Depression

ICD-10 F03, F20, F21, F32-F34, F41-F44, F53

Joe Hurrell

Depressive episodes are serious medical conditions that affect thoughts, feelings and the ability to function in everyday life. In typical mild, moderate, or severe depressive episodes, an individual suffers from a lowering of mood, reduction of energy, and decreases in activity level. Capacity for enjoyment, interest, and concentration is reduced, and marked fatigue, after even minimal effort, is common. Sleep is frequently disturbed and appetite diminished. Self-esteem and self-confidence are almost always reduced and feelings of guilt or worthlessness are often present. The lowered mood is generally unresponsive to circumstances and varies little from day to day. Episodes may be accompanied by various somatic symptoms including psychomotor retardation, agitation, loss of appetite, weight loss, and loss of libido. Depending on the number, variety, and severity of the symptoms, depressive episodes can be labeled as mild, moderate, or severe.

Occurrence

Depression has become one of the most prevalent, debilitating, and costly disorders of modern times, unsurpassed by any chronic health disorder in terms of the number of people afflicted at any point in time. Nationally representative studies show a 12-month prevalence of 8% for men and 13% for women, and a lifetime prevalence of 13% for men and 21% for women. Chronic mild depression affects at least an additional 2-3% of the U.S. population annually. Depression rates are much higher for women, decline with increasing socioeconomic status, and are highest in the 15-to-54 year age group. Prevalence in the workforce (4%) is similar to that in the community (5%). Morbidity rates appear to vary considerably by occupation, even after adjustment for such potentially confounding factors as age, race, gender, and job tenure. Blue-collar workers, as compared with professional and managerial workers, appear to be at excess risk.

Judged in terms of years of life lost, premature death, and years lived with disability, depression will, by 2020, surpass all health disorders worldwide, except for ischemic heart disease. The total cost of depression to the U.S. economy alone is more than $43 billion, including direct medical costs, suicide-related mortality costs, and productivity losses—exceeding the cost of all cases of cancer, respiratory disease, AIDS, coronary heart disease, and arthritis combined.

Causes

Depression results from abnormal functioning of the brain. The specific causal mechanisms are not known, but interaction between genetic predisposition and life history appears to determine an individual's level of risk. Episodes of depression can be triggered by stress, illnesses, difficult life events, various medications, or other environmental exposures. Job stress, in particular, has been found, in both cross-sectional and prospective studies, to be linked to symptoms of depression and physician-diagnosed psychiatric morbidity.

Consistent with the hypothesis that depression is secondary to the experience of stressful working conditions, numerous studies examining diverse occupational groups have identified various job stressors that appear to be associated with depression. Convergent evidence from many epidemiologic studies implicates high level of job demand, low levels of job control, and limited work-related social support as risk factors for depression. The potency of these stressors in causing depression may be gender-dependent. The presence of high levels of job control and/or social support may buffer the deleterious effects of high levels of job demand. Whether the effects on depression of job demand, job control, and social support are interactive or additive is not clear.

Specific job stressors, such as time pressures, physical demands, conflict with co-workers, long work hours, poor supervision, and ambiguous and conflicting work expectations, are thought to contribute to depression susceptibility.

Pathophysiology

The precise pathophysiologic mechanisms of depression are not fully understood. The consistent observation that central norepinephrine, dopamine, and serotonin are functionally reduced during episodes of depression has led to the belief that depression is due to reduced functional activity of any of the endogenous monoamines in the brain. In this view, antidepressants relieve depression by inhibiting the reuptake of central monoamines, thereby correcting this deficiency. The mechanisms through which external stressors, such as those encountered on the job, affect brain function have been studied extensively. Disorganization of the sympathetic system and the pituitary-adrenal axis appears to be involved. The "stress hormone" corticotropin-releasing factor appears to play an important role in the regulation of central norepinephirne. Thus, there seems to be a close link between changes in the pituitary-adrenal axis, activation of the central norepinephrine system, stress responses, and depression.

Prevention

Despite the accumulating evidence of a causal relationship between job stress and depression, very few studies have been able to provide strong evidence for the efficacy of primary prevention efforts. The body of literature on interventions to change aspects of job design or organizational practices to reduce exposure to job stressors is small and tends to be beset by various

methodological problems, especially the absence of strong study designs involving randomized trials, making evaluations and attributions of outcomes difficult. Conducting workplace intervention research using strong designs is difficult because of practical, ethical, legal, and other constraints. Much critical thinking is needed to close the gaps between basic and applied research. Several well-designed studies suggest that primary prevention can be effective, such as by engineering, job design, training, and work process features designed to reduce exposures to job stressors.

Stress management interventions have been shown to be effective in reducing symptoms of depression among groups of workers, but the effects of these interventions are generally thought to be short-lived. In designing overall stress reduction programs aimed at reducing the health consequences of job stress in general, most experts recommend combining organizational change with stress management.

Major depression, known to the public as clinical depression, can come on slowly, but, once recognized, requires immediate referral and treatment. Psychotherapy and antidepressant medications are the most common treatments of major depression and are believed to work well in combination. Common job-related signs of depression include tardiness, absenteeism, decreased productivity, complaints of fatigue, safety problems and accidents, unexplained aches and pains, and alcohol or drug abuse. Fostering an awareness of the signs and symptoms of depression among managers and employees alike may help in the early identification of affected workers. While there are few studies in the literature regarding the efficacy of worksite-based depression screening, voluntary test screening seems to offer a good opportunity to identify previously unidentified and untreated people with depression.

Other Issues

Heart disease affects an estimated 12.2 million Americans and is the leading cause of death in the United States. Research over the past two decades has shown that people with heart disease are much more likely to suffer from depression than healthy people. While the notion that depression increases one's risk for developing heart disease remains controversial, nearly all recent studies of the heart disease-depression relationship document increased cardiovascular morbidity and mortality in patients with depressive symptoms or major depression, thereby implicating depression as a potential independent risk factor in the pathophysiologic progression of heart disease, rather than merely a secondary affective response to the illness. Understanding the relationships between these two illnesses represents a major challenge.

Depression is an important, if not the most important, risk factor for suicide. It is estimated that over 20% of all people with recurrent depressive disorders will attempt suicide and many will die. In the United States, it is believed that more than 20 000 people commit suicide each year. In addition

to increasing the risk for self-directed violence, depression seems to increase the risk of violence directed at family members, co-workers, and others.

Further Reading

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Emphysema

ICD-10 J43, J68.4, J98.2, J98.3 P25.0, P25.2, T79.7, T81.8

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Pulmonary emphysema is a disorder of lung anatomy defined as a permanent, abnormal increase in the size of airspaces distal to the terminal bronchiole accompanied by destruction of the lung tissue. Because the tissue destruction is nonuniform, the orderly appearance of the airspaces is disrupted and may be lost altogether.

The clinical presentation of emphysema can vary from mild shortness of breath to severe breathlessness and respiratory failure. The level of dyspnea depends on the demands placed on the respiratory system. When the disease has progressed to the point where the forced expiratory volume in 1 second (FEV_1) is about 40% of what is predicted, carbon dioxide retention and cor pulmonale (right heart failure) may complicate the picture. Because emphysema is a process destructive to lung tissue, the diffusing capacity is typically reduced in moderate to severe disease. Both emphysema and bronchitis can result from the same exposures; therefore, many people with one condition will also have signs or symptoms of the other.

X-ray changes are absent in early emphysema. Later, the characteristic changes are of two general types: (1) an increase in the volume of the thorax occupied by the lung, and (1) a decrease of the overall pulmonary vascular pattern.

Occurrence

Emphysema, with or without associated chronic bronchitis, affects at least 3 million Americans. It is the most costly disease that the U.S. Veterans

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