative symptoms of schizophrenia** than traditional antipsychotics.

- Because they have fewer side effects and increased effectiveness in treating negative symptoms, these drugs are now first line in the treatment of schizophrenia.

- Atypical antipsychotics include:
  - **Clozapine (Clozaril)**
  - **Risperidone (Risperdal)**
  - **Quetiapine (Seroquel)**
  - **Olanzapine (Zyprexa)**
  - **Ziprasidone (Geodon)**



- SIDE EFFECTS
  - Some anti-HAM effects (antihistaminic, antiadrenergic, and antimuscarinic)
  - 1% incidence of agranulocytosis and 2 to 5% incidence of seizures with
  - clozapine
  - Olanzapine can cause hyperlipidemia, glucose intolerance, weight gain, and liver toxicity; monitor liver function tests (LFTs).
  - Quetiapine has less propensity for weight gain but has been shown to cause cataracts in beagle dogs, so periodic (every 6 months) slit lamp examination is recommended.

Personality disorders

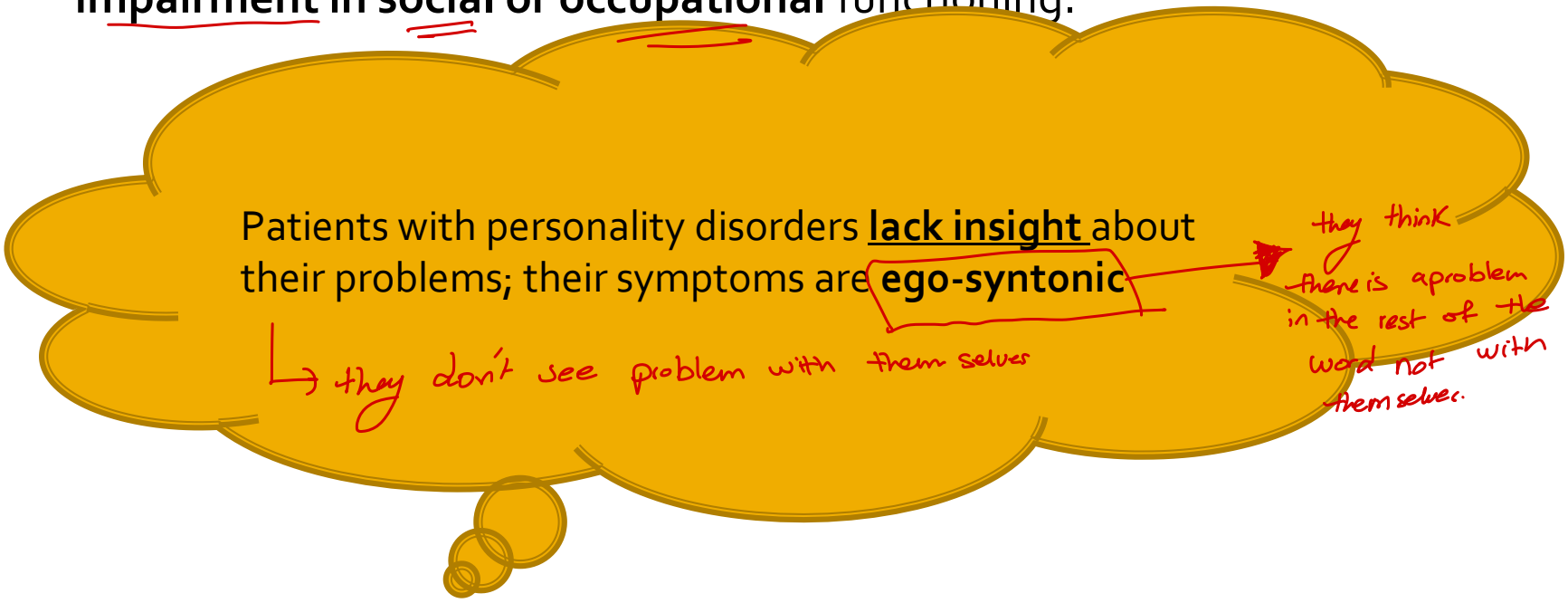
- borderline
- anti social
- paranoid

- their behavior traits are maladaptive to the society around them → result in difficulty with interactions over long term.

Personality disorders

- **Personality:-**one's set of stable, predictable emotional and behavioral traits.
- **Personality *disorders:-***deeply ingrained, inflexible patterns of relating to others that are **maladaptive and cause significant impairment in social or occupational** functioning.

Patients with personality disorders **lack insight** about their problems; their symptoms are **ego-syntonic**



DIAGNOSIS AND DSM-IV CRITERIA

1. Pattern of behavior/inner experience that deviates from the person's culture and is manifested in two or more of the following ways:

- Cognition
- Affect
- Personal relations
- Impulse control

2. The pattern:

- Is **pervasive and inflexible in a broad range of situations**
- Is **stable and has an onset no later than adolescence or early adulthood**
- Leads to significant distress in functioning
- Is not accounted for by another mental/medical illness or by use of a substance.

Personality disorders are divided into three clusters:

- **Cluster A—schizoid, schizotypal, and paranoid:**
  - Patients seem eccentric, peculiar, or withdrawn.
  - Familial association with psychotic disorders.
- **Cluster B—antisocial, borderline, histrionic, and narcissistic:**
  - Patients seem emotional, dramatic, or inconsistent.
  - Familial association with mood disorders.
- **Cluster C—avoidant, dependent, and obsessive–compulsive:**
  - Patients seem anxious or fearful.
  - Familial association with anxiety disorders

Personality disorder not otherwise specified (NOS) includes disorders that do not fit into clusters A, B, or C (including passive–aggressive personality disorder).

ETIOLOGY

- ✓ Biological.
- ✓ Genetic.
- ✓ psychosocial factors
- The prevalence of personality disorders in monozygotic twins is several times higher than in dizygotic twins.

TREATMENT

- Personality disorders are generally very difficult to treat, especially since few patients are aware that they need help.
- The disorders tend to be chronic and lifelong. In general, pharmacologic treatment has limited usefulness (see individual exceptions below) except in treating coexisting symptoms of depression, anxiety, and the like. Psychotherapy and group therapy are usually the most helpful.

CLUSTER A

- **Paranoid Personality Disorder (PPD):-**

pervasive distrust and suspiciousness of others, They tend to blame their own problems on others and seem angry and hostile.

DIAGNOSIS AND DSM-IV CRITERIA:-

- Diagnosis requires a general distrust of others, beginning by early adulthood and present in a variety of contexts. At least four of the following must also be present:

- Suspicion (without evidence) that others are exploiting or deceiving him or her.
- Preoccupation with doubts of loyalty or trustworthiness of acquaintances.
- Reluctance to confide in others.
- Interpretation of benign remarks as threatening or demeaning.
- Persistence of grudges.
- Perception of attacks on his or her character that are not apparent to others; quick to counterattack.
- Recurrence of suspicions regarding fidelity of spouse or lover.

Paranoid Personality Disorder (PPD

- **EPIDEMIOLOGY:-**
- ✓ Prevalence: 0.5 to 2.5%
- ✓ Men are more likely to have PPD than women.
- ✓ Higher incidence in family members of schizophrenics.

- **DIFFERENTIAL DIAGNOSIS:-**
- **Paranoid schizophrenia. But unlike** schizophrenic patients *do not have any fixed delusions and are not frankly psychotic.*
- **COURSE AND PROGNOSIS:-**
- ❖ Some patients with PPD may eventually be diagnosed with schizophrenia.
- ❖ The disorder usually has a chronic course, causing lifelong marital and job-related problems.
- **TREATMENT**
- Psychotherapy is the treatment of choice. Patients may also benefit from antianxiety medications or short course of antipsychotics for transient psychosis.

Schizoid Personality Disorder

- lifelong pattern of social withdrawal. They are often perceived as eccentric and reclusive. They are quiet and unsociable and have a constricted affect. They have *no desire for close relationships and prefer to be alone*.
- **DIAGNOSIS AND DSM-IV CRITERIA**

A pattern of voluntary social withdrawal and restricted range of emotional expression, beginning by early adulthood and present in a variety of contexts. Four or more of the following must also be present:-

- ✓ Neither enjoying nor desiring close relationships (including family).
- ✓ Generally choosing solitary activities.
- ✓ Little (if any) interest in sexual activity with another person.
- ✓ Taking pleasure in few activities (if any).
- ✓ Few close friends or confidants (if any).
- ✓ Indifference to praise or criticism.
- ✓ Emotional coldness, detachment, or flattened affect.

- **EPIDEMIOLOGY**
  - Prevalence: Approximately 7%
  - Men are two times as likely to have schizoid personality disorder as women.
  - There is not an increased incidence of schizoid personality disorder in families with history of schizophrenia.
- **DIFFERENTIAL DIAGNOSIS**
  - *Paranoid schizophrenia:- but unlike schizophrenic patient they* do not have any fixed delusions, although these may exist transiently in some patients.
- *Schizotypal personality disorder:* do not have the same eccentric behavior or magical thinking seen in patients with schizotypal personality disorder.

- **COURSE**

Usually chronic course, but not always lifelong.

- **TREATMENT**

Similar to paranoid personality disorder:

- Psychotherapy is the treatment of choice; group therapy is often beneficial.
- Low-dose antipsychotics (short course) if transiently psychotic, or antidepressants if comorbid major depression is diagnosed.

Schizotypal Personality Disorder

a pervasive pattern of eccentric behavior and peculiar thought patterns. They are often perceived as strange and eccentric.

DIAGNOSIS AND DSM-IV CRITERIA

- A pattern of social deficits marked by eccentric behavior, cognitive or perceptual distortions, and discomfort with close relationships, beginning by early adulthood and present in a variety of contexts. **Five** or more of the following must be present:
- **1. Ideas of reference (excluding delusions of reference)**
- **2. Odd beliefs or magical thinking, inconsistent with cultural norms**
- **3. Unusual perceptual experiences (such as bodily illusions)**
- **4. Suspiciousness**
- **5. Inappropriate or restricted affect**
- **6. Odd or eccentric appearance or behavior**
- **7. Few close friends or confidants**
- **8. Odd thinking or speech (vague, stereotyped, etc.)**
- **9. Excessive social anxiety**

- Magical thinking may include:
  - Belief in clairvoyance or telepathy
  - Bizarre fantasies or preoccupations
  - Belief in superstitions

Odd behaviors may include involvement in cults or strange religious practices.

EPIDEMIOLOGY

- Prevalence: 3.0%
- More prevalent in monozygotic than dizygotic twins.

- **DIFFERENTIAL DIAGNOSIS:-**
- *Paranoid schizophrenia:-* patients with schizotypal personality disorder are not frankly psychotic.
- *Schizoid personality disorder:* Patients with schizoid personality disorder do not have the same eccentric behavior seen in patients with schizotypal personality disorder.
- **COURSE**

Course is chronic or patients may eventually develop schizophrenia.

- **TREATMENT**
- Psychotherapy is the treatment of choice.
- Short course of low-dose antipsychotics if necessary (for transient psychosis)

CLUSTER B

- **Antisocial Personality Disorder:-**

refuse to conform to social norms and lack remorse for their actions. They are impulsive, deceitful, and often violate the law. However, they often appear charming and normal to others who meet them for the first time and do not know their history.

DIAGNOSIS AND DSM-IV CRITERIA

- Pattern of disregard for others and violation of the rights of others since age 15. Patients must be **at least 18 years old for this diagnosis; history of behavior** as a child/adolescent must be consistent with **conduct disorder** Three or more of the following should be present:-

- **1. Failure to conform to social norms by committing unlawful acts**
- **2. Deceitfulness/repeated lying/manipulating others for personal gain**
- **3. Impulsivity/failure to plan ahead**
- **4. Irritability and aggressiveness/repeated fights or assaults**
- **5. Recklessness and disregard for safety of self or others**
- **6. Irresponsibility/failure to sustain work or honor financial obligations**
- **7. Lack of remorse for actions**

- **EPIDEMIOLOGY:-**
- Prevalence: 3% in men and 1% in women
- Higher incidence in poor urban areas and in prisoners
- Genetic component: Five times increased risk among first-degree relatives
- **DIFFERENTIAL DIAGNOSIS:-**
- *Drug abuse:* It is necessary to ascertain which came first. Patients who began abusing drugs before their antisocial behavior started may have behavior attributable to the effects of their addiction.
- **COURSE:-**
- Usually has a chronic course, but some improvement of symptoms may occur as the patient ages. Many patients have multiple somatic complaints, and coexistence of substance abuse and/or major depression is common.

- **TREATMENT:-** Psychotherapy is the treatment of choice. Pharmacotherapy may be used to treat symptoms of anxiety or depression, but use caution due to high addictive potential of these patients.

Borderline Personality Disorder (BPD)

- unstable moods, behaviors, and interpersonal relationships.They feel alone in the world and have problems with self-image. They are impulsive and may have a history of repeated suicide attempts/gestures or episodes of self-mutilation.

DIAGNOSIS AND DSM-IV CRITERIA

- Pervasive pattern of impulsivity and unstable relationships, affects, self-image, and behaviors, present by early adulthood and in a variety of contexts. At least five of the following must be present:
- **1. Desperate efforts to avoid real or imagined abandonment**
- **2. Unstable, intense interpersonal relationships**
- **3. Unstable self-image**
- **4. Impulsivity in at least two potentially harmful ways (spending, sexual**activity, substance use, etc.)
- **5. Recurrent suicidal threats or attempts or self-mutilation**
- **6. Unstable mood/affect**
- **7. General feeling of emptiness**
- **8. Difficulty controlling anger**
- **9. Transient, stress-related paranoid ideation or dissociative symptoms.**

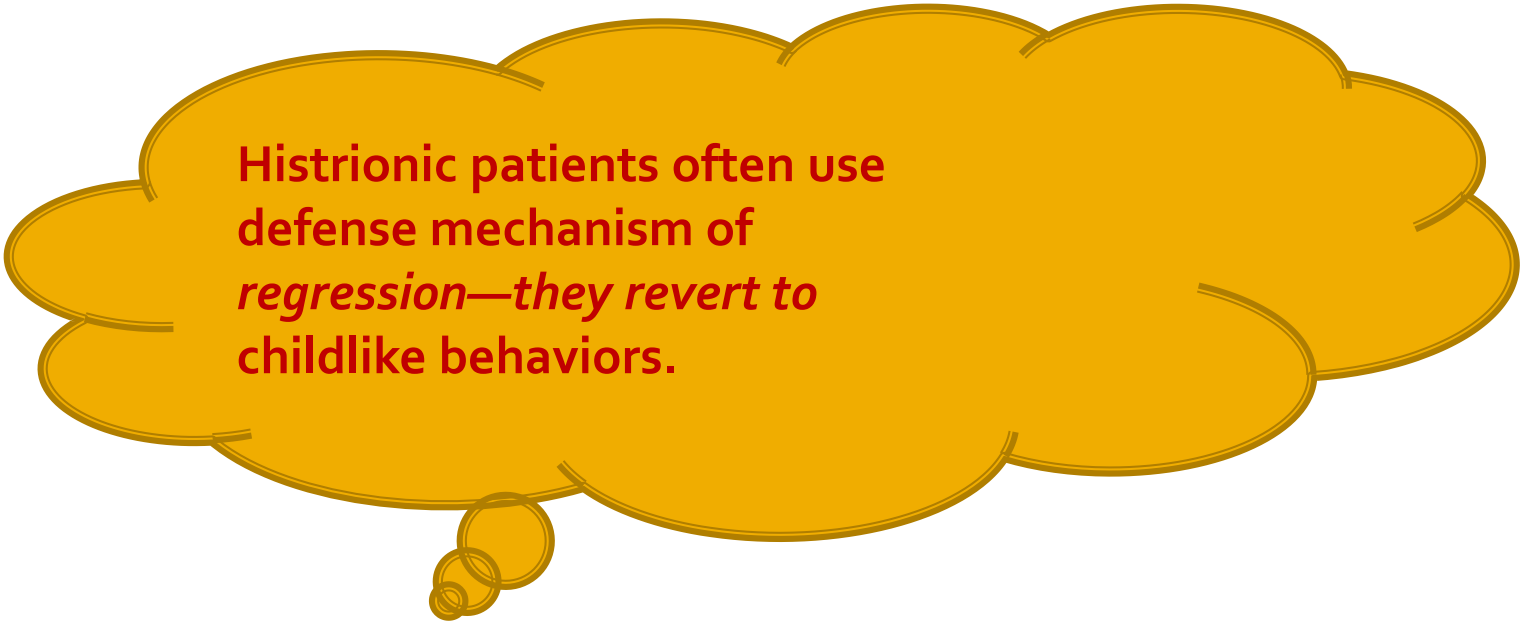
- **EPIDEMIOLOGY**
- Prevalence: **1 to 2%**
- Women are two times as likely to have BPD as men.
- 10% suicide rate.

- **DIFFERENTIAL DIAGNOSIS**
- *Schizophrenia: Unlike patients with schizophrenia, patients with borderline* personality disorder do not have frank psychosis (may have transient psychosis, however, if decompensate under stress).

- **COURSE**
- Usually has a stable, chronic course. High incidence of coexisting major depression and/or substance abuse; increased risk of suicide (often because patients will make suicide gestures and kill themselves by accident).
- **TREATMENT**
- Psychotherapy is the treatment of choice—behavior therapy, cognitive therapy, social skills training, and the like.
- Pharmacotherapy to treat psychotic or depressive symptoms as necessary

Histrionic Personality Disorder (HPD)

- attention-seeking behavior and excessive emotionality, They are dramatic, flamboyant, and extroverted but are unable to form long-lasting, meaningful relationships. They are often sexually inappropriate and provocative.



DIAGNOSIS AND DSM-IV CRITERIA

- Pattern of excessive emotionality and attention seeking, present by early adulthood and in a variety of contexts. At least five of the following must be present:
- **2. Inappropriately seductive or provocative behavior**
- **3. Uses physical appearance to draw attention to self**
- **4. Has speech that is impressionistic and lacking in detail**
- **5. Theatrical and exaggerated expression of emotion**
- **6. Easily influenced by others or situation**
- **7. Perceives relationships as more intimate than they actually are**

- **EPIDEMIOLOGY**
- Prevalence: 2 to 3%
- Women are more likely to have HPD than men.
- **DIFFERENTIAL DIAGNOSIS**
- *Borderline personality disorder: Patients with BPD are more likely to suffer from* depression and to attempt suicide. HPD patients are generally more functional.
- **COURSE**

Usually has a chronic course, with some improvement of symptoms with age.

- **TREATMENT**
- Psychotherapy is the treatment of choice.
- Pharmacotherapy to treat associated depressive or anxious symptoms as necessary

Narcissistic Personality Disorder (NPD)

- sense of superiority, a need for admiration, and a lack of empathy. They consider themselves "special" and will exploit others for their own gain. Despite their grandiosity, however, these patients often have fragile self-esteems.

DIAGNOSIS AND DSM-IV CRITERIA

- Pattern of grandiosity, need for admiration, and lack of empathy beginning by early adulthood and present in a variety of contexts. Five or more of the following must be present:-
- **1. Exaggerated sense of self-importance**
- **2. Preoccupied with fantasies of unlimited money, success, brilliance, etc.**
- **3. Believes that he or she is "special" or unique and can associate only** with other high-status individuals
- **4. Needs excessive admiration**
- **5. Has sense of entitlement**
- **6. Takes advantage of others for self-gain**
- **7. Lacks empathy**
- **8. Envious of others or believes others are envious of him or her**
- **9. Arrogant or haughty**

- **EPIDEMIOLOGY**

Prevalence: < 1%

- **DIFFERENTIAL DIAGNOSIS**
- *Antisocial personality disorder: Both types of patients exploit others, but NPD* patients want status and recognition, while antisocial patients want material gain or simply the subjugation of others. Narcissistic patients become depressed when they don't get the recognition they think they deserve.
- **COURSE**
- Usually has a chronic course; higher incidence of depression and midlife crises since these patients put such a high value on youth and power.
- **TREATMENT**
- Psychotherapy is the treatment of choice.
- Antidepressants or lithium may be used as needed (for mood swings if a comorbid mood disorder is diagnosed).

CLUSTER C

- **Avoidant Personality Disorder:-**
- Patients with avoidant personality disorder **have a pervasive pattern of social inhibition and an intense fear of rejection.** They will avoid situations in which they may be rejected. Their fear of rejection is so overwhelming that it affects all aspects of their lives. They avoid social interactions and seek jobs in which there is little interpersonal contact. These patients *desire companionship* but are extremely shy and easily injured.

DIAGNOSIS AND DSM-IV CRITERIA

- A pattern of social inhibition, hypersensitivity, and feelings of inadequacy since early adulthood, with at least four of the following:
- **1. Avoids occupation that involves interpersonal contact due to a fear of** criticism and rejection
- **2. Unwilling to interact unless certain of being liked**
- **3. Cautious of intrapersonal relationships**
- **4. Preoccupied with being criticized or rejected in social situations**
- **5. Inhibited in new social situations because he or she feels inadequate**
- **6. Believes he or she is socially inept and inferior**
- **7. Reluctant to engage in new activities for fear of embarrassment.**

- **EPIDEMIOLOGY**
- Prevalence: 1 to 10%
- Sex ratio not known
- **DIFFERENTIAL DIAGNOSIS**
- *Schizoid personality disorder:* Patients with avoidant personality disorder desire companionship but are extremely shy, whereas patients with schizoid personality disorder have no desire for companionship.
- *Social phobia (social anxiety disorder).*
- *Dependent personality disorder.*

- **COURSE :-** Course is usually chronic. Particularly difficult during adolescence, when attractiveness and socialization are important Increased incidence of associated anxiety and depressive disorders.
- **TREATMENT:-** Psychotherapy, including assertiveness training, is most effective.
- Beta blockers may be used to control autonomic symptoms of anxiety, and selective serotonin reuptake inhibitors (SSRIs) may be prescribed for major depression.

Dependent Personality Disorder (DPD)

- poor self-confidence and fear separation. They have an excessive need to be taken care of and allow others to make decisions for them. They feel helpless when left alone.

DIAGNOSIS AND DSM-IV CRITERIA

- A pattern of **submissive and clinging behavior due to excessive need to be taken care** of. At **least five** of the following must be present:
- **1. Difficulty making everyday decisions without reassurance from others**
- **2. Needs others to assume responsibilities for most areas of his or her life**
- **3. Cannot express disagreement because of fear of loss of approval**
- **4. Difficulty initiating projects because of lack of self-confidence**
- **5. Goes to excessive lengths to obtain support from others**
- **6. Feels helpless when alone**
- **7. Urgently seeks another relationship when one ends**
- **8. Preoccupied with fears of being left to take care of self**

- **EPIDEMIOLOGY:-**
- Prevalence: Approximately 1%
- Women are more likely to have DPD than men.
- **DIFFERENTIAL DIAGNOSIS:-**
- *Avoidant personality disorder.*
- *Borderline and histrionic personality disorder: Patients with DPD usually* have a long-lasting relationship with one person on whom they are dependent. Patients with borderline and histrionic personality disorders are often dependent on other people, but they are unable to maintain a long-lasting relationship.

- **COURSE:-**
  - Usually has a chronic course
  - Often, symptoms decrease with age and/or with therapy.
  - Patients are prone to depression, particularly after loss of person on whom they are dependent.

TREATMENT

- Psychotherapy is the treatment of choice.
- Pharmacotherapy may be used to treat associated symptoms of anxiety or depression.

Obsessive–Compulsive Personality Disorder (OCPD

- pervasive pattern of perfectionism, inflexibility, and orderliness. They get so preoccupied with unimportant details that they are often unable to complete simple tasks in a timely fashion. They appear stiff, serious, and formal with constricted affect. They are often successful professionally but have poor interpersonal skills

DIAGNOSIS AND DSM-IV CRITERIA

- Pattern of preoccupation with orderliness, control, and perfectionism at the expense of efficiency, present by early adulthood and in a variety of contexts. At least four of the following must be present:
- **1. Preoccupation with details, rules, lists, and organization such that the** major point of the activity is lost
- **2. Perfectionism that is detrimental to completion of task**
- **3. Excessive devotion to work**
- **4. Excessive conscientiousness and scrupulousness about morals and** ethics
- **5. Will not delegate tasks**
- **6. Unable to discard worthless objects**
- **7. Miserly**
- **8. Rigid and stubborn**

- **EPIDEMIOLOGY:-**
- Prevalence unknown
- Men are more likely to have OCPD than women.
- Occurs most often in the oldest child
- Increased incidence in first-degree relatives.
- **DIFFERENTIAL DIAGNOSIS**

Obsessive–compulsive disorder (OCD): Patients with OCPD do not have the recurrent obsessions or compulsions that are present inobsessive–compulsive disorder. In addition, the symptoms of OCPD are **ego-syntonic rather than ego-dystonic (as in OCD). That is, OCD patients** are aware that they have a problem and wish that their thoughts and behaviors would go away.

Narcissistic personality disorder: Both personalities involve assertiveness

- and achievement, but NPD patients are motivated by status, whereas
- OCD patients are motivated by the work itself.

- **COURSE**
- Unpredictable course
- Some patients later develop obsessions or compulsions (OCD), some
- develop schizophrenia or major depressive disorder, and others may improve or remain stable.
- **TREATMENT**
- Psychotherapy is the treatment of choice. Group therapy and behavior therapy may be useful.
- Pharmacotherapy may be used to treat associated symptoms as necessary.

PERSONALITY DISORDER NOT OTHERWISE SPECI FIED (NOS)

- This diagnosis is reserved for personality disorders that do not fit into categories A, B, or C. It includes passive–aggressive personality disorder, depressive personality disorder, sadomasochistic personality disorder, and sadistic personality disorder. Only passive–aggressive personality disorder.

Passive–Aggressive Personality Disorder

- Passive–aggressive personality disorder was once a separate personality disorder like those listed above but was relegated to the NOS category when DSMIV was published. Patients with this disorder are stubborn, inefficient procrastinators. They alternate between compliance and defiance and passively resist fulfillment of tasks. They frequently make excuses for themselves and lack assertiveness. They attempt to manipulate others to do their chores, errands, and the like, and frequently complain about their own misfortunes. Psychotherapy is the treatment of choice.

Somatoform Disorders and Factitious Disorders

DEFINITION

- Patients with somatoform disorders present with physical symptoms that have no organic cause. They truly believe that their symptoms are due to medical problems and are not consciously feigning symptoms. Examples of somatoform disorders include:
- Somatization disorder
- Conversion disorder
- Hypochondriasis
- Pain disorder
- Body dysmorphic disorder

- Primary and secondary gain often result from symptoms expressed in somatoform disorders, but patients are not consciously aware of gains and do not intentionally seek them.
- **Primary gain: Expression of unacceptable feelings as physical symptoms** in order to avoid facing them
- **Secondary gain: Use of symptoms to benefit the patient (increased attention** from others, decreased responsibilities, avoidance of the law, etc.).
- With the exception of hypochondriasis, somatoform disorders are more common in women. One half of patients have comorbid mental disorders, especially anxiety disorders and major depression.

SOMATIZATION DISORDER

- Patients with somatization disorder present with multiple vague complaints involving many organ systems. They have a long-standing history of numerous visits to doctors. Their symptoms cannot be explained by a medical disorder.
- DIAGNOSIS AND DSM-IV CRITERIA

1. At least two gastrointestinal (GI) symptoms
2. At least one sexual or reproductive symptom
3. At least one neurological symptom
4. At least four pain symptoms
5. Onset **before age 30**
6. Cannot be explained by general medical condition or substance use

SOMATIZATION DISORDER

- **EPIDEMIOLOGY**

1. Incidence in females 5 to 20 times that of males
2. Lifetime prevalence: 0.1 to 0.5%
3. Greater prevalence in low socioeconomic groups
4. Fifty percent have comorbid mental disorder.
5. First-degree female relatives have 10 to 20% incidence.
6. 30% concordance in identical twins

- **COURSE AND PROGNOSIS**

Usually chronic and debilitating. Symptoms may periodically improve and then worsen under stress.

- **TREATMENT**

There is no cure, but management involves regularly scheduled frequent visits to a primary care practitioner, since these patients will usually not agree to see a psychiatrist. Secondary gain should be minimized. Medications should be used with caution and only with a clear indication; they are usually ineffective, and patients tend to be erratic in their use. Relaxation therapy, hypnosis, and individual and group psychotherapy are sometimes helpful.

CONVERSION DISORDER

Patients have at least one neurological symptom (sensory or motor) that cannot be explained by a medical disorder. Onset is always preceded or exacerbated by a psychological stressor, although the patient may not connect the two. Patients are often surprisingly calm and unconcerned *(la belle indifference)* when describing their symptoms, which may include blindness or paralysis.

- DIAGNOSIS AND DSM-IV CRITERIA

1. At least one neurological symptom
2. Psychological factors associated with initiation or exacerbation of symptom
3. Symptom not intentionally produced
4. Cannot be explained by medical condition or substance use
5. Causes significant distress or impairment in social or occupational functioning
6. Not accounted for by somatization disorder or other mental disorder
7. Not limited to pain or sexual symptom

CONVERSION DISORDER

- **Common Symptoms**

1. Shifting paralysis
2. Blindness
3. Mutism
4. Paresthesias
5. Seizures
6. Globus hystericus (sensation of lump in throat)

- **EPIDEMIOLOGY**

1. Common disorder
2. 20 to 25% incidence in general medical settings
3. Two to five times more common in women than men
4. Onset at any age, but most often in adolescence or early adulthood
5. Increased incidence in low socioeconomic groups
6. High incidence of comorbid schizophrenia, major depression, or anxiety disorders

- **DIFFERENTIAL DIAGNOSIS**

Must rule out underlying medical cause, as 50% of these patients eventually receive medical diagnoses

CONVERSION DISORDER

- **COURSE**

Symptoms resolve within 1 month. Twenty-five percent will eventually have future episodes, especially during times of stress. Symptoms may spontaneously resolve after hypnosis or **sodium amobarbital interview if the psychological** trigger can be uncovered during the interview.

- **TREATMENT**

Insight-oriented psychotherapy, hypnosis, or relaxation therapy if needed. Most patients spontaneously recover.

HYPOCHONDRIASIS

Hypochondriasis involves prolonged, exaggerated concern about health and possible illness. Patients either fear having a disease or are convinced that one is present. They misinterpret normal bodily symptoms as indicative of disease.

- **DIAGNOSIS AND DSM-IV CRITERIA**

1. Patients fear that they have a serious medical condition based on misinterpretation of normal body symptoms.
2. Fears persist despite appropriate medical evaluation.
3. Fears present for at least **6 months**

- **EPIDEMIOLOGY**

Men affected as often as women

Average age of onset: 20 to 30

Eighty percent have coexisting major depression or anxiety disorder.

HYPOCHONDRIASIS

- **DIFFERENTIAL DIAGNOSIS**

1. Must rule out underlying medical condition
2. Somatization disorder—hypochondriacs are worried about disease, whereas patients with somatization disorder are concerned about their symptoms.

- **COURSE**

Episodic—symptoms may wax and wane periodically. Exacerbations occur commonly under stress. Up to 50% of patients improve significantly

- **TREATMENT**

No cure exists, but management involves frequently scheduled visits to *one* primary care doctor who oversees the patient's care. Patients are usually resistant to psychotherapy. Group therapy or insight-oriented psychotherapy may be helpful if patient is willing.

BODY DYSMORPHIC DISORDER

- Patients with body dysmorphic disorder are preoccupied with body parts that they perceive as flawed or defective. Though their physical imperfections are either minimal or completely imagined, patients view them as severe and grotesque. They are extremely self-conscious about their appearance and spend significant time trying to correct perceived flaws with makeup, dermatological procedures, or plastic surgery.
- **DIAGNOSIS AND DSM-IV CRITERIA**

1. Preoccupation with an imagined defect in appearance or excessive concern about a slight physical anomaly
2. Must cause significant distress in the patient's life

BODY DYSMORPHIC DISORDER

- **EPIDEMIOLOGy**

1. More common in women than men
2. More common in unmarried than married persons
3. Average age of onset: Between 15 and 20
4. Ninety percent have coexisting major depression.
5. Seventy percent have coexisting anxiety disorder.
6. Thirty percent have coexisting psychotic disorder.

- **COURSE AND PROGNOSIS**

Usually chronic; symptoms wax and wane in intensity.

- **TREATMENT**

Surgical or dermatological procedures are routinely unsuccessful in pleasing the patient. Selective serotonin reuptake inhibitors (SSRIs) reduce symptoms in 50% of patients.

PAIN DISORDER

- Patients with pain disorder have prolonged, severe discomfort without adequate medical explanation. The pain often co-exists with a medical condition but is not directly caused by it. Patients often have a history of multiple visits to doctors. Pain disorder can be acute (< 6 months) or chronic (> 6 months).
- **DIAGNOSIS AND DSM-IV CRITERIA**

1. Patient's main complaint is of pain at one or more anatomic sites.
2. The pain causes significant distress in the patient's life.
3. The pain has to be related to psychological factors.
4. The pain is not due to a true medical disorder.

- **DIFFERENTIAL DIAGNOSIS**

1. Must rule out underlying medical condition
2. Hypochondriasis and malingering

PAIN DISORDER

- **EPIDEMIOLOGY**

1. Women are two times as likely as men to have pain disorder.
2. Average age of onset: 30 to 50
3. Increased incidence in first-degree relatives
4. Increased incidence in blue-collar workers
5. Patients have higher incidence of major depression, anxiety disorders, and substance abuse.

- **COURSE**

Abrupt onset and increase in intensity for first several months; usually a chronic and disabling course

- **TREATMENT**

Analgesics are not helpful, and patients often become dependent on them. SSRIs, transient nerve stimulation, biofeedback, hypnosis, and psychotherapy may be beneficial.

FACTITIOUS DISORDER

- Patients with factitious disorder intentionally produce medical or psychological symptoms in order to assume the role of a sick patient. *Primary gain is a* prominent feature of this disorder (see definition p. 105).
- **DIAGNOSIS AND DSM-IV CRITERIA**

1. Patients **intentionally produce signs of physical or mental disorders.**
2. They produce the symptoms to assume the role of the patient *(primary gain).*
3. There are no external incentives (such as monetary reward, etc.)
4. Either predominantly psychiatric complaints or predominantly physical complaints

- **Commonly Feigned Symptoms**

1. *Psychiatric—hallucinations, depression*
2. *Medical—fever (by heating the thermometer), abdominal pain, seizures,* skin lesions, and hematuria

FACTITIOUS DISORDER

- **RELATED DISORDERS**

1. **Münchhausen syndrome—another name for factitious disorder with predominantly** physical complaints. These patients may take insulin, consume blood thinners, or mix feces in their urine in order to produce symptoms of medical disease. In addition, they will often demand specific medications. They are very skilled at feigning symptoms necessitating hospitalization.
2. **Münchhausen syndrome by proxy—intentionally producing symptoms** in someone else who is under one's care (usually one's children) in order to assume the sick role by proxy

FACTITIOUS DISORDER

- **EPIDEMIOLOGY**

1. > 5% of all hospitalized patients
2. Increased incidence in males
3. Higher incidence in hospital and health care workers (who have learned how to feign symptoms)
4. Associated with higher intelligence, poor sense of identity, and poor sexual adjustment

- Many patients have a history of child abuse or neglect. Inpatient hospitalization resulting from abuse provided a safe, comforting environment, thus linking the sick role with a positive experience.
- **COURSE AND PROGNOSIS**

Repeated and long-term hospitalizations are common.

- **TREATMENT**

No effective treatment exists, but it is important to avoid unnecessary procedures and to maintain a close liaison with the patient's primary medical doctor. Patients who are confronted while in the hospital usually leave.

MALINGERING

- Malingering involves the feigning of physical or psychological symptoms in order to achieve personal gain. Common external motivations include avoiding the police, receiving room and board, obtaining narcotics, and receiving monetary compensation.
- **PRESENTATION**

Patients usually present with multiple vague complaints that do not conform to a known medical condition. They often have a long medical history with many hospital stays. They are generally uncooperative and refuse to accept a good prognosis even after extensive medical evaluation. However, their symptoms improve once their desired objective is obtained.

- **EPIDEMIOLOGY**

1. Common in hospitalized patients
2. More common in men than women

REVIEW OF DISTINGUISHING FEATURES

- **Somatoform disorders: Patients *believe they are ill.***
- **Factitious disorders: Patients *pretend they are ill with no obvious external* reward.**
- **Malingering (most common): Patients pretend they are ill with obvious *external incentive.***

Substance-Related Disorders

المطلوب للامتحان

1. Alcohol
2. opiates

SUBSTANCE ABUSE

abuse vs dependence
- take the substance without regular continous prescription.
- regular, continous use of substance
- withdrawal + Tolerance

- DIAGNOSIS AND DSM-IV CRITERIA
- Abuse is a pattern of substance use leading to impairment or distress for at least 1 year with one or more of the following manifestations:
- **1. Failure to fulfill obligations at work, school, or home**
- **2. Use in dangerous situations (i.e., driving a car)**
- **3. Recurrent substance-related legal problems**
- **4. Continued use despite social or interpersonal problems due to the substance** use

SUBSTANCE DEPENDENCE

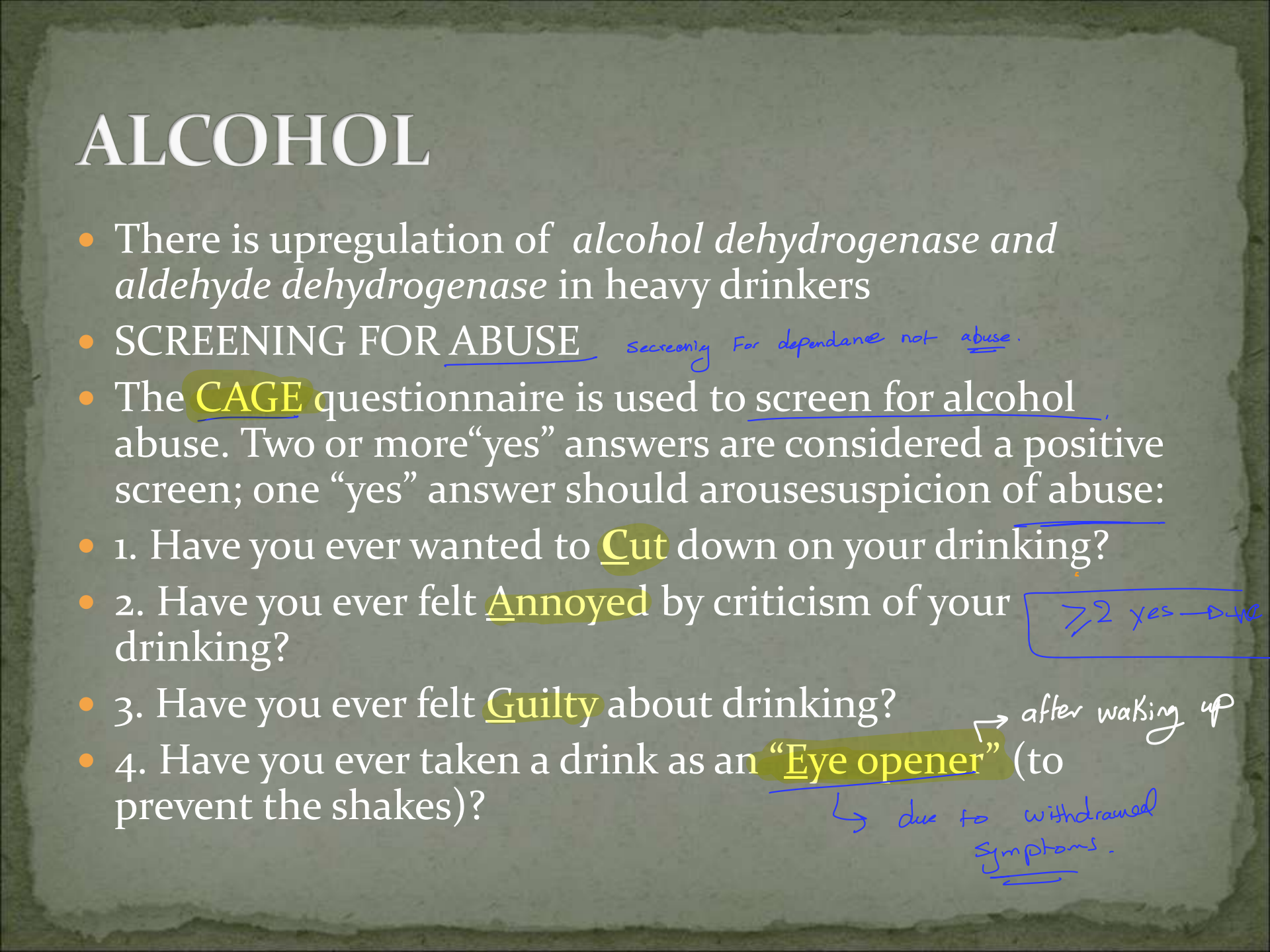
- DIAGNOSIS AND DSM-IV CRITERIA
- Dependence is substance use leading to impairment or distress manifested by at least three of the following within a 12-month period:
- **1. Tolerance**
- **2. Withdrawal**
- **3. Using substance more than originally intended**
- **4. Persistent desire or unsuccessful efforts to cut down on use**
- **5. Significant time spent in getting, using, or recovering from substance**
- **6. Decreased social, occupational, or recreational activities because of** substance use
- **7. Continued use despite subsequent physical or psychological problem** (e.g., drinking despite worsening liver problems)

- A diagnosis of substance dependence supercedes a diagnosis of substance abuse.
- EPIDEMIOLOGY
- Lifetime prevalence Approximately 17% .
- More common in men than women .
- Depressive symptoms are common among those patients.

- Caffeine, alcohol, and nicotine are the most commonly used

ALCOHOL

- There is upregulation of *alcohol dehydrogenase and aldehyde dehydrogenase* in heavy drinkers
- SCREENING FOR ABUSE
- The CAGE questionnaire is used to screen for alcohol abuse. Two or more"yes" answers are considered a positive screen; one "yes" answer should arousesuspicion of abuse:
- 1. Have you ever wanted to Cut down on your drinking?
- 2. Have you ever felt Annoyed by criticism of your drinking?
- 3. Have you ever felt Guilty about drinking?
- 4. Have you ever taken a drink as an "Eye opener" (to prevent the shakes)?



Alcohol intoxication

per week
14 units → For female
21 units → For male

1 unit → 8 gram of pure ethanol in 30 mL spirits.

- CLINICAL PRESENTATION
- **Effects** **BAL**
- Decreased fine motor control 20–50 mg/dL
- Impaired judgment and coordination 50–100 mg/dL
- Ataxic gait and poor balance 100–150 mg/dL
- Lethargy; difficulty sitting upright 150–250 mg/dL
- Coma in the novice drinker 300 mg/dL
- Respiratory depression 400 mg/dL

- BAL :blood alcohol level

- DIFFERENTIAL DIAGNOSIS
- Hypoglycemia, hypoxia, mixed EtOH–drug overdose, ethylene glycol or methanol poisoning, hepatic encephalopathy, psychosis, and psychomotor seizures.
- Diagnosis :
- Serum EtOH level or an expired air breathalyzer can determine the extent of intoxication. A computed tomographic (CT) scan of the head may be necessary to rule out subdural hematoma or other brain injury.

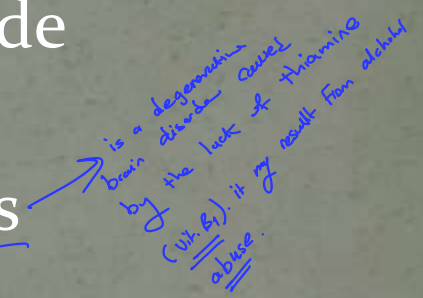
TREATMENT

Intoxication (Acute)

Ensure ABC ,Monitor electrolytes and acid–base status.

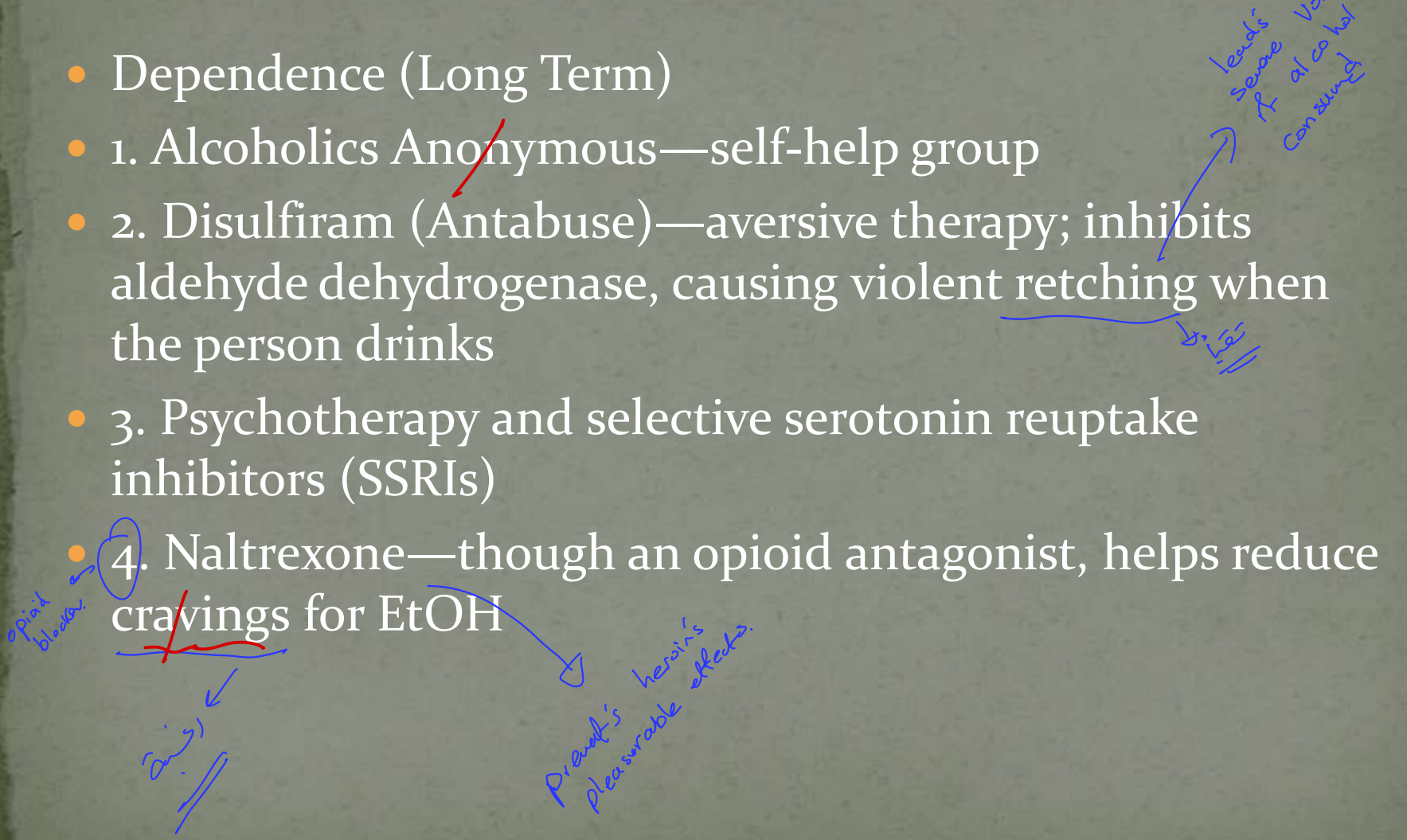
Obtain finger-stick glucose level to exclude hypoglycemia.

Thiamine (to prevent or treat Wernicke's encephalopathy),



Naloxone (to reverse the effects of any opioids that may have been ingested), and folate are also administered.

- Dependence (Long Term)
- 1. Alcoholics Anonymous—self-help group
- 2. Disulfiram (Antabuse)—aversive therapy; inhibits aldehyde dehydrogenase, causing violent retching when the person drinks
- 3. Psychotherapy and selective serotonin reuptake inhibitors (SSRIs)
- 4. Naltrexone—though an opioid antagonist, helps reduce cravings for EtOH



Alcohol Withdrawal

- CLINICAL PRESENTATION

The earliest symptoms begin between 6 and 24 hours .

- The signs and symptoms of the alcohol withdrawal syndrome include insomnia, anxiety, tremor, irritability, anorexia, tachycardia, hyperreflexia, hypertension,fever, seizures, hallucinations, and delirium.
- Delirium tremens (DTs) is the most serious form of EtOH withdrawal and often begins within 72 hours of cessation of drinking, 15 to 20% mortality rate if left untreated.
- symptoms of DTs may include visual or tactile hallucinations, gross tremor, autonomic instability, and fluctuating levels of psychomotor activity.

DT → - alcohol withdrawal delirium.
- tremors.

- DIFFERENTIAL DIAGNOSIS
- Alcohol-induced hypoglycemia, acute schizophrenia, drug-induced psychosis, encephalitis, thyrotoxicosis, anticholinergic poisoning, and withdrawal from other sedative–hypnotic type drugs
- TREATMENT to decrease complication → Werink - Krocscoff syndrome
- Tapering doses of benzodiazepines (chlordiazepoxide, lorazepam)
  - ↳ act on GABA to prevent withdrawal symptoms
- Thiamine, folic acid, and a multivitamin to treat nutritional deficiencies
- Magnesium sulfate for postwithdrawal seizures

Long-Term Complications of Alcohol Intake

- Wernicke–Korsakoff syndrome is caused by thiamine (vitamin B1) deficiency resulting from the poor diet of alcoholics. Wernicke's encephalopathy is acute and can be reversed with thiamine therapy:

1. Ataxia
2. Confusion
3. Ocular abnormalities (nystagmus, gaze palsies)

- If left untreated, Wernicke's encephalopathy may progress into Korsakoff's syndrome, which is chronic and often irreversible.

1. Impaired recent memory
2. Anterograde amnesia → you can't form new memories.
3. +/– Confabulation fabrication

- *Confabulation: Making up answers when memory has failed*

* physical comp of alcohol dependence

- liver cirhosis → portal hypertension
  - ascitis
  - capit medusa
  - esophageal varices
- acute pancreatitis
- periphral neuropathy
- mallory wess tear
- testicular atrophy (impotence) → sexual dysfunction

Othello syndrome is **a psychotic disorder characterized by delusion of infidelity or jealousy**;

orthelu syndrome ؛ x in alcohol dependent pt

↳ morbid or pathological jealousy

[delusion of infidelity]

more in males

erotomanic delusion → in female

delusion → can't be changed with reasonable. (fixed false beilefe)

- مراقب كل شيء / يلاحقها
- زوجته اللي تشتغل من (نفاله)
- aggressive / Kill her
- false confesion ← due to

الاعتراف الكاذب حتى تخلص منه.

COCAINE

- Has a stimulant effect.
- **Cocaine Intoxication**
- CLINICAL PRESENTATION
- Cocaine intoxication often produces euphoria, increased or decreased blood pressure, tachycardia or bradycardia, nausea, dilated pupils, weight loss, psychomotor agitation or depression, chills, and sweating. It may also cause respiratory depression, seizures, arrhythmias, and hallucinations (especially tactile). Since cocaine is an indirect sympathomimetic, intoxication mimics the fight-or-flight response.
- Cocaine's vasoconstrictive effect may result in myocardial infarction (MI) or cerebrovascular accident (CVA).

- DIFFERENTIAL DIAGNOSIS

Amphetamine or phencyclidine (PCP) intoxication, sedative withdrawal

- DIAGNOSTIC EVALUATION

Urine drug screen (positive for 3 days, longer in heavy users)

- TREATMENT
- **Intoxication**

1. For mild-to-moderate agitation: Benzodiazepines

2. For severe agitation or psychosis: Haloperidol

3. Symptomatic support (i.e., control hypertension, arrhythmias)

- Dependence

1. Psychotherapy, group therapy
2. Tricyclic antidepressants (TCAs)
3. Dopamine agonists (amantadine, bromocriptine)

- Cocaine Withdrawal

Abrupt abstinence is not life threatening but produces a dysphoric "crash":malaise, fatigue, depression,hunger, constricted pupils, vivid dreams, psychomotor agitation or retardation

- TREATMENT

Usually supportive—let patient sleep off crash.

AMPHETAMINES

- *Classic amphetamines: Dextroamphetamine (Dexedrine), methylphenidate*(Ritalin), methamphetamine (Desoxyn, ice, speed, "crystal meth," "crack")
- *Substituted ("designer") amphetamines: MDMA (ecstasy), MDEA (eve)*

Amphetamine Intoxication

- CLINICAL PRESENTATION

similar to those of cocaine .

- DIFFERENTIAL DIAGNOSIS

Cocaine or PCP intoxication. Chronic use in high doses may cause a psychotic state that is similar to schizophrenia.

- DIAGNOSTIC EVALUATION

Urine drug screen (positive for 1 to 2 days). A negative routine drug screen does not rule out amphetamine use.

Treatment and amphetamine withdrawal are Similar to cocaine .

PHENCYCLIDINE (PCP)

- “angel dust,”
- Intoxicztion

recklessness, impulsiveness, impaired judgment, assaultiveness, rotatory nystagmus, ataxia, hypertension, tachycardia, muscle rigidity, and high tolerance to pain. Overdose can cause seizures or coma.

- DIFFERENTIAL DIAGNOSIS

Acute psychotic states, schizophrenia

- DIAGNOSTIC EVALUATION

Urine drug screen (positive for > 1 week). (CPK) and (AST) are often elevated.

- TREATMENT
- Monitor blood pressure, temperature, and electrolytes.
- Acidify urine with ammonium chloride and ascorbic acid.
- Benzodiazepines or dopamine antagonists to control agitation and anxiety
- Diazepam for muscle spasms and seizures
- Haloperidol to control severe agitation or psychotic symptoms
- **PCP Withdrawal**
- No withdrawal syndrome, but “flashbacks” may occur

SEDATIVES-HYPNOTICS

- BDZs and *Barbiturates*
- **Intoxication**

drowsiness, slurred speech, incoordination, ataxia, mood lability, impaired judgment, nystagmus, respiratory depression, and coma or death in overdose (especially barbiturates). Symptoms are augmented when combined with EtOH. Long-term sedative use causes dependence.

- DIFFERENTIAL DIAGNOSIS

Alcohol intoxication, generalized cerebral dysfunction (i.e., delirium)

- DIAGNOSTIC EVALUATION

Urine or serum drug screen (positive for 1 week), electrolytes, electrocardiogram

- TREATMENT
- Maintain airway, breathing, and circulation.
- Activated charcoal to prevent further gastrointestinal absorption
- For *barbiturates only: Alkalinize urine with sodium bicarbonate to promote* renal excretion.
- For *benzodiazepines only: Flumazenil in overdose*
- Supportive care—improve respiratory status, control hypotension

- **Sedative-Hypnotic Withdrawal**

Abrupt abstinence after chronic use can be lif e threatening.

- Symptoms of autonomic hyperactivity (tachycardia, sweating, etc.), insomnia, anxiety, tremor, nausea/vomiting, delirium, and hallucinations. Seizures may occur and can be life threatening.
- TREATMENT
- Administration of a long-acting benzodiazepine such as chlorodiazepoxide or diazepam, with tapering of the dose
- Tegretol or valproic acid may be used for seizure control.

OPIATES

- Heroin, codeine, dextromethorphan, morphine, methadone, meperidine (Demerol).

- **Opiate Intoxication**

drowsiness, nausea/vomiting, constipation, slurred speech, constricted pupils, seizures, and respiratory depression, which may progress to coma or death in overdose.

- **DIFFERENTIAL DIAGNOSIS**

Sedative-hypnotic intoxication, severe EtOH intoxication

- **Diagnosis**

Urine and blood tests remain positive for 12 to 36 hours.

- Rapid recovery of consciousness following the administration of intravenous (IV) naloxone (opiate antagonist) is consistent with opiate overdose.
- **TREATMENT**
- Intoxication

Ensure adequate airway, breathing, and circulation.

- Overdose

Administration of naloxone or naltrexone (opiate antagonists) will improve respiratory depression but may cause severe withdrawal in an opiate-dependent patient. Ventilatory support may be required.

- **Dependence**
- Oral methadone once daily, tapered over months to years
- Psychotherapy, support groups (Narcotics Anonymous, etc.)
- **Opiate Withdrawal**
- CLINICAL PRESENTATION

unpleasant withdrawal syndrome characterized by dysphoria, insomnia, lacrimation, **rhinorrhea, yawning, weakness, sweating, piloerection,** nausea/vomiting, fever, dilated pupils, and muscle ache.

- TREATMENT
- Moderate symptoms: Clonidine and/or buprenorphine
- Severe symptoms: Detox with methadone tapered over 7 days.

HALLUCINOGENS

- Eg : Psilocybin (mushrooms), mescaline, lysergic acid diethylamide (LSD).
- Hallucinogens do not cause physical dependence or withdrawal but patients may experience “flashbacks” later in life (recurrence of symptoms due to reabsorption from lipid stores).
- **Intoxication**

perceptual changes, papillary dilation, tachycardia, tremors, incoordination, sweating, and palpitations.

- TREATMENT
- Guidance and reassurance , In severe cases, antipsychotics or benzodiazepines may be used.

MARI JUANA

- **Intoxication**

euphoria, impaired coordination, mild tachycardia, conjunctival injection, dry mouth, and increased appetite.

- DIAGNOSTIC EVALUATION

Urine drug screen is positive for up to 4 weeks in heavy users (released fromadipose stores).

- TREATMENT

Supportive and symptomatic

- No withdrawal syndrome.

INHALANTS

- Solvents, glue, paint thinners, fuels, isobutyl nitrates ("rush," "locker room," "bolt").
- **Inhalant Intoxication**
- Inhalants may cause impaired judgment, belligerence, impulsivity, perceptual disturbances, lethargy, dizziness, nystagmus, tremor, muscle weakness, hyporeflexia, ataxia, slurred speech, euphoria, stupor, or coma. Overdose may be fatal secondary to respiratory depression or arrhythmias. Long-term use may cause permanent damage to CNS, (PNS), liver, kidney, and muscle.

- DIAGNOSTIC EVALUATION

Serum drug screen (positive for 4 to 10 hours)

- TREATMENT
- Monitor airway, breathing, and circulation.
- Symptomatic treatment as needed
- Psychotherapy and counseling for dependent patients
- **Inhalant Withdrawal**

A withdrawal syndrome does not usually occur, but symptoms may include irritability, nausea, vomiting, tachycardia, and occasionally hallucinations.

CAFFEINE

- **Caffeine Intoxication**
- may occur with consumption of over 250 mg of caffeine. Signs and symptoms include anxiety, insomnia, twitching, rambling speech, flushed face, diuresis, gastrointestinal disturbance, and restlessness. Consumption of more than 1 gram of caffeine may cause tinnitus, severe agitation, and cardiac arrhythmias. In excess of 10 g, death may occur secondary to seizures and respiratory failure.
- TREATMENT
- Supportive and symptomatic

- **Caffeine Withdrawal**
- Withdrawal symptoms resolve within 1 week and include headache, nausea/ vomiting, drowsiness, anxiety, or depression.
- TREATMENT
- Taper consumption of caffeine-containing products. Use analgesics to treat headaches. Rarely, a short course of benzodiazepines may be indicated to control anxiety.

NICOTINE

- **Nicotine Intoxication**
- Nicotine acts as a CNS stimulant and may cause restlessness, insomnia, anxiety, and increased gastrointestinal motility. Tobacco users report improved attention, improved mood, and decreased tension.
- TREATMENT

Cessation

- **Nicotine Withdrawal**

Withdrawal causes intense craving, dysphoria, anxiety, increased appetite, irritability,and insomnia.

- TREATMENT
- Smoking cessation with the aid of:

1. **Behavioral counseling**
2. **Nicotine replacement therapy (gum, transdermal patch)**
3. **Zyban—antidepressant that helps reduce cravings**
4. **Clonidine**

- Relapse after abstinence is common.

Psychiatric aspect of General medical condition

- Many psychiatric syndromes can have an organic etiology.

  For this reason, every patient who presents with psychiatric symptoms requires a thorough physical examination (in most cases including neurological examination and special investigations) before a diagnosis of functional illness is made.

Psychosis

DSM-IV criteria for psychotic disorder secondary to a general medical condition include:

- Prominent hallucinations or delusions
- Symptoms do not occur only during episode of delirium
- Evidence to support medical cause from lab data, history, or physical

Cont,,,

Medical causes of psychosis include:

1. **CNS disease** (head injury, CVA, multiple sclerosis, neoplasm, Parkinson's disease, Huntington's chorea, temporal lobe epilepsy, encephalitis, prion disease)

2. **Endocrinopathies** (Addison's/Cushing's disease, hyper/hypothyroidism**,** hyper/hypocalcemia, hypopituitarism)

3. **Nutritional/Vitamin deficiency states (**B12, folate, niacin**)**

4. **Other (**connective tissue disease [SLE, temporal arteritis], porphyria, HIV)

Mood disorder

- Depression
- Mania

1- Depression

Major Depressive Episode (DSM-IV Criteria)

Must have at least five of the following symptoms (must include either number 1 or number 2) for at least a 2-week period:

1. **Depressed mood**
2. **Anhedonia (loss of interest in pleasurable activities)**
3. **Change in appetite or body weight (increased or decreased)**
4. **Feelings of worthlessness or excessive guilt**
5. **Insomnia or hypersomnia**
6. **Diminished concentration**
7. **Psychomotor agitation or retardation (i.e., restlessness or slowness)**
8. **Fatigue or loss of energy**
9. **Recurrent thoughts of death or suicide**

Symptoms **cannot be** due to substance use or medical conditions, and they must cause social or occupational impairment.

1- Depression

anti-HTN
↳ most drug lead to depression.

Medical causes:

- **Neurological** (CVA; epilepsy; Parkinson's disease; brain tumour; dementia; MS; Huntington's disease; head injury)
- **Infectious** (HIV; EBV/infectious mononucleosis; brucellosis)
- **Endocrine and metabolic** (hypo\hyper-thyroidism, hypo/hyper-calcemia, hypoglycemia, Cushing's; Addison's disease; parathyroid disease; vitamin deficiency [B_{12} and folate]; porphyria)
- **Cardiac disease** (MI; CCF)
- **SLE**
- **Rheumatoid arthritis**
- **Cancer**
- **Medication**s (analgesics; antihypertensives; L-dopa; anticonvulsants; antibiotics; steroids; OCP; cytotoxics; cimetidine; salbutamol)
- **Drugs of abuse** (alcohol; benzodiazepines; cannabis; cocaine; opioids)
- Toxins

↳ anti-convulsants

2- Mania

A period of abnormally and persistently elevated, expansive, or irritable mood, lasting at least 1 week and including at least three of the following (four if mood is irritable):

1. **Distractibility**
2. **Inflated self-esteem or grandiosity**
3. **Increase in goal-directed activity (socially, at work, or sexually)**
4. **Decreased need for sleep**
5. **Flight of ideas or racing thoughts**
6. **More talkative or *pressured speech (rapid and uninterruptible)***
7. **Excessive involvement in pleasurable activities that have a high risk of** negative consequences (e.g., buying sprees, sexual indiscretions)

These symptoms **cannot be** due to substance use or medical conditions, and they must cause social or occupational impairment. Seventy-five percent of manic patients have psychotic symptoms.

2- Mania

- **Neurological** (CVA; epilepsy; brain tumour; head injury; MS)
- **Endocrine** (hyperthyroidism)
- **Neoplasm**
- **HIV infection**
- **Medications** (steroids; antidepressants; mefloquine; cytotoxics)
- **Drugs of abuse** (cannabis; cocaine; amphetamines)
- **Toxins**

Anxiety

Causes:

- Poor pain control—Such as ischaemic heart disease, malignant infiltration
- Hypoxia—May be episodic in both asthma and pulmonary embolus
- Hypocapnia, Hypercapnia
- Hypoglycemia
- Hyponatraemia
- Anemia
- **Hyperthyroidism**
- Hyperkalaemia

- Central nervous system disorders (epilepsy ,MS, tumor)
- Vitamin B12 deficiency
- Pheochromocytoma
- Head injury (post-trumatic stress diorder)
- Infection (HIV)

Cognitive Disorders

- Delirium
- Dementia
- Amnestic Disorders

1- Delerium

– clouding of consciousness-

Organic causes :

- CNS injury or disease.
- Systemic illness (Urinary tract infection , Renal failure , Liver disease , Endocrinopathy, HIV).
- Hypoxia
- Electrolyte imbalances (uremia)
- Fever
- Postop.
- Post ictal seizures
- Medications (anticholinergics, steroids, antipsychotics, antihypertensives,insulin, etc.)
- Drug abuse/withdrawal.

2- Dementia

- **Progressive** and **irreversible** impairment of **memory** and other **cognitive functions** without alteration in the level of consciousness

- The most common causes of dementia are:

1. **Alzheimer's disease (50 to 60%)**
2. **Vascular dementia –CVA-(10 to 20%)**
3. **Major depression ("pseudodementia")**

Cont,,,

Organic causes:

1. **Structural:** Benign forgetfulness of normal aging, Parkinson's disease,Huntington's disease, Down's syndrome, head trauma, brain tumor,normal pressure hydrocephalus, multiple sclerosis, subdural hematoma.
2. **Metabolic:** Hypothyroidism, hypoxia, malnutrition (B12, folate, or thiamine deficiency), Wilson's disease, lead toxicity.
3. **Infectious:** Lyme disease, HIV dementia, Creutzfeldt–Jakob disease**,** neurosyphilis, meningitis, encephalitis.

Drugs:

Alcohol (chronic and acute), phenothiazines, anticholinergics, sedatives

3- Amensia

- Impairment of **memory** without other cognitive problems or altered consciousness. They **always** occur **secondary to an underlying medical condition.**

Cont,,,

Causes:

- Hypoglycemia
- Systemic illness (such as thiamine deficiency)
- Hypoxia
- Head trauma
- Brain tumor
- CVA
- Seizures
- Multiple sclerosis
- Herpes simplex encephalitis
- Substance use (alcohol, benzodiazepines, medications)

Cognitive disorders
Dementia / Delirium

Cognitive disorders

- Cognitive disorders affect memory, orientation, attention, and judgment. They result from primary or secondary abnormalities of the central nervous system.
- The main categories of cognitive disorders are:
  - Dementia
  - Delirium
  - Amnestic disorders

[Wernicke-Korsakoff Syndrome]

Amnesia is loss of memory, but with preservation of motor/ executive functions

able to recognize daily objects, able to speak, have motor skills
⇒ problem just in loss of memory

MINI MENTAL STATE EXAM (MMSE)

- The MMSE is used to assess a patient's current state of cognitive functioning. It can be used as a daily barometer to evaluate interval changes but should not be used to make a formal diagnosis. It tests orientation, registration, attention and calculation, recall, and language.
- MMSE scoring:
  - Perfect score: 30
  - Dysfunction: < 25

Performing the Mini Mental State Exam

1. **Orientation**:-
   - What is the date, month, year? 5 points
   - Where are we (state, city, hospital)? 5 points
2. **Registration**:-
   - Name three objects and repeat them. 3 points
3. **Attention and calculation**
   - Serial 7s (subtract 7 from 100 and continue subtracting 7 from each answer) or spell "world" backward. 5 points
4. **Recall**
   - Name the three objects above 5 minutes later. 3 points
5. **Language**
   - Name a pen and a clock. 2 points
   - Say, "No ifs, ands, or buts." 1 points
   - Three-step command: 3 points

Take a pencil in your right hand, put in your left hand, then put it on the floor.

6. **Read and obey the following:**
   - Close your eyes. 1 point
   - Write a sentence. 1 point
   - Copy design. 1 point

TOTAL 30 points

DEMENTIA

- Dementia is an impairment of memory and other cognitive functions without alteration in the level of consciousness. -- Most forms of dementia are progressive and irreversible. Dementia is a major cause of disability in the elderly. It affects memory, cognition, language skills, behavior, and personality.
- **EPIDEMIOLOGY:-**
- Incidence increases with age.
- Twenty percent of people > age 80 have a severe form of dementia.
- *Associations: Delusions and hallucinations occur in approximately 30%* of demented patients. Affective symptoms, including depression and anxiety, are seen in 40 to 50% of patients. Personality changes are also common.

ETIOLOGY

- The *most common causes of dementia are:*

1. **Alzheimer's disease (50 to 60%)**
2. **Vascular dementia (10 to 20%)**
3. **Major depression ("pseudodementia")**

- Patient will often reply "I don't know" to MMSE questions, whereas a patient with a true dementia will confabulate
- Patient will usually be able to state approximate onset of symptoms and will elaborate on deficits

↓ appetite
depressed mood

- good appetite
- good mood

15% of demented patients have a treatable and potentially reversible condition.

DIFFERENTIAL DIAGNOSIS

- 1. **Psychiatric:-**

✔ Depression (pseudodementia).

✔ Delirium.

✔ Schizophrenia.

✔ Malingering.

- 2. **Organic:-**

- *Structural:* *Benign forgetfulness of normal aging*, *Parkinson's disease*, Huntington's disease, Down's syndrome, head trauma, brain tumor, normal pressure hydrocephalus, multiple sclerosis, subdural hematoma
- *Metabolic:* *Hypothyroidism, hypoxia, malnutrition (B12, folate, or thiamine* deficiency), Wilson's disease, lead toxicity.
- *Infectious:* *Lyme disease, HIV dementia, Creutzfeldt–Jakob disease*, neurosyphilis, meningitis, encephalitis

- 3. **Drugs:-** Alcohol (chronic and acute), phenothiazines, anticholinergics, sedatives.

Alzheimer's Disease

just dementia and the patient otherwise healthy (not HTN, No Hyper-cholesterolemia)

declining (slowly but surely).

* in general → healthy patients but they are starting to forget things as they get older → forget thing + losing orientation, cognitive process

- Most common dementia (80% of all dementias).
- EPIDEMIOLOGY
- Incidence: 5% of all people > 65; 15 to 25% of all people > 85
- More common in women than men
- Average life expectancy: 8 years after diagnosis
- Forty percent of patients have a family history of Alzheimer's.

CLINICAL MANIFESTATIONS

- **Hallmarks: Gradual progressive decline of cognitive functions, especially** memory and language. Personality changes and mood swings are very common.

DIAGNOSIS AND DSM-IV CRITERIA

- **Memory impairment plus at least one of the following:**

✔ **Aphasia—disorder of language affecting speech *and understanding*.**

✔ **Apraxia—inability to perform purposeful movements (e.g., copying a** picture)

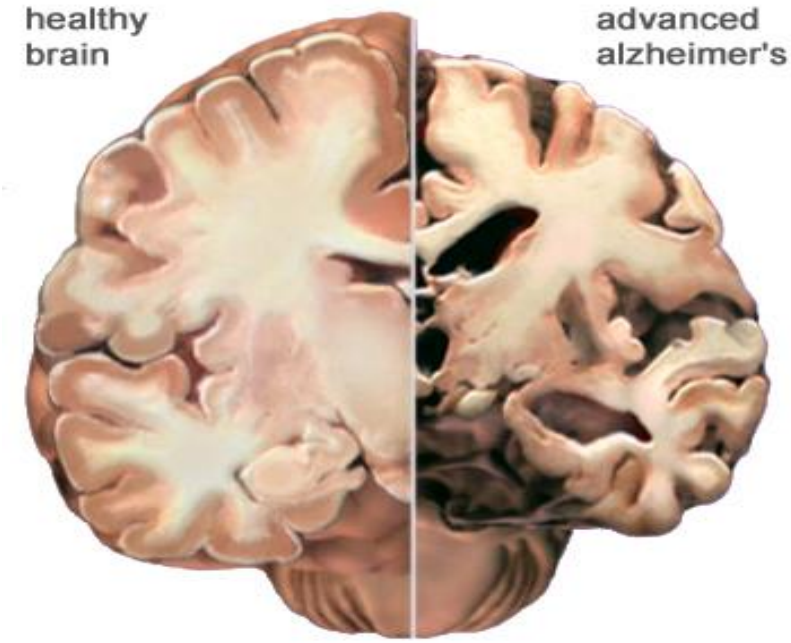
✔ **Agnosia—inability to interpret sensations correctly (*visual agnosia—inability*** to recognize a previously known object)

✔ **Diminished executive functioning—problems with planning, organizing,** and abstracting.

✔ *Personality/mood changes: Depression, anxiety, anger, and suspiciousness are* common. Psychotic symptoms such as paranoia are common.

※ patho physiology ⟶ Cortical atrophy, reduction in Ach + NE Synthesis and deposition of amyloid plaques.

- **NEUROPHYSIOLOGY:-**
  Alzheimer's patients have decreased levels of acetylcholine (due to loss of noradrenergic neurons in the locus ceruleus of the brainstem) and of norepinephrine (due to preferential loss of cholinergic neurons in the basal nucleus of Meynert of the midbrain).
- **PATHOLOGY:-**
- **Gross**
  Diffuse atrophy with enlarged ventricles and flattened sulci
- **Microscopic**
  Senile plaques composed of amyloid protein / Neurofibrillary tangles derived from Tau proteins/ Neuronal and synaptic.



TREATMENT

- No cure or truly effective treatment
- Physical and emotional support, proper nutrition, exercise, and supervision
- NMDA(n.methyl.d.aspartate) receptor antagonists: memantine

Cholinesterase inhibitors to help slow progression:

- Tacrine (Cognex)
- Donepezil (Aricept)
- Rivastigmine (Exelon)

Treatment of symptoms as necessary:

- Low-dose, short-acting benzodiazepines for anxiety
- Low-dose antipsychotics for agitation/psychosis (e.g., quetiapine)
- Antidepressants for depression (if the patient fulfills criteria for major depression)

Vascular Dementia

demented symptoms + Focal neurologic deficits

+ due to multiple small, sub clinical infracts of various part of the brain.

→ non-linear progression → Small strokes happen at different time.

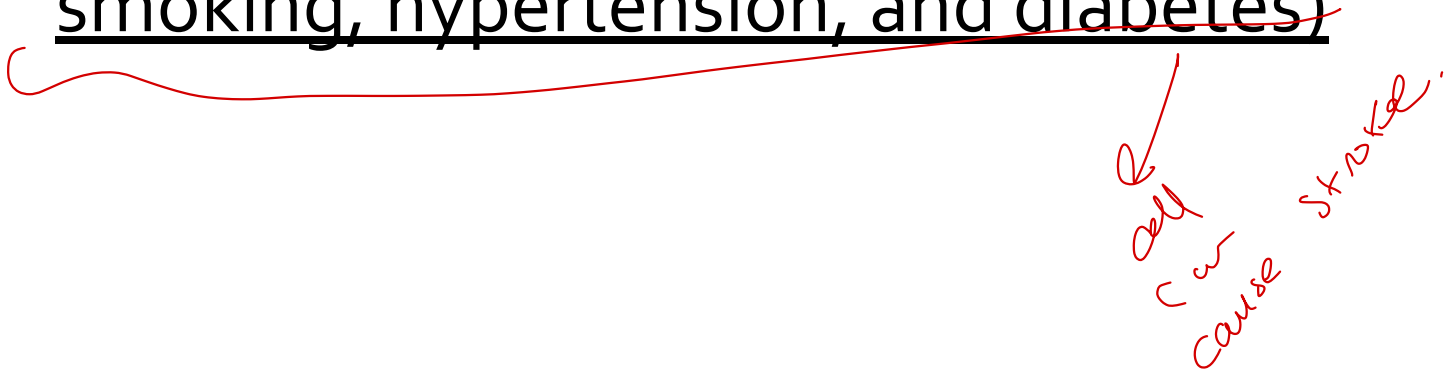
- Caused by <u>microvascular disease in the brain</u> that <u>produces multiple small infarcts</u>. A substantial infarct burden must accumulate before dementia develops.
- **CLINICAL MANIFESTATIONS**
- Disease manifestations of vascular dementia are identical to Alzheimer's.

Memory impairment and at least one of the following must be present:

- **1. Aphasia**
- **2. Apraxia**
- **3. Agnosia**
- **4. Diminished executive functioning**
- *Personality changes: Depression, anger, and suspiciousness are common. Psychotic* symptoms such as paranoia are also common.

VASCULAR DEMENTIA VERSUS ALZHEIMER'S

- Since vascular dementia is caused by small brain infarcts, patients also have focal neurological symptoms (such as hyperreflexia or paresthesias).
- Onset usually more abrupt than Alzheimer's
- Greater preservation of personality
- Can reduce risk by modifying risk factors (such as smoking, hypertension, and diabetes)



- DIAGNOSIS

Can be diagnosed readily by MRI.

- TREATMENT
  - No cure or truly effective treatment
  - Physical and emotional support, proper nutrition, exercise, and supervision
  - Treatment of symptoms as necessary

Pick's Disease/Frontotemporal Dementia (FTD)

كثير صعب تميزه عن الزهايمر Clinical

- A rare cause of slowly progressing dementia.
- CLINICAL MANIFESTATIONS:-

Aphasia, apraxia, agnosia; difficult to distinguish from Alzheimer's clinically, but personality and behavioral changes are more prominent early in the disease. ✗ prior to onset of memory changes.

- PATHOLOGY
- Atrophy of frontotemporal lobes
- **Pick bodies—intraneuronal inclusion bodies (not necessary for diagnosis** of FTD)
- TREATMENT
- No effective treatment
- Physical, emotional, and nutritional support
- Treat emotional/behavioral symptoms as needed.

Huntington's Disease

- Autosomal dominant genetic disorder that results in progressively disabling cognitive, physical, and psychological functioning, ultimately resulting in death after approximately 15 years.
- CLINICAL MANIFESTATIONS

Onset: 35 to 50 years of age

Hallmarks:

- Progressive dementia
- Bizarre **choreiform movements (dancelike flailing of arms and legs)**
- Muscular hypertonicity
- Depression and psychosis very common.

PATHOLOGY

- Trinucleotide repeat on short arm of chromosome 4; primarily affects basal ganglia.

DIAGNOSIS

- MRI shows caudate atrophy (and sometimes cortical atrophy). Genetic testing and MRI are diagnostic.

TREATMENT

- There is no effective treatment available (supportive only).

Parkinson's Disease

[lewy body dementia]

dementia in patient with parkinson's

- Progressive disease with prominent neuronal loss in substantia nigra, which provides dopamine to the basal ganglia, causing physical and cognitive impairment.

Approximately 30% of patients with Parkinson's disease develop dementia.

CLINICAL MANIFESTATIONS

Characterized by:

1. **Bradykinesia**
2. **Cogwheel rigidity**
3. **Resting tremor—"pill-rolling" tremor most common**
4. **Masklike facial expression**
5. **Shuffling gait**
6. **Dysarthria (abnormal speech).**

Fifty percent of patients will suffer from depression.

ETIOLOGY

- Idiopathic (most common)
- Traumatic (e.g., Muhammad Ali)
- Drug- or toxin-induced
- Encephalitic (as in the book/movie *Awakenings)*
- Familial (rare)

PATHOLOGY AND PATHOPHYSIOLOGY

- Loss of cells in the substantia nigra of the basal ganglia, which leads to a decrease in dopamine and loss of the dopaminergic tracts.

TREATMENT

- **Pharmacologic**
- Levodopa
- Carbidopa

→ Replacement of dopamine (due to dopaminergic neuronal destruction)

- Amantadine → [Not First choice]
- Anticholinergics—help relieve tremor
- Dopamine agonists (bromocriptine, etc.)
- Monoamine oxidase (MAO)-B inhibitors (selegiline)—inhibit breakdown of dopamine.

Surgical

- Thalamotomy or pallidotomy may be performed if no longer responsive to pharmacotherapy.

Creutzfeldt–Jakob Disease (CJD)

- A rapidly progressive, degenerative disease of the central nervous system (CNS) caused by a *prion*. *CJD may be inherited, sporadic, or acquired. A* small percentage of patients have become infected through corneal transplants.
- CLINICAL MANIFESTATIONS
- **Hallmarks: Rapidly progressive dementia 6 to 12 months after onset of symptoms.**
- More than 90% of patients have myoclonus (sudden spasms of muscles).
- Extrapyramidal signs, ataxia, and lower motor neuron signs are also common.
- There is a long latency period between exposure and disease onset.

10 months ago the patient was fine and they've been rapidly quickly developing the symptoms for forgetfulness, inability to remember objects, inability to perform activities of daily life and so it's going to resemble alzheimer's but it's like compressing into like 1-year period opposed to 10-year.

Huntington's disease

gait disturbance

choric

Fast

(Fast the onset of death from diagnosis onset of symptoms) is within month

PATHOLOGY

- Spongiform changes of cerebral cortex, neuronal loss, and hypertrophy of glial cells.

DIAGNOSIS

- *Definitive—pathological demonstration of spongiform changes of brain tissue*
- *Probable—the presence of both rapidly progressive dementia and periodic* generalized sharp waves on electroencephalogram (EEG) *plus at least two of* the following clinical features:
  - Myoclonus
  - Cortical blindness
  - Ataxia, pyramidal signs, or extrapyramidal signs
  - Muscle atrophy
  - Mutism

3M → myoclonus – mutism – muscle atrophy

cortical blindness

pyramidal + extrapyramidal signs

Ataxia

rapidly progressive dementia

TREATMENT AND COURSE

- No treatment; relentless course, progressing to death usually within a year

Normal Pressure Hydrocephalus (NPH)

- NPH is a reversible cause of dementia. Patients have enlarged ventricles with increased CSF pressure. The etiology is either idiopathic or secondary to obstruction of CSF reabsorption sites due to trauma, infection, or hemorrhage.
- CLINICAL MANIFESTATIONS

Clinical triad:

1. Gait disturbance (often appears first)

2. Urinary incontinence

3. Dementia (mild, insidious onset)

TREATMENT

- Relieve increased pressure with shunt. Of the clinical triad, the dementia is least likely to improve.

DELIRIUM

+ any intra or extra cranial pathological process affecting CNs
+ alter level of consciousness, impaired cognitive function (usually hallucination)
+ due to organic causes → CNs dz
+ acute/ reversible + ttt → treat the underlying cause.

+ uremia
+ ICU

+ behavioral hallucination

- Delirium is an acute disorder of cognition related to impairment of cerebral metabolism.
- Unlike demented patients, delirious patients have a **rapid onset** of symptoms, periods of **altered levels of consciousness**, **and potential reversal** of symptoms with treatment of the underlying cause.
- Delirious patients appear confused and have a fluctuating course with **lucid intervals. They may be either stuporous or agitated, and perceptual disturbances** (e.g., **hallucinations) are common. Patients are often anxious, incoherent,** and unable to sleep normally.
- It can be caused by virtually any medical disorder, and there is a high mortality rate if untreated.
- It can last from days to weeks, and can also be chronic.

ETIOLOGY

- *Common causes of delirium include:*
- CNS injury or disease
- Systemic illness
- Drug abuse/withdrawal
- Hypoxia

Additional causes of delirium include:

- Fever
- Sensory deprivation
- Medications (anticholinergics, steroids, antipsychotics, antihypertensives,
- insulin, etc.)
- Postop
- Electrolyte imbalances

- DSM-IV TREATMENT CRITERIA

The two types of delirium are:

- **1. *Quiet: patient may seem depressed or exhibit symptoms similar to failure*** to thrive; an MMSE must be done to distinguish from depression and other diagnostic criteria
- **2. *Agitated: obvious pulling out lines; may hallucinate.***

- DIFFERENTIAL DIAGNOSIS

Dementia, fluent aphasia (Wernicke's), acute amnestic syndrome, psychosis, depression, malingering.

TREATMENT

- First and foremost: Treat the underlying cause!
- Provide physical and sensory support.
- Treat drug withdrawal.
- Treat symptoms of psychosis (low-dose antipsychotic) and insomnia
- (sedative-hypnotic).

Delirium Versus Dementia

Delirium	Dementia
Clouding of consciousness	Loss of memory/intellectual ability
Acute onset	*Insidious onset*
Lasts 3 days to 2 weeks	Lasts months to years
Orientation impaired	Orientation often impaired
Immediate/recent memory impaired	Recent and remote memory impaired
Visual hallucinations common	Hallucinations less common
Symptoms fluctuate, often worse at night	Symptoms stable throughout day
Usually reversible	15% reversible
Awareness reduced	Awareness clear