Psychophysiological (psychosomatic) medicine ➔ 2 basic assumptions ➔ there is a unity of mind and body and psychological factors must be taken into account when considering all disease states.

No classification for psychosomatic disease is listed in DSM-IV TR.

In DSM-IV TR ➔ psychological factors affecting medical conditions.
This category covers physical disorders caused by emotional or psychological factors.

In 2005, the American Board of Specialties and The American Board of Psychiatry and Neurology approved a separate board to be called the American Board of Psychosomatic Medicine.
Definition

Psychosomatic medicine deals with the relation between psychological and physiological factors in the causation or maintenance of disease states.
etiology

1. specific stress factors

Specific stresses or personality types for each psychosomatic disease and is typified by the following investigators:

A. Flanders Dunbar ➔ type A personality is hard-driving, aggressive, irritable and susceptible to heart disease
B. Franz Alexander ➔ unconscious conflicts that produce anxiety, are mediated through the autonomic nervous system and result in a specific disorder (e.g., repressed dependency needs contribute to peptic ulcer)
2. Nonspecific stress factors

This theory states that any prolonged stress can cause physiological changes that result in physical disorder.

Each person has shock organ that is genetically vulnerable to stress: some pts are cardiac reactors, others are gastric reactors and others are skin reactors.

Persons who are chronically anxious or depressed are more vulnerable to physical or psychosomatic disease.
3. Physiological factors

Hans Selye described the general adaptation syndrome, which is the sum of all the non specific systemic reactions of the body that follow prolonged stress.

The hypothalamic-pituitary-adrenal axis is affected, with excess secretion of cortisol producing structural damage to various organ systems.
George Engel ➔ in the stressed states, all neuroregulatory mechanism undergo functional changes that depress the body’s homeostatic mechanism, so that the body is left vulnerable to infection and other disorders.

Neurophysiological pathway: cerebral cortex, limbic system, hypothalamus, adrenal medulla and sympathetic and parasympathetic nervous systems.
Neurotransmitter response
1. Increased synthesis of brain norepinephrine
2. Increased serotonin turnover may result in eventual depletion of serotonin
3. Increased dopamine transmission

Endocrine response
1. Increased ACTH stimulates adrenal cortisol
2. Testosterone decrease with prolonged stress

3. Decrease in thyroid hormone

- **Immune response**
  1. Immune activation occurs with release of hormonal immune factors (Cytokines) in acute stress
  2. Number and activity of natural killer cells decreased in chronic stress
Physical Conditions Affected By Psychological Factors

1. Coronary artery disease
   - Type A person is aggressive, irritable, easily frustrated ➔ coronary artery disease
   - Arrhythmias common in anxiety disorder
   - Sudden death from ventricular arrhythmias in some pts who experience massive psychological shock or catastrophe
2. Asthma

- Attacks precipitated by stress, respiratory infection, allergy
- Characterized as having excessive dependency needs

Certain personality traits (intense fear, emotional lability, sensitivity to rejection and lack of persistence in difficulty situations) in pts w/asthma are associated w/ greater use of corticosteroids and bronchodilators and longer hospitalizations than would be predicted from pulmonary function alone.
3. hyperventilation syndrome

- Pts breathe rapidly and deeply for several minutes
- They soon complain of suffocation, anxiety, giddiness and lightheadedness
- Tetany, palpitations. Chronic pain and paresthesias about the mouth and the fingers and toes are associated symptoms
4. Hypertension

Acute stress produces catecholamines (epinephrine) → systolic BP ↑

Chronic stress associated w/ essential hypertension

Labile BP → White coat hypertension → in a physicians office and related to anxiety

Otto Fenichel → increase essential HT is probably connected to the mental situations of persons who have learned that aggressiveness is bad and must live in a world for which an enormous amount of aggressiveness is required
5. vasovagal syncope
Sudden loss consciousness (fainting) caused by vasodepressor response decreasing cerebral perfusion.

Sympathetic autonomic activity is inhibited and parasympathetic vagal nerve activity is augmented ➔ decreased cardiac Output, decreased vascular resistance, vasodilatation and bradycardia

➔ ↓ ventricular filling ➔ ↓blood supply to the brain ➔ hypoxia ➔ LOSS OF CONSCIOUSNESS
6. Headaches

- Tension headaches → contraction of strap muscles in neck, constricting blood flow
  Associated with anxiety, situational stress, depression

- Migraine headaches → unilateral
  Triggered by stress, exercise, foods high in tyramine, hormone
  Persons with migraines: overly controlled, perfectionist, and unable to suppress anger
7. Peptic ulcer disease

Idiopathic type not related to specific bacterium or physical stimulus

Increased gastric acid and pepsin related to mucosal resistance: both sensitive to anxiety, stress, coffee, alcohol
8. Obesity

Hyperphagia reduces anxiety

Night-eating syndrome associated with insomnia

Failure to perceive appetite, hunger, and satiation

Conflicts about orality and pathologic dependency
9. Metabolic and endocrine disorders

Thyrotoxicosis following sudden severe stress

Glycosuria in chronic fear and anxiety

Depression Alters hormone metabolism: ACTH
10. Inflammatory bowel disease, Crohn’s disease, irritable bowel syndrome, ulcerative colitis

Depressed mood associated with illness; stress exacerbates symptoms

Onset after major life stress

Psychological theories: passive personality, childhood intimidation, obsessive traits, fear of punishment, masked hostility
11. rheumatoid arthritis (RA)

- Chronic musculoskeletal pain arising from inflammation of the joints
- Causative factors: hereditary, allergic, immunological and psychological
- Stress can predispose pts to (RA) and other autoimmune disease by immune suppression
12. low back pain (LBP)

Sign and symptoms: excruciating pain, restricted movement, paresthesias and weakness or numbness,
may be accompanied by anxiety, fear or even panic

pts w/ LBP often report that the pain is began at a time of psychological trauma or stress
13. neurodermatitis
Eczema in pts w/ multiple psychosocial stressors – especially death of loved one, conflicts over sexuality, repressed anger

14. urticaria
Idiopathic type not related to specific allergens or physical stimulus
Associated w/ stress, chronic anxiety, depression
Pruritus worse w/ anxiety; self excoriation associated w repressed hostility

(+ ) conflict between dependence-independence, unconscious guilt feelings, itching as sexual displacement
Diagnosis

Diagnostic criteria for psychological factors affecting a medical condition, the following 2 criteria must be met:

1. A medical condition is present
2. Psychological factors affect it adversely (e.g., the psychologically meaningful environmental stimulus is temporally related to initiation or exacerbation of the specific physical condition or disorder)
The physical condition must demonstrate either organic disease (e.g., rheumatoid arthritis) or a known patophysiologic process (migraine headache)
Differential diagnosis

1. Conversion disorder
2. Body dysmorphic disorder
3. Hypochondriasis
4. Somatization disorder
5. Pain disorder
Treatment

- Collaborative approach
- Psychotherapy
- Pharmacotherapy