

DEPRESSION

DEPRESSION GOALS AND OBJECTIVES

Course Description

“Depression” is a home study continuing education course for rehabilitation professionals. The course presents updated information about depression including sections on etiology, symptomology, diagnosis and treatment of the disorder.

Course Rationale

The information presented in this course is critical for rehabilitation professional in all settings. A greater understanding of depressive disorders will enable therapists and assistant to provide more effective and efficient care to individuals affected by this condition.

Course Goals and Objectives

Upon completion of this course, the therapist or assistant will be able to:

1. Differentiate between the different types of depressive disorders
2. Identify the causes of depression
3. Identify current research findings
4. Recognize how depression is diagnosed
5. Identify and list the treatments for depression
6. Identify success strategies that can improve function
7. Differentiate how depression affects men, women, children and the elderly differently.
8. Recognize the relationship between depression and certain specific diseases.

Course Instructor

Michael Niss PT

Target Audience

Physical therapists, physical therapist assistants, occupational therapists, and occupational therapist assistants

Course Educational Level

This course is applicable for introductory learners.

Course Prerequisites

None

Criteria for issuance of Continuing Education Credits

A documented score of 70% or greater on the written post-test.

Continuing Education Credits

Three (3) hours of continuing education credit

(3 NBCOT PDUs/3 contact hours)

AOTA - .3 AOTA CEU, Category 1: Domain of OT – Client Factors, Context

Determination of Continuing Education Contact Hours

“Depression” has been established to be a 3 hour continuing education program. This determination is based on the standard for home-based self-study courses of approximately 12 pages of text (12 pt font) per hour. The complete instructional text for this course is 39 pages (excluding References and Post-Test)

Innovative Educational Services

To take the post-test for CE credit, go to: www.cheapceus.com

DEPRESSION

DEPRESSION

OUTLINE

Goals and Objectives	page 1	start of hour 1
Outline	2	
Overview	3	
Facts	3	
Economic Impact	3	
Types of Depression	3-4	
Symptoms	4-6	
Causes	6-7	
Research Findings	7-12	
Genetics Research	7-8	
Brain Imaging	8	
Structural Imaging	8-9	
Functional Imaging	9	
Hormonal Research	9-11	
Treatment Research	11	
Research by NIMH	11-12	end of hour 1
Diagnostic Evaluation	12-13	start of hour 2
Treatments	13-19	
Medication	13-17	
Psychotherapies	17-18	
Electroconvulsive Therapy	18	
Success Strategies	18-19	
Depression in Women	19-24	
Depression in Men	24-25	end of hour 2
Depression in the Elderly	25-27	start of hour 3
Depression in Children	27-34	
Depression and Stroke	35-36	
Depression and Cancer	36	
Depression and Diabetes	36-37	
Depression and Heart Disease	37-38	
Depression and HIV/AIDS	38	
Resources	39	
References	40-41	
Post-Test	42-43	end of hour 3

Innovative Educational Services

To take the post-test for CE credit, go to: www.cheapceus.com

DEPRESSION

OVERVIEW OF DEPRESSION

A depressive disorder is an illness that involves the body, mood, and thoughts. It affects the way a person eats and sleeps, the way one feels about oneself, and the way one thinks about things. A depressive disorder is not the same as a passing blue mood. It is not a sign of personal weakness or a condition that can be willed or wished away. People with a depressive illness cannot merely "pull themselves together" and get better. Without treatment, symptoms can last for weeks, months, or years. Appropriate treatment, however, can help most people who suffer from depression.

Depression is a serious medical condition. In contrast to the normal emotional experiences of sadness, loss, or passing mood states, clinical depression is persistent and can interfere significantly with an individual's ability to function.

Facts About Depression

- Major depression is the leading cause of disability in the U.S. and worldwide.
- Depressive disorders affect an estimated 9.5 percent of adult Americans ages 18 and over.
- Nearly twice as many women (12 percent) as men (7 percent) are affected by a depressive disorder each year.

Economic Impact of Depression

Untreated depression is costly. A RAND Corporation study found that patients with depressive symptoms spend more days in bed than those with diabetes, arthritis, back problems, lung problems or gastrointestinal disorders. Estimates of the total cost of depression to the Nation in 1990 range from \$30-\$44 billion. Of the \$44 billion figure, depression accounts for close to \$12 billion in lost work days each year. Additionally, more than \$11 billion in other costs accrue from decreased productivity due to symptoms that sap energy, affect work habits, cause problems with concentration, memory, and decision-making. And costs escalate still further if a worker's untreated depression contributes to alcoholism or drug abuse.

TYPES OF DEPRESSION

This course reviews three of the most common types of depressive disorders: major depressive disorder, dysthymic disorder, and bipolar disorder (manic-depressive illness). However, within these types there are variations in the number of symptoms, their severity, and persistence.

Innovative Educational Services

To take the post-test for CE credit, go to: www.cheapceus.com

DEPRESSION

Major depression is manifested by a combination of symptoms that interfere with the ability to work, study, sleep, eat, and enjoy once pleasurable activities. Such a disabling episode of depression may occur only once but more commonly occurs several times in a lifetime.

A less severe type of depression, dysthymia, involves long-term, chronic symptoms that do not disable, but keep one from functioning well or from feeling good. Many people with dysthymia also experience major depressive episodes at some time in their lives.

Another type of depression is *bipolar disorder*, also called manic-depressive illness. Not nearly as prevalent as other forms of depressive disorders, bipolar disorder is characterized by cycling mood changes: severe highs (mania) and lows (depression). Sometimes the mood switches are dramatic and rapid, but most often they are gradual. When in the depressed cycle, an individual can have any or all of the symptoms of a depressive disorder. When in the manic cycle, the individual may be overactive, overtalkative, and have a great deal of energy. Mania often affects thinking, judgment, and social behavior in ways that cause serious problems and embarrassment. For example, the individual in a manic phase may feel elated, full of grand schemes that might range from unwise business decisions to romantic sprees. Mania, left untreated, may worsen to a psychotic state. Because bipolar disorder requires different treatment than major depressive disorder or dysthymia, obtaining an accurate diagnosis is extremely important.

SYMPTOMS OF DEPRESSION AND MANIA

Not everyone who is depressed or manic experiences every symptom. Some people experience a few symptoms, some many. Severity of symptoms varies with individuals and also varies over time.

Depression

- Persistent sad, anxious, or "empty" mood
- Feelings of hopelessness, pessimism
- Feelings of guilt, worthlessness, helplessness
- Loss of interest or pleasure in hobbies and activities that were once enjoyed, including sex
- Decreased energy, fatigue, being "slowed down"
- Difficulty concentrating, remembering, making decisions
- Insomnia, early-morning awakening, or oversleeping
- Appetite and/or weight loss or overeating and weight gain
- Thoughts of death or suicide; suicide attempts
- Restlessness, irritability

Innovative Educational Services

To take the post-test for CE credit, go to: www.cheapceus.com

DEPRESSION

- Persistent physical symptoms that do not respond to treatment, such as headaches, digestive disorders, and chronic pain

Mania

- Abnormal or excessive elation
- Unusual irritability
- Decreased need for sleep
- Grandiose notions
- Increased talking
- Racing thoughts
- Increased sexual desire
- Markedly increased energy
- Poor judgment
- Inappropriate social behavior

Mixed State

Symptoms of mania and depression are sometimes present at the same time. This is referred to a “mixed state”. The symptom picture frequently includes agitation, trouble sleeping, significant change in appetite, psychosis, and suicidal thinking. Depressed mood accompanies manic activation.

Psychosis

Sometimes severe mania or depression is accompanied by periods of psychosis. Psychotic symptoms include hallucinations (hearing, seeing, or otherwise sensing the presence of stimuli that are not actually there) and delusions (false fixed beliefs that are not subject to reason or contradictory evidence and are not explained by a person's usual cultural concepts). Psychotic symptoms associated with bipolar disorder typically reflect the extreme mood state at the time (e.g., grandiosity during mania, worthlessness during depression).

Rapid Cycling

Bipolar disorder with rapid cycling is defined as four or more episodes of illness within a 12-month period. This form of the illness tends to be more resistant to treatment than non-rapid-cycling bipolar disorder.

The particular combinations and severity of symptoms vary among people with bipolar disorder. Some people experience very severe manic episodes, during which they may feel "out of control," have major impairment in functioning, and suffer psychotic symptoms. Other people have milder hypomanic episodes, characterized by low-level, non-psychotic symptoms of mania such as increased energy, euphoria, irritability, and intrusiveness, which may cause little impairment

Innovative Educational Services

To take the post-test for CE credit, go to: www.cheapceus.com

DEPRESSION

in functioning but are noticeable to others. Some people suffer severe, incapacitating depressions, with or without psychosis, that prevent them from working, going to school, or interacting with family or friends. Others experience more moderate depressive episodes, which may feel just as painful but impair functioning to a lesser degree. Inpatient hospitalization is often necessary to treat severe episodes of mania and depression.

A diagnosis of bipolar I disorder is made when a person has experienced at least one episode of severe mania; a diagnosis of bipolar II disorder is made when a person has experienced at least one hypomanic episode but has not met the criteria for a full manic episode. Cyclothymic disorder, a milder illness, is diagnosed when a person experiences, over the course of at least two years (one year for adolescents and children), numerous periods with hypomanic symptoms and numerous periods with depressive symptoms that are not severe enough to meet criteria for major manic or depressive episodes. People who meet criteria for bipolar disorder or unipolar depression and who experience chronic psychotic symptoms, which persist even with clearing of the mood symptoms, suffer from schizoaffective disorder. The diagnostic criteria for all mental disorders are described in the Diagnostic and Statistical Manual of Mental Disorders, 4th Edition (*DSM-IV*).

Many patients with bipolar disorder are initially misdiagnosed. This occurs most often either when a person with bipolar II disorder, whose hypomania is not recognized, is diagnosed with unipolar depression, or when a patient with severe psychotic mania is misjudged to have schizophrenia. However, since bipolar disorder, like other mental illnesses, cannot yet be identified physiologically (for example, by a blood test or a brain scan), diagnosis must be made on the basis of symptoms, course of illness, and, when available, family history.

CAUSES OF DEPRESSION

Some types of depression run in families, suggesting that a biological vulnerability can be inherited. This seems to be the case with bipolar disorder. Studies of families in which members of each generation develop bipolar disorder found that those with the illness have a somewhat different genetic makeup than those who do not get ill. However, the reverse is not true: Not everybody with the genetic makeup that causes vulnerability to bipolar disorder will have the illness. Apparently additional factors, possibly stresses at home, work, or school, are involved in its onset.

In some families, major depression also seems to occur generation after generation. However, it can also occur in people who have no family history of depression. Whether inherited or not, major depressive disorder is often associated with changes in brain structures or brain function.

Innovative Educational Services

To take the post-test for CE credit, go to: www.cheapceus.com

DEPRESSION

People who have low self-esteem, who consistently view themselves and the world with pessimism or who are readily overwhelmed by stress, are prone to depression. Whether this represents a psychological predisposition or an early form of the illness is not clear.

In recent years, researchers have shown that physical changes in the body can be accompanied by mental changes as well. Medical illnesses such as stroke, a heart attack, cancer, Parkinson's disease, and hormonal disorders can cause depressive illness, making the sick person apathetic and unwilling to care for his or her physical needs, thus prolonging the recovery period. Also, a serious loss, difficult relationship, financial problem, or any stressful (unwelcome or even desired) change in life patterns can trigger a depressive episode. Very often, a combination of genetic, psychological, and environmental factors is involved in the onset of a depressive disorder. Later episodes of illness typically are precipitated by only mild stresses, or none at all.

RESEARCH FINDINGS

Genetics Research

Data from family, twin, and adoption studies unequivocally demonstrate the involvement of genetic factors in the transmission of bipolar disorder. Research to date leads to the conclusion that in most families the etiology of bipolar disorder is complex, with vulnerability being produced by the interaction of multiple genes and non-genetic factors. Scientists expect that identification of genes conferring vulnerability to bipolar disorder, and the brain proteins they code for, will make it possible to develop better diagnostic procedures, treatments, and preventive interventions targeted at the underlying illness process.

The NIMH Bipolar Disorder Genetics Initiative, launched in 1989, continues to gather genetic material and state-of-the-art diagnostic and clinical data from families with two or more members affected by bipolar disorder. The primary goal of this initiative is to establish a national resource that makes DNA and clinical information widely available to qualified investigators in the scientific community. The genetic and clinical information is distributed in a way that keeps the research volunteers anonymous. Ten major research groups worldwide are currently studying DNA and clinical data from over 650 individuals with bipolar disorder and related conditions in an effort to find genes that confer vulnerability to bipolar disorder. Further information on the Initiative is available at <http://www-grb.nimh.nih.gov/gi.html>.

Successful genetic studies of complex disorders like bipolar disorder will require very large samples drawn from diverse populations, and/or samples drawn from genetically isolated populations. In order to facilitate such research, NIMH

Innovative Educational Services

To take the post-test for CE credit, go to: www.cheapceus.com

DEPRESSION

recently funded three major collaborative projects to collect data that will significantly augment the information already available in the NIMH Bipolar Genetics Initiative. In one study, scientists at nine research institutions across the United States will gather clinical and genetic data from at least 500 families in which two or more siblings suffer from bipolar disorder. In another, American and Israeli researchers will use shared methods of data collection, diagnosis, and clinical assessment to study 300 additional families. A third project will study over 300 families collected from the population of the Azores, a nine-island archipelago off the coast of Portugal. New genetic analytic methods and technologies like gene chips offer great potential for identifying specific gene sites responsible for vulnerability to bipolar disorder in such large samples of families.

Brain Imaging

Brain imaging technologies are helping scientists learn what goes wrong in the brain to produce mental illness. NIMH researchers are using advanced imaging techniques to examine brain function and structure in people with bipolar disorder.

An important area of imaging research focuses on identifying and characterizing neural circuits – networks of interconnected nerve cells in the brain, interactions among which form the basis for normal and abnormal behaviors. Researchers hypothesize that abnormalities in the structure and/or function of certain brain circuits could underlie bipolar and other mood disorders. Better understanding of the neural circuits involved in regulating mood states will influence the development of new and better treatments, and will ultimately aid in diagnosis.

Structural Imaging

NIMH has supported considerable research magnetic resonance imaging (MRI) to examine the structure of brain tissue in various mental disorders, including bipolar disorder. The first such studies have appeared only within the past ten years, with the pace of progress accelerating steadily since that time. The goal of this research is to discover the ways in which specific areas of the brain in people with bipolar disorder may differ from healthy individuals.

One of the most consistent findings to date has been the appearance of specific abnormalities, or lesions, in the white matter of the brain in patients with bipolar disorder. White matter consists of groups of nerve cell fibers surrounded by fatty sheaths that appear white in color. These sheaths help the transmission of electrical signals within the brain. While the white matter abnormalities appear in many parts of the brain in individuals with bipolar disorder, they tend to be concentrated in areas that are responsible for emotional processing. These brain changes increase in frequency with age both in people with bipolar disorder and

Innovative Educational Services

To take the post-test for CE credit, go to: www.cheapceus.com

DEPRESSION

individuals with no mental illness, but they appear more often than expected in young patients with bipolar disorder. This finding suggests that the white matter abnormalities seen with MRI are related to the presence of the disorder. However, some patients with bipolar disorder do not show the white matter changes, and conversely, some entirely healthy individuals have the lesions. Also, it is not yet clear whether these changes contribute to the onset of the disorder, or are in some way a result of becoming ill. While these MRI abnormalities likely indicate one type of malfunction in the brain circuits involved in bipolar disorder, more research is clearly needed to understand their significance and their utility for early diagnosis and treatment.

Functional Imaging

Functional neuroimaging is an important tool for researchers studying bipolar and other mood disorders. Studies using positron emission tomography (PET), a technique that measures brain function in terms of blood flow or glucose metabolism, have found abnormal activity in specific brain regions including the prefrontal cortex, basal ganglia, and temporal lobes during manic and depressive episodes. It is not yet known whether these functional abnormalities are a cause or consequence of mood disorders.

When neurons become more active, their demand for oxygen, delivered via the blood supply, increases. Using a special measurement technique called functional magnetic resonance imaging (fMRI), scientists can measure these changes in blood oxygen levels in different brain areas in healthy people and those with specific brain disorders, including unipolar and bipolar disorder and schizophrenia. This technique provides a powerful tool for understanding how the brains of individuals with mental disorders process information differently from healthy individuals, and for understanding and even predicting how people with these diseases might respond to different types of drug therapy. For example, NIMH supported researchers have studied how brain regions of healthy people and of people with depression respond differently when emotionally evocative pictures are viewed, and how drug treatment changes the response to these pictures in individuals with depression. Modified versions of both the fMRI and PET techniques, which allow scientists to directly study changes in brain chemistry and the activity of specific signaling molecules (neurotransmitters) in both healthy individuals and people with mood disorders, are enabling researchers to better understand the fundamental characteristics of bipolar disorder.

Hormonal Research

The hormonal system that regulates the body's response to stress, the hypothalamic-pituitary-adrenal (HPA) axis, is overactive in many patients with

Innovative Educational Services

To take the post-test for CE credit, go to: www.cheapceus.com

DEPRESSION

depression. Researchers are investigating whether this phenomenon contributes to the development of the illness.

The hypothalamus, the brain region responsible for managing hormone release from glands throughout the body, increases production of a substance called corticotropin releasing factor (CRF) when a threat to physical or psychological well-being is detected. Elevated levels and effects of CRF lead to increased hormone secretion by the pituitary and adrenal glands which prepares the body for defensive action. The body's responses include reduced appetite, decreased sex drive, and heightened alertness. Research suggests that persistent overactivation of this hormonal system may lay the groundwork for depression. The elevated CRF levels detectable in depressed patients are reduced by treatment with antidepressant drugs or ECT, and this reduction corresponds to improvement in depressive symptoms.

One important line of research has focused on brain systems that control cortisol. A number of studies conducted in people with depression indicate that excess cortisol released over a long time span may have many negative consequences for health. Excess cortisol may cause shrinking of the hippocampus, a brain structure required for the formation of certain types of memory.

In experiments with animals, scientists have shown that a well-defined period of early postnatal development may be an important determinant of the capacity to handle stress throughout life. In one set of studies, rat pups were removed each day from their mothers for a period as brief as 15 minutes and then returned. The natural maternal response of intensively licking and grooming the returned pup was shown to alter the brain chemistry of the pup in a positive way, making the animal less reactive to stressful stimuli. While these pups are able to mount an appropriate stress response in the face of threat, their response does not become excessive or inappropriate. Rat mothers who spontaneously lick and groom their pups with the same intensity even without human handling of the pups also produce pups that have a similarly stable reaction, including an appropriate stress hormone response.

Striking differences were seen in rat pups removed from their mothers for periods of 3 hours a day, a model of neglect compared to pups that were not separated. After 3 hours, the mother rats tended to ignore the pups, at least initially, upon their return. In sharp contrast to those pups that were greeted attentively by their mothers after a short absence, the "neglected" pups were shown to have a more profound and excessive stress response in subsequent tests. This response appeared to last into adulthood.

The implications of these animal studies are worrisome. However, research is in progress to determine the extent to which the hypersensitive or dysregulated stress response of "neglected" rat pups can be reversed if, for example, foster

Innovative Educational Services

To take the post-test for CE credit, go to: www.cheapceus.com

DEPRESSION

mothers are provided who will groom the pups more intensely, or if the animals are raised in an "enriched" environment following their separation. An enriched setting may include, for example, a diverse and varied diet, a running wheel, mazes, and changes of toys.

Animal investigators are well aware of another kind of long-term change, again rooted in the first days of life. Laboratory rats are often raised in shoebox cages with few sources of stimulation. Scientists have compared these animals to rats raised in an enriched environment and found that the "privileged" rats consistently have a thicker cerebral cortex and denser networks of nerve cells than the "deprived" rats.

Another study recently reported that infant monkeys raised by mothers who experienced unpredictable conditions in obtaining food showed markedly high levels of corticotropin releasing factor (CRF) in their cerebrospinal fluid and, as adults, abnormally low levels of cerebrospinal fluid cortisol. This is a pattern often seen in humans with depression. The distressed monkey mothers, uncertain about finding food, behaved inconsistently and sometimes neglectfully toward their offspring. The affected young monkeys were abnormally anxious when confronted with separations or new environments. They were also less social and more subordinate as adult animals.

Treatment Research

Medication side effects are often troublesome and can lead to reduced treatment adherence. Some regimens work well for years and then gradually lose their effectiveness. Researchers are working at multiple levels – from molecular genetics, to neuroimaging, to behavioral science, to clinical trials – to learn what underlies these and other treatment-related problems and to apply this knowledge toward the development of better treatments and enhanced treatment strategies.

Research by the National Institute of Mental Health

Research on the causes, treatment, and prevention of all forms of depression is a high priority of the NIMH. Areas of interest and opportunity include the following:

- NIMH researchers will seek to identify distinct subtypes of depression characterized by various features including genetic risk, course of illness, and clinical symptoms. The aims of this research will be to enhance clinical prediction of onset, recurrence, and co-occurring illness; to identify the influence of environmental stressors in people with genetic vulnerability for major depression; and to prevent the development of co-

Innovative Educational Services

To take the post-test for CE credit, go to: www.cheapceus.com

DEPRESSION

occurring physical illnesses and substance use disorders in people with primary recurrent depression.

- Because many adult mental disorders originate in childhood, studies of development over time that uncover the complex interactions among psychological, social, and biological events are needed to track the persistence, chronicity, and pathways into and out of disorders in childhood and adolescence. Information about behavioral continuities that may exist between specific dimensions of child temperament and child mental disorder, including depression, may make it possible to ward off adult psychiatric disorders.
- Recent research on thought processes that has provided insights into the nature and causes of mental illness creates opportunities for improving prevention and treatment. Among the important findings of this research is evidence that points to the role of negative attentional and memory biases (selective attention to and memory of negative information) in producing and sustaining depression and anxiety. Future studies are needed to obtain a more precise account of the content and life course development of these biases, including their interaction with social and emotional processes, and their neural influences and effects.
- Advances in neurobiology and brain imaging technology now make it possible to see clearer linkages between research findings from different domains of emotion and mood. Such "maps" of depression will inform understanding of brain development, effective treatments, and the basis for depression in children and adults. In adult populations, charting physiological changes involved in emotion during aging will shed light on mood disorders in the elderly, as well as the psychological and physiological effects of bereavement.
- An important long-term goal of NIMH depression research is to identify simple biological markers of depression that, for example, could be detected in blood or with brain imaging. In theory, biological markers would reveal the specific depression profile of each patient and would allow psychiatrists to select treatments known to be most effective for each profile. Although such data-driven interventions can only be imagined today, NIMH already is investing in multiple research strategies to lay the groundwork for tomorrow's discoveries.

DIAGNOSTIC EVALUATION

The first step to getting appropriate treatment for depression is a physical examination by a physician. Certain medications as well as some medical conditions such as a viral infection can cause the same symptoms as

Innovative Educational Services

To take the post-test for CE credit, go to: www.cheapceus.com

DEPRESSION

depression, and the physician should rule out these possibilities through examination, interview, and lab tests. If a physical cause for the depression is ruled out, a psychological evaluation should be done, by the physician or by referral to a psychiatrist or psychologist.

A good diagnostic evaluation will include a complete history of symptoms, i.e., when they started, how long they have lasted, how severe they are, whether the patient had them before and, if so, whether the symptoms were treated and what treatment was given. The doctor should ask about alcohol and drug use, and if the patient has thoughts about death or suicide. Further, a history should include questions about whether other family members have had a depressive illness and, if treated, what treatments they may have received and which were effective.

Last, a diagnostic evaluation should include a mental status examination to determine if speech or thought patterns or memory have been affected, as sometimes happens in the case of a depressive or manic-depressive illness.

TREATMENTS FOR DEPRESSION

Medications

Antidepressants are used most often for serious depressions, but they can also be helpful for some milder depressions. Antidepressants are not "uppers" or stimulants, but rather take away or reduce the symptoms of depression and help depressed people feel the way they did before they became depressed.

The doctor chooses an antidepressant based on the individual's symptoms. Some people notice improvement in the first couple of weeks; but usually the medication must be taken regularly for at least 6 weeks and, in some cases, as many as 8 weeks before the full therapeutic effect occurs. If there is little or no change in symptoms after 6 or 8 weeks, the doctor may prescribe a different medication or add a second medication such as lithium, to augment the action of the original antidepressant. Because there is no way of knowing beforehand which medication will be effective, the doctor may have to prescribe first one and then another. To give a medication time to be effective and to prevent a relapse of the depression once the patient is responding to an antidepressant, the medication should be continued for 6 to 12 months, or in some cases longer, carefully following the doctor's instructions. When a patient and the doctor feel that medication can be discontinued, withdrawal should be discussed as to how best to taper off the medication gradually. For those who have had several bouts of depression, long-term treatment with medication is the most effective means of preventing more episodes.

Innovative Educational Services

To take the post-test for CE credit, go to: www.cheapceus.com

DEPRESSION

Dosage of antidepressants varies, depending on the type of drug and the person's body chemistry, age, and, sometimes, body weight. Traditionally, antidepressant dosages are started low and raised gradually over time until the desired effect is reached without the appearance of troublesome side effects. Newer antidepressants may be started at or near therapeutic doses.

From the 1960s through the 1980s, tricyclic antidepressants (named for their chemical structure) were the first line of treatment for major depression. Most of these medications affected two chemical neurotransmitters, norepinephrine and serotonin. Though the tricyclics are as effective in treating depression as the newer antidepressants, their side effects are usually more unpleasant; thus, today tricyclics such as imipramine, amitriptyline, nortriptyline, and desipramine are used as a second- or third-line treatment. Other antidepressants introduced during this period were monoamine oxidase inhibitors (MAOIs). MAOIs are effective for some people with major depression who do not respond to other antidepressants. They are also effective for the treatment of panic disorder and bipolar depression. MAOIs approved for the treatment of depression are phenelzine (Nardil), tranylcypromine (Parnate), and isocarboxazid (Marplan). Because substances in certain foods, beverages, and medications can cause dangerous interactions when combined with MAOIs, people on these agents must adhere to dietary restrictions. This has deterred many clinicians and patients from using these effective medications, which are in fact quite safe when used as directed.

The past decade has seen the introduction of many new antidepressants that work as well as the older ones but have fewer side effects. Some of these medications primarily affect one neurotransmitter, serotonin, and are called selective serotonin reuptake inhibitors (SSRIs). These include fluoxetine (*Prozac*), sertraline (*Zoloft*), fluvoxamine (*Luvox*), paroxetine (*Paxil*), and citalopram (*Celexa*).

The late 1990s ushered in new medications that, like the tricyclics, affect both norepinephrine and serotonin but have fewer side effects. These new medications include venlafaxine (*Effexor*) and nefazadone (*Serzone*).

Other newer medications chemically unrelated to the other antidepressants are the sedating mirtazepine (*Remeron*) and the more activating bupropion (*Wellbutrin*). Wellbutrin has not been associated with weight gain or sexual dysfunction but is not used for people with, or at risk for, a seizure disorder.

Each antidepressant differs in its side effects and in its effectiveness in treating an individual person, but the majority of people with depression can be treated effectively by one of these antidepressants.

Innovative Educational Services

To take the post-test for CE credit, go to: www.cheapceus.com

DEPRESSION

Side effects of antidepressant medications

Antidepressants may cause mild, and often temporary, side effects (sometimes referred to as adverse effects) in some people. Typically, these are not serious. However, any reactions or side effects that are unusual, annoying, or that interfere with functioning should be reported to the doctor immediately. The most common side effects of tricyclic antidepressants, and ways to deal with them, are as follows:

- *Dry mouth*--it is helpful to drink sips of water; chew sugarless gum; brush teeth daily.
- *Constipation*--bran cereals, prunes, fruit, and vegetables should be in the diet.
- *Bladder problems*--emptying the bladder completely may be difficult, and the urine stream may not be as strong as usual. Older men with enlarged prostate conditions may be at particular risk for this problem. The doctor should be notified if there is any pain.
- *Sexual problems*--sexual functioning may be impaired; if this is worrisome, it should be discussed with the doctor.
- *Blurred vision*--this is usually temporary and will not necessitate new glasses. Glaucoma patients should report any change in vision to the doctor.
- *Dizziness*--rising from the bed or chair slowly is helpful.
- *Drowsiness as a daytime problem*--this usually passes soon. A person who feels drowsy or sedated should not drive or operate heavy equipment. The more sedating antidepressants are generally taken at bedtime to help sleep and to minimize daytime drowsiness.
- *Increased heart rate*--pulse rate is often elevated. Older patients should have an electrocardiogram (EKG) before beginning tricyclic treatment.

The newer antidepressants, including SSRIs, have different types of side effects, as follows:

- *Sexual problems*--fairly common, but reversible, in both men and women. The doctor should be consulted if the problem is persistent or worrisome.
- *Headache*--this will usually go away after a short time.
- *Nausea*--may occur after a dose, but it will disappear quickly.
- *Nervousness and insomnia (trouble falling asleep or waking often during the night)*--these may occur during the first few weeks; dosage reductions or time will usually resolve them.
- *Agitation (feeling jittery)*--if this happens for the first time after the drug is taken and is more than temporary, the doctor should be notified.
- Any of these side effects may be amplified when an SSRI is combined with other medications that affect serotonin. In the most extreme cases, such a combination of medications (e.g., an SSRI and an MAOI) may

Innovative Educational Services

To take the post-test for CE credit, go to: www.cheapceus.com

DEPRESSION

result in a potentially serious or even fatal "serotonin syndrome," characterized by fever, confusion, muscle rigidity, and cardiac, liver, or kidney problems.

The small number of people for whom MAOIs are the best treatment need to avoid taking decongestants and consuming certain foods that contain high levels of tyramine, such as many cheeses, wines, and pickles. The interaction of tyramine with MAOIs can bring on a sharp increase in blood pressure that can lead to a stroke. The doctor should furnish a complete list of prohibited foods that the individual should carry at all times. Other forms of antidepressants require no food restrictions. MAOIs also should not be combined with other antidepressants, especially SSRIs, due to the risk of serotonin syndrome.

Lithium has for many years been the treatment of choice for bipolar disorder, as it can be effective in smoothing out the mood swings common to this disorder. Its use must be carefully monitored, as the range between an effective dose and a toxic one is small. If a person has preexisting thyroid, kidney, or heart disorders or epilepsy, lithium may not be recommended. Fortunately, other medications have been found to be of benefit in controlling mood swings. Among these are two mood-stabilizing anticonvulsants, carbamazepine (Tegretol[®]) and valproate (Depakote[®]). Both of these medications have gained wide acceptance in clinical practice, and valproate has been approved by the Food and Drug Administration for first-line treatment of acute mania. Other anticonvulsants that are being used now include lamotrigine (Lamictal[®]) and gabapentin (Neurontin[®]): their role in the treatment hierarchy of bipolar disorder remains under study.

Medications of any kind--prescribed, over-the-counter, or herbal supplements--should never be mixed without consulting the doctor; nor should medications ever be borrowed from another person. Other health professionals who may prescribe a drug--such as a dentist or other medical specialist--should be told that the person is taking a specific antidepressant and the dosage. Some drugs, although safe when taken alone, can cause severe and dangerous side effects if taken with other drugs. Alcohol (wine, beer, and hard liquor) or street drugs may reduce the effectiveness of antidepressants and their use should be minimized or, preferably, avoided by anyone taking antidepressants. Some people who have not had a problem with alcohol use may be permitted by their doctor to use a modest amount of alcohol while taking one of the newer antidepressants. The potency of alcohol may be increased by medications since both are metabolized by the liver; one drink may feel like two.

Herbal Therapy

In the past few years, much interest has risen in the use of herbs in the treatment of both depression and anxiety. St. John's wort (*Hypericum perforatum*), an herb used extensively in the treatment of mild to moderate depression in Europe, has

Innovative Educational Services

To take the post-test for CE credit, go to: www.cheapceus.com

DEPRESSION

recently aroused interest in the United States. St. John's wort, an attractive bushy, low-growing plant covered with yellow flowers in summer, has been used for centuries in many folk and herbal remedies. Today in Germany, Hypericum is used in the treatment of depression more than any other antidepressant. However, the scientific studies that have been conducted on its use have been short-term and have used several different doses.

Because of the widespread interest in St. John's wort, the National Institutes of Health (NIH) is conducting a 3-year study, sponsored by three NIH components—the National Institute of Mental Health, the National Center for Complementary and Alternative Medicine, and the Office of Dietary Supplements. The study is designed to include 336 patients with major depression, randomly assigned to an 8-week trial with one-third of patients receiving a uniform dose of St. John's wort, another third a selective serotonin reuptake inhibitor commonly prescribed for depression, and the final third a placebo (a pill that looks exactly like the SSRI and the St. John's wort, but has no active ingredients). The study participants who respond positively will be followed for an additional 18 weeks. After the 3-year study has been completed, results will be analyzed and published.

The Food and Drug Administration issued a Public Health Advisory on February 10, 2000. It stated that St. John's wort appears to affect an important metabolic pathway that is used by many drugs prescribed to treat conditions such as heart disease, depression, seizures, certain cancers, and rejection of transplants. Therefore, health care providers should alert their patients about these potential drug interactions. Any herbal supplement should be taken only after consultation with the doctor or other health care provider.

Psychotherapies

Many forms of psychotherapy, including some short-term (10-20 week) therapies, can help depressed individuals. "Talking" therapies help patients gain insight into and resolve their problems through verbal exchange with the therapist, sometimes combined with "homework" assignments between sessions. "Behavioral" therapists help patients learn how to obtain more satisfaction and rewards through their own actions and how to unlearn the behavioral patterns that contribute to or result from their depression.

Two of the short-term psychotherapies that research has shown helpful for some forms of depression are interpersonal and cognitive/behavioral therapies. Interpersonal therapists focus on the patient's disturbed personal relationships that both cause and exacerbate (or increase) the depression. Cognitive/behavioral therapists help patients change the negative styles of thinking and behaving often associated with depression.

Innovative Educational Services

To take the post-test for CE credit, go to: www.cheapceus.com

DEPRESSION

Research indicates that mild to moderate depression often can be treated successfully with either therapy alone; however, severe depression appears more likely to respond to a combination of psychotherapy and medication. More than 80 percent of people with depressive disorders improve when they receive appropriate treatment.

Electroconvulsive Therapy

In situations where medication, psychotherapy, and the combination of these interventions prove ineffective, or work too slowly to relieve severe symptoms such as psychosis (e.g., hallucinations, delusional thinking) or suicidality, electroconvulsive therapy (ECT) may be considered. ECT is a highly effective treatment for severe depressive episodes. In recent years, ECT has been much improved. A muscle relaxant is given before treatment, which is done under brief anesthesia. Electrodes are placed at precise locations on the head to deliver electrical impulses. The stimulation causes a brief (about 30 seconds) seizure within the brain. The person receiving ECT does not consciously experience the electrical stimulus. For full therapeutic benefit, at least several sessions of ECT, typically given at the rate of three per week, are required. The possibility of long-lasting memory problems, although a concern in the past, has been significantly reduced with modern ECT techniques. However, the potential benefits and risks of ECT, and of available alternative interventions, should be carefully reviewed and discussed with individuals considering this treatment and, where appropriate, with family or friends.

Success Strategies

Depressive disorders make one feel exhausted, worthless, helpless, and hopeless. Such negative thoughts and feelings make some people feel like giving up. It is important to realize that these negative views are part of the depression and typically do not accurately reflect the actual circumstances. Negative thinking fades as treatment begins to take effect. In the meantime:

- Set realistic goals in light of the depression and assume a reasonable amount of responsibility.
- Break large tasks into small ones, set some priorities, and do what you can as you can.
- Try to be with other people and to confide in someone; it is usually better than being alone and secretive.
- Participate in activities that may make you feel better.
- Mild exercise, going to a movie, a ballgame, or participating in religious, social, or other activities may help.
- Expect your mood to improve gradually, not immediately. Feeling better takes time.

Innovative Educational Services

To take the post-test for CE credit, go to: www.cheapceus.com

DEPRESSION

- It is advisable to postpone important decisions until the depression has lifted. Before deciding to make a significant transition (i.e., change jobs, get married or divorced) discuss it with others who know you well and have a more objective view of your situation.
- People rarely "snap out of" a depression. But they can feel a little better day-by-day.
- Positive thinking will replace the negative thinking that is part of the depression and will disappear as your depression responds to treatment.
- Let your family and friends help you.

DEPRESSION IN WOMEN

Mental illnesses affect women and men differently—some disorders are more common in women, and some express themselves with different symptoms. Scientists are only now beginning to tease apart the contribution of various biological and psychosocial factors to mental health and mental illness in both women and men. In addition, researchers are currently studying the special problems of treatment for serious mental illness during pregnancy and the postpartum period. Research on women's health has grown substantially in the last 20 years. Today's studies are helping to clarify the risk and protective factors for mental disorders in women and to improve women's mental health treatment outcome.

In the U.S., nearly twice as many women (12.0 percent) as men (6.6 percent) are affected by a depressive disorder each year. These figures translate to 12.4 million women and 6.4 million men. Major depression is the leading cause of disease burden among females ages 5 and older worldwide.

Depressive disorders raise the risk for suicide. Although men are 4 times more likely than women to die by suicide, women report *attempting* suicide about 2 to 3 times as often as men. Self-inflicted injury, including suicide, ranks 9th out of the 10 leading causes of disease burden for females ages 5 and older worldwide.

Research shows that before adolescence and late in life, females and males experience depression at about the same frequency. Because the gender difference in depression is not seen until after puberty and decreases after menopause, scientists hypothesize that hormonal factors are involved in women's greater vulnerability. Stress due to psychosocial factors, such as multiple roles in the home and at work and the increased likelihood of women to be poor, at risk for violence and abuse, and raising children alone, also plays a role in the development of depression.

While many women report some history of premenstrual mood changes and physical symptoms, an estimated 3 to 4 percent suffer severe symptoms that significantly interfere with work and social functioning. This impairing form of

Innovative Educational Services

To take the post-test for CE credit, go to: www.cheapceus.com

DEPRESSION

premenstrual syndrome, also called Premenstrual Dysphoric Disorder (PMDD), appears to be an abnormal response to normal hormone changes. Researchers are studying what makes some women susceptible to PMDD, including differences in hormone sensitivity, history of other mood disorders, and individual differences in the function of brain chemical messenger systems. Antidepressant medications known to work via serotonin circuits are effective in relieving the premenstrual symptoms. Women with susceptibility to depression may be more vulnerable to the mood-shifting effects of hormones. A recent study showed that in the case of severe premenstrual syndrome (PMS), women with a preexisting vulnerability to PMS experienced relief from mood and physical symptoms when their sex hormones were suppressed. Shortly after the hormones were re-introduced, they again developed symptoms of PMS. Women without a history of PMS reported no effects of the hormonal manipulation.

Many women are also particularly vulnerable after the birth of a baby. The hormonal and physical changes, as well as the added responsibility of a new life, can be factors that lead to postpartum depression in some women. While transient "blues" are common in new mothers, a full-blown depressive episode is not a normal occurrence and requires active intervention. Postpartum depression is a serious disorder that can disable some women with an apparent underlying vulnerability. Research is evaluating the use of antidepressant medication and psychosocial interventions following delivery to prevent postpartum depression in women with a history of this disorder.

Researchers recently found that women who suffer depression as they enter the early stages of menopause (perimenopause) may find estrogen to be an alternative to traditional antidepressants. The efficacy of the female hormone was comparable to that usually reported with antidepressants in the first controlled study of its direct effects on mood in perimenopausal women meeting standardized criteria for depression.

Adulthood: Relationships and Work Roles

Stress in general can contribute to depression in persons biologically vulnerable to the illness. Some have theorized that higher incidence of depression in women is not due to greater vulnerability, but to the particular stresses that many women face. These stresses include major responsibilities at home and work, single parenthood, and caring for children and aging parents. How these factors may uniquely affect women is not yet fully understood.

For both women and men, rates of major depression are highest among the separated and divorced, and lowest among the married, while remaining always higher for women than for men. The quality of a marriage, however, may contribute significantly to depression. Lack of an intimate, confiding relationship, as well as overt marital disputes, have been shown to be related to depression in

Innovative Educational Services

To take the post-test for CE credit, go to: www.cheapceus.com

DEPRESSION

women. In fact, rates of depression were shown to be highest among unhappily married women.

Reproductive Events

Women's reproductive events include the menstrual cycle, pregnancy, the postpregnancy period, infertility, menopause, and sometimes, the decision not to have children. These events bring fluctuations in mood that for some women include depression. Researchers have confirmed that hormones have an effect on the brain chemistry that controls emotions and mood; a specific biological mechanism explaining hormonal involvement is not known, however.

Many women experience certain behavioral and physical changes associated with phases of their menstrual cycles. In some women, these changes are severe, occur regularly, and include depressed feelings, irritability, and other emotional and physical changes. Called premenstrual syndrome (PMS) or premenstrual dysphoric disorder (PMDD), the changes typically begin after ovulation and become gradually worse until menstruation starts. Scientists are exploring how the cyclical rise and fall of estrogen and other hormones may affect the brain chemistry that is associated with depressive illness.

Postpartum mood changes can range from transient "blues" immediately following childbirth to an episode of major depression to severe, incapacitating, psychotic depression. Studies suggest that women who experience major depression after childbirth very often have had prior depressive episodes even though they may not have been diagnosed and treated.

Pregnancy (if it is desired) seldom contributes to depression. Women with infertility problems may be subject to extreme anxiety or sadness, though it is unclear if this contributes to a higher rate of depressive illness. In addition, motherhood may be a time of heightened risk for depression because of the stress and demands it imposes.

Menopause, in general, is not associated with an increased risk of depression. In fact, while once considered a unique disorder, research has shown that depressive illness at menopause is no different than at other ages. The women more vulnerable to change-of-life depression are those with a history of past depressive episodes.

Specific Cultural Considerations

As for depression in general, the prevalence rate of depression in African American and Hispanic women remains about twice that of men. There is some indication, however, that major depression and dysthymia may be diagnosed less frequently in African American and slightly more frequently in Hispanic than in

Innovative Educational Services

To take the post-test for CE credit, go to: www.cheapceus.com

DEPRESSION

Caucasian women. Prevalence information for other racial and ethnic groups is not definitive.

Possible differences in symptom presentation may affect the way depression is recognized and diagnosed among minorities. In addition, people from various cultural backgrounds may view depressive symptoms in different ways. Such factors should be considered when working with women from special populations.

Victimization

Studies show that women molested as children are more likely to have clinical depression at some time in their lives than those with no such history. In addition, several studies show a higher incidence of depression among women who have been raped as adolescents or adults. Since far more women than men were sexually abused as children, these findings are relevant. Women who experience other commonly occurring forms of abuse, such as physical abuse and sexual harassment on the job, also may experience higher rates of depression. Abuse may lead to depression by fostering low self-esteem, a sense of helplessness, self-blame, and social isolation. There may be biological and environmental risk factors for depression resulting from growing up in a dysfunctional family. At present, more research is needed to understand whether victimization is connected specifically to depression.

Poverty

Women and children represent seventy-five percent of the U.S. population considered poor. Low economic status brings with it many stresses, including isolation, uncertainty, frequent negative events, and poor access to helpful resources. Sadness and low morale are more common among persons with low incomes and those lacking social supports. But research has not yet established whether depressive illnesses are more prevalent among those facing environmental stressors such as these.

Depression in Later Adulthood

At one time, it was commonly thought that women were particularly vulnerable to depression when their children left home and they were confronted with "empty nest syndrome" and experienced a profound loss of purpose and identity. However, studies show no increase in depressive illness among women at this stage of life.

As with younger age groups, more elderly women than men suffer from depressive illness. Similarly, for all age groups, being unmarried (which includes widowhood) is also a risk factor for depression. Most important, depression

Innovative Educational Services

To take the post-test for CE credit, go to: www.cheapceus.com

DEPRESSION

should not be dismissed as a normal consequence of the physical, social, and economic problems of later life. In fact, studies show that most older people feel satisfied with their lives.

About 800,000 persons are widowed each year. Most of them are older, female, and experience varying degrees of depressive symptomatology. Most do not need formal treatment, but those who are moderately or severely sad appear to benefit from self-help groups or various psychosocial treatments. However, a third of widows/widowers do meet criteria for major depressive episode in the first month after the death, and half of these remain clinically depressed 1 year later. These depressions respond to standard antidepressant treatments, although research on when to start treatment or how medications should be combined with psychosocial treatments is still in its early stages.

Women and Psychotropic Medications

Because there is a risk of birth defects with some psychotropic medications during early pregnancy, a woman who is taking such medication and wishes to become pregnant should discuss her plans with her doctor. In general, it is desirable to minimize or avoid the use of medication during early pregnancy. If a woman on medication discovers that she is pregnant, she should contact her doctor immediately. She and the doctor can decide how best to handle her therapy during and following the pregnancy. Some precautions that should be taken are:

- If possible, lithium should be discontinued during the first trimester (first 3 months of pregnancy) because of an increased risk of birth defects.
- If the patient has been taking an anticonvulsant such as carbamazepine (*Tegretol*) or valproic acid (*Depakote*)--both of which have a somewhat higher risk than lithium--an alternate treatment should be used if at all possible. The risks of two other anticonvulsants, lamotrigine (*Lamictal*) and gabapentin (*Neurontin*) are unknown. An alternative medication for any of the anticonvulsants might be a conventional antipsychotic or an antidepressant, usually an SSRI. If essential to the patient's health, an anticonvulsant should be given at the lowest dose possible. It is especially important when taking an anticonvulsant to take a recommended dosage of folic acid during the first trimester.
- Benzodiazepines are not recommended during the first trimester.

The decision to use a psychotropic medication should be made only after a careful discussion between the woman, her partner, and her doctor about the risks and benefits to her and the baby. If, after discussion, they agree it best to continue medication, the lowest effective dosage should be used, or the medication can be changed. For a woman with an anxiety disorder, a change from a benzodiazepine to an antidepressant might be considered. Cognitive-

Innovative Educational Services

To take the post-test for CE credit, go to: www.cheapceus.com

DEPRESSION

behavioral therapy may be beneficial in helping an anxious or depressed person to lower medication requirements. For women with severe mood disorders, a course of electroconvulsive therapy (ECT) is sometimes recommended during pregnancy as a means of minimizing exposure to riskier treatments.

After the baby is born, there are other considerations. Women with bipolar disorder are at particularly high risk for a postpartum episode. If they have stopped medication during pregnancy, they may want to resume their medication just prior to delivery or shortly thereafter. They will also need to be especially careful to maintain their normal sleep-wake cycle. Women who have histories of depression should be checked for recurrent depression or postpartum depression during the months after the birth of a child.

Women who are planning to breastfeed should be aware that small amounts of medication pass into the breast milk. In some cases, steps can be taken to reduce the exposure of the nursing infant to the mother's medication, for instance, by timing doses to post-feeding sleep periods. The potential benefits and risks of breastfeeding by a woman taking psychotropic medication should be discussed and carefully weighed by the patient and her physician.

A woman who is taking birth control pills should be sure that her doctor knows this. The estrogen in these pills may affect the breakdown of medications by the body--for example, increasing side effects of some antianxiety medications or reducing their ability to relieve symptoms of anxiety. Also, some medications, including carbamazepine and some antibiotics, and an herbal supplement, St. John's wort, can cause an oral contraceptive to be ineffective.

DEPRESSION IN MEN

Researchers estimate that at least six million men in the United States suffer from a depressive disorder every year. Research and clinical evidence reveal that while both women and men can develop the standard symptoms of depression, they often experience depression differently and may have different ways of coping with the symptoms. Men may be more willing to acknowledge fatigue, irritability, loss of interest in work or hobbies, and sleep disturbances rather than feelings of sadness, worthlessness, and excessive guilt. Some researchers question whether the standard definition of depression and the diagnostic tests based upon it adequately capture the condition as it occurs in men.

Men are more likely than women to report alcohol and drug abuse or dependence in their lifetime; however, there is debate among researchers as to whether substance use is a "symptom" of underlying depression in men, or a co-occurring condition that more commonly develops in men. Nevertheless, substance use can mask depression, making it harder to recognize depression

Innovative Educational Services

To take the post-test for CE credit, go to: www.cheapceus.com

DEPRESSION

as a separate illness that needs treatment.

Instead of acknowledging their feelings, asking for help, or seeking appropriate treatment, men may turn to alcohol or drugs when they are depressed, or become frustrated, discouraged, angry, irritable and, sometimes, violently abusive. Some men deal with depression by throwing themselves compulsively into their work, attempting to hide their depression from themselves, family, and friends; other men may respond to depression by engaging in reckless behavior, taking risks, and putting themselves in harm's way.

Four times as many men as women die by suicide in the United States, even though women make more suicide attempts during their lives. In addition to the fact that the methods men use to attempt suicide are generally more lethal than those methods used by women, there may be other issues that protect women against suicide death. In light of research indicating that suicide is often associated with depression, the alarming suicide rate among men may reflect the fact that men are less likely to seek treatment for depression. Many men with depression do not obtain adequate diagnosis and treatment, which may be life saving.

More research is needed to understand all aspects of depression in men, including how men respond to stress and feelings associated with depression, how to make them more comfortable acknowledging these feelings and getting the help they need, and how to train physicians to better recognize and treat depression in men. Family members, friends, and employee assistance professionals in the workplace also can play important roles in recognizing depressive symptoms in men and helping them get treatment.

Depression can also affect the physical health in men differently from women. A new study shows that, although depression is associated with an increased risk of coronary heart disease in both men and women, only men suffer a high death rate.

Men must cope with several kinds of stress as they age. If they have been the primary wage earners for their families and have identified heavily with their jobs, they may feel stress upon retirement-loss of an important role, loss of self-esteem-that can lead to depression. Similarly, the loss of friends and family and the onset of other health problems can trigger depression.

DEPRESSION IN THE ELDERLY

Major depression, a significant predictor of suicide in older adults is a widely under-recognized and under-treated medical illness. In fact, several studies have found that many older adults who commit suicide have visited a primary care physician very close to the time of the suicide: *20 percent on the same day, 40*

Innovative Educational Services

To take the post-test for CE credit, go to: www.cheapceus.com

DEPRESSION

percent within one week, and 70 percent within one month of the suicide. These findings point to the urgency of enhancing both the detection and the adequate treatment of depression as a means of reducing the risk of suicide among the elderly.

Older Americans are disproportionately likely to commit suicide. Comprising only 13 percent of the U.S. population, individuals ages 65 and older accounted for 19 percent of all suicide deaths in 1997. The highest rate is for white men ages 85 and older: 64.9 deaths per 100,000 persons in 1997, about 6 times the national U.S. rate of 10.6 per 100,000.

An estimated 6 percent of Americans ages 65 and older in a given year, or approximately 2 million of the 34 million adults in this age group in 1998, have a diagnosable depressive illness (major depressive disorder, bipolar disorder, or dysthymic disorder). In contrast to the normal emotional experiences of sadness, grief, loss, or passing mood states, depressive disorders can be extreme and persistent and can interfere significantly with an individual's ability to function. Dysthymic disorder as well as depressive symptoms that do not meet full diagnostic criteria for a disorder are common among the elderly and are associated with an increased risk of developing major depression. In any of its forms, however, depression is not a normal part of aging.

Depression often co-occurs with other medical illnesses such as cardiovascular disease, stroke, diabetes, and cancer. Because many older adults face such physical illnesses as well as various social and economic difficulties, individual health care professionals often mistakenly conclude that depression is a normal consequence of these problems—an attitude often shared by patients themselves. These factors conspire to make the illness under-diagnosed and under-treated.

Some people have the mistaken idea that it is normal for the elderly to feel depressed. On the contrary, most older people feel satisfied with their lives. Sometimes, though, when depression develops, it may be dismissed as a normal part of aging. Depression in the elderly, undiagnosed and untreated, causes needless suffering for the family and for the individual who could otherwise live a fruitful life. When he or she does go to the doctor, the symptoms described are usually physical, for the older person is often reluctant to discuss feelings of hopelessness, sadness, loss of interest in normally pleasurable activities, or extremely prolonged grief after a loss.

Recognizing how depressive symptoms in older people are often missed, many health care professionals are learning to identify and treat the underlying depression. They recognize that some symptoms may be side effects of medication the older person is taking for a physical problem, or they may be caused by a co-occurring illness. If a diagnosis of depression is made, treatment

Innovative Educational Services

To take the post-test for CE credit, go to: www.cheapceus.com

DEPRESSION

with medication and/or psychotherapy will help the depressed person return to a happier, more fulfilling life. Recent research suggests that brief psychotherapy (talk therapies that help a person in day-to-day relationships or in learning to counter the distorted negative thinking that commonly accompanies depression) is effective in reducing symptoms in short-term depression in older persons who are medically ill. Psychotherapy is also useful in older patients who cannot or will not take medication. Efficacy studies show that late-life depression can be treated with psychotherapy.

Improved recognition and treatment of depression in late life will make those years more enjoyable and fulfilling for the depressed elderly person, the family, and caretakers.

DEPRESSION IN CHILDREN

Only in the past two decades has depression in children been taken very seriously. The depressed child may pretend to be sick, refuse to go to school, cling to a parent, or worry that the parent may die. Older children may sulk, get into trouble at school, be negative, grouchy, and feel misunderstood. Because normal behaviors vary from one childhood stage to another, it can be difficult to tell whether a child is just going through a temporary "phase" or is suffering from depression. Sometimes the parents become worried about how the child's behavior has changed, or a teacher mentions that "your child doesn't seem to be himself." In such a case, if a visit to the child's pediatrician rules out physical symptoms, the doctor will probably suggest that the child be evaluated, preferably by a psychiatrist who specializes in the treatment of children.

The National Institute of Mental Health (NIMH) has identified the use of medications for depression in children as an important area for research. The NIMH-supported Research Units on Pediatric Psychopharmacology (RUPPs) form a network of seven research sites where clinical studies on the effects of medications for mental disorders can be conducted in children and adolescents. Among the medications being studied are antidepressants, some of which have been found to be effective in treating children with depression, if properly monitored by the child's physician.

Symptoms of mania and depression in children and adolescents may manifest themselves through a variety of different behaviors. When manic, children and adolescents, in contrast to adults, are more likely to be irritable and prone to destructive outbursts than to be elated or euphoric. When depressed, there may be many physical complaints such as headaches, muscle aches, stomachaches or tiredness, frequent absences from school or poor performance in school, talk of or efforts to run away from home, irritability, complaining, unexplained crying, social isolation, poor communication, and extreme sensitivity to rejection or

Innovative Educational Services

To take the post-test for CE credit, go to: www.cheapceus.com

DEPRESSION

failure. Other manifestations of manic and depressive states may include alcohol or substance abuse and difficulty with relationships.

Existing evidence indicates that bipolar disorder beginning in childhood or early adolescence may be a different, possibly more severe form of the illness than older adolescent- and adult-onset bipolar disorder. When the illness begins before or soon after puberty, it is often characterized by a continuous, rapid-cycling, irritable, and mixed symptom state that may co-occur with disruptive behavior disorders, particularly attention deficit hyperactivity disorder (ADHD) or conduct disorder (CD), or may have features of these disorders as initial symptoms. In contrast, later adolescent- or adult-onset bipolar disorder tends to begin suddenly, often with a classic manic episode, and to have a more episodic pattern with relatively stable periods between episodes. There is also less co-occurring ADHD or CD among those with later onset illness.

A child or adolescent who appears to be depressed and exhibits ADHD-like symptoms that are very severe, with excessive temper outbursts and mood changes, should be evaluated by a psychiatrist or psychologist with experience in bipolar disorder, particularly if there is a family history of the illness. This evaluation is especially important since psychostimulant medications, often prescribed for ADHD, may worsen manic symptoms. There is also limited evidence suggesting that some of the symptoms of ADHD may be a forerunner of full-blown mania.

Findings from an NIMH-supported study suggest that the illness may be at least as common among youth as among adults. In this study, one percent of adolescents ages 14 to 18 were found to have met criteria for bipolar disorder or cyclothymia, a similar but milder illness, in their lifetime. In addition, close to six percent of adolescents in the study had experienced a distinct period of abnormally and persistently elevated, expansive, or irritable mood even though they never met full criteria for bipolar disorder or cyclothymia. Compared to adolescents with a history of major depressive disorder and to a never-mentally-ill group, both the teens with bipolar disorder and those with subclinical symptoms had greater functional impairment and higher rates of co-occurring illnesses (especially anxiety and disruptive behavior disorders), suicide attempts, and mental health services utilization. The study highlights the need for improved recognition, treatment, and prevention of even the milder and subclinical cases of bipolar disorder in adolescence.

Treatment

Once the diagnosis of bipolar disorder is made, the treatment of children and adolescents is based mainly on experience with adults, since as yet there is very limited data on the efficacy and safety of mood stabilizing medications in youth. The essential treatment for this disorder in adults involves the use of appropriate

Innovative Educational Services

To take the post-test for CE credit, go to: www.cheapceus.com

DEPRESSION

doses of mood stabilizers, most typically lithium and/or valproate, which are often very effective for controlling mania and preventing recurrences of manic and depressive episodes. Research on the effectiveness of these and other medications in children and adolescents with bipolar disorder is ongoing. In addition, studies are investigating various forms of psychotherapy, including cognitive-behavioral therapy, to complement medication treatment for this illness in young people.

Depressive disorders can have far reaching effects on the functioning and adjustment of young people. Among both children and adolescents, depressive disorders confer an increased risk for illness and interpersonal and psychosocial difficulties that persist long after the depressive episode is resolved; in adolescents there is also an increased risk for substance abuse and suicidal behavior. Unfortunately, these disorders often go unrecognized by families and physicians alike. Signs of depressive disorders in young people often are viewed as normal mood swings typical of a particular developmental stage. In addition, health care professionals may be reluctant to prematurely "label" a young person with a mental illness diagnosis. Yet early diagnosis and treatment of depressive disorders are critical to healthy emotional, social, and behavioral development.

Although the scientific literature on treatment of children and adolescents with depression is far less extensive than that concerning adults, a number of studies—mostly conducted in the last four to five years—have confirmed the short-term efficacy and safety of treatments for depression in youth. Larger treatment trials are needed to determine which treatments work best for which youngsters, and studies are also needed, however, on how to best incorporate these treatments into primary care practice.

Scope of the Problem

A number of epidemiological studies have reported that up to 2.5 percent of children and up to 8.3 percent of adolescents in the U.S. suffer from depression. An NIMH-sponsored study of 9- to 17-year-olds estimates that the prevalence of any depression is more than 6 percent in a 6-month period, with 4.9 percent having major depression. In addition, research indicates that depression onset is occurring earlier in life today than in past decades. A recently published longitudinal prospective study found that early-onset depression often persists, recurs, and continues into adulthood, and indicates that depression in youth may also predict more severe illness in adult life. Depression in young people often co-occurs with other mental disorders, most commonly anxiety, disruptive behavior, or substance abuse disorders, and with physical illnesses, such as diabetes.

Before adolescence, there is little difference in the rate of depression in boys and girls. But between the ages of 11 and 13 there is a precipitous rise in depression

Innovative Educational Services

To take the post-test for CE credit, go to: www.cheapceus.com

DEPRESSION

rates for girls. By the age of 15, females are twice as likely to have experienced a major depressive episode as males. This comes at a time in adolescence when roles and expectations change dramatically. The stresses of adolescence include forming an identity, emerging sexuality, separating from parents, and making decisions for the first time, along with other physical, intellectual, and hormonal changes. These stresses are generally different for boys and girls, and may be associated more often with depression in females. Studies show that female high school students have significantly higher rates of depression, anxiety disorders, eating disorders, and adjustment disorders than male students, who have higher rates of disruptive behavior disorders.

Suicide

Depression in children and adolescents is associated with an increased risk of suicidal behaviors. This risk may rise, particularly among adolescent boys, if the depression is accompanied by conduct disorder and alcohol or other substance abuse. In 1997, suicide was the third leading cause of death in 10- to 24-year-olds. Researchers found that among adolescents who develop major depressive disorder, as many as 7 percent may commit suicide in the young adult years. Consequently, it is important for doctors and parents to take all threats of suicide seriously.

Clinical Characteristics

The diagnostic criteria and key defining features of major depressive disorder in children and adolescents are the same as they are for adults. However, recognition and diagnosis of the disorder may be more difficult in youth for several reasons. The way symptoms are expressed varies with the developmental stage of the youngster. In addition, children and young adolescents with depression may have difficulty in properly identifying and describing their internal emotional or mood states. For example, instead of communicating how bad they feel, they may act out and be irritable toward others, which may be interpreted simply as misbehavior or disobedience. Research has found that parents are even less likely to identify major depression in their adolescents than are the adolescents themselves.

Signs That May Be Associated with Depression in Children and Adolescents

- Frequent vague, non-specific physical complaints such as headaches, muscle aches, stomachaches or tiredness
- Frequent absences from school or poor performance in school
- Talk of or efforts to run away from home
- Outbursts of shouting, complaining, unexplained irritability, or crying
- Being bored

Innovative Educational Services

To take the post-test for CE credit, go to: www.cheapceus.com

DEPRESSION

- Lack of interest in playing with friends
- Alcohol or substance abuse
- Social isolation, poor communication
- Fear of death
- Extreme sensitivity to rejection or failure
- Increased irritability, anger, or hostility
- Reckless behavior
- Difficulty with relationships

While the recovery rate from a single episode of major depression in children and adolescents is quite high, episodes are likely to recur. In addition, youth with dysthymic disorder are at risk for developing major depression. Prompt identification and treatment of depression can reduce its duration and severity and associated functional impairment.

Screening

There are several tools that are useful for screening children and adolescents for possible depression. They include the Children's Depression Inventory (CDI) for ages 7 to 17; and, for adolescents, the Beck Depression Inventory (BDI) and the Center for Epidemiologic Studies Depression (CES-D) Scale. When a youngster screens positive on any of these instruments, a comprehensive diagnostic evaluation by a mental health professional is warranted. The evaluation should include interviews with the youth, parents, and when possible, other informants such as teachers and social services personnel.

Risk Factors

In childhood, boys and girls appear to be at equal risk for depressive disorders; but during adolescence, girls are twice as likely as boys to develop depression. Children who develop major depression are more likely to have a family history of the disorder, often a parent who experienced depression at an early age, than patients with adolescent- or adult-onset depression. Adolescents with depression are also likely to have a family history of depression, though the correlation is not as high as it is for children.

Other risk factors include:

- Stress
- Cigarette smoking
- A loss of a parent or loved one
- Break-up of a romantic relationship
- Attentional, conduct or learning disorders
- Chronic illnesses, such as diabetes
- Abuse or neglect

Innovative Educational Services

To take the post-test for CE credit, go to: www.cheapceus.com

DEPRESSION

- Other trauma, including natural disasters

Treatment

Treatment for depressive disorders in children and adolescents often involves short-term psychotherapy, medication, or the combination, and targeted interventions involving the home or school environment. There remains, however, a pressing need for additional research on the effectiveness of psychosocial and pharmacological treatments for depression in youth. While data from adults indicate the need for maintenance treatment after episode recovery in order to prevent recurrences, the value of such treatment in children and adolescents has yet to be determined through research.

Psychotherapy

Recent research shows that certain types of short-term psychotherapy, particularly cognitive-behavioral therapy (CBT), can help relieve depression in children and adolescents. CBT is based on the premise that people with depression have cognitive distortions in their views of themselves, the world, and the future. CBT, designed to be a time-limited therapy, focuses on changing these distortions. An study that compared different types of psychotherapy for major depression in adolescents found that CBT led to remission in nearly 65 percent of cases, a higher rate than either supportive therapy or family therapy. CBT also resulted in a more rapid treatment response.

Another specific psychotherapy, interpersonal therapy (IPT), focuses on working through disturbed personal relationships that may contribute to depression. IPT has not been well investigated in youth with depression; however, one controlled study found that IPT led to greater improvement than clinical contact alone.

Continuing psychotherapy for several months after remission of symptoms may help patients and families consolidate the skills learned during the acute phase of depression, cope with the after-effects of the depression, effectively address environmental stressors, and understand how the young person's thoughts and behaviors could contribute to a relapse.

Medication

Research clearly demonstrates that antidepressant medications, especially when combined with psychotherapy, can be very effective treatments for depressive disorders in adults. Using medication to treat mental illness in children and adolescents, however, has caused controversy. Many doctors have been understandably reluctant to treat young people with psychotropic medications because, until fairly recently, little evidence was available about the safety and efficacy of these drugs in youth.

Innovative Educational Services

To take the post-test for CE credit, go to: www.cheapceus.com

DEPRESSION

In the last few years, however, researchers have been able to conduct randomized, placebo-controlled studies with children and adolescents. Some of the newer antidepressant medications, specifically the selective serotonin reuptake inhibitors (SSRIs), have been shown to be safe and efficacious for the short-term treatment of severe and persistent depression in young people, although large scale studies in clinical populations are still needed. So far, there are two controlled studies showing efficacy of fluoxetine and paroxetine, respectively. It is important to note that available studies do not support the efficacy of tricyclic antidepressants (TCAs) for depression in youth.

Medication as a first-line course of treatment should be considered for children and adolescents with severe symptoms that would prevent effective psychotherapy, those who are unable to undergo psychotherapy, those with psychosis, and those with chronic or recurrent episodes. Following remission of symptoms, continuation treatment with medication and/or psychotherapy for at least several months may be recommended by the psychiatrist, given the high risk of relapse and recurrence of depression. Discontinuation of medications, as appropriate, should be done gradually over 6 weeks or longer.

Other Types of Depression in Children and Adolescents

Bipolar Disorder

Although rare in young children, bipolar disorder can appear in both children and adolescents. It is more likely to affect the children of parents who have the disorder. Twenty to 40 percent of adolescents with major depression develop bipolar disorder within 5 years after depression onset.

Existing evidence indicates that bipolar disorder beginning in childhood or early adolescence may be a different, possibly more severe form of the illness than older adolescent- and adult-onset bipolar disorder. When the illness begins before or soon after puberty, it is often characterized by a continuous, rapid-cycling, irritable, and mixed symptom state that may co-occur with disruptive behavior disorders, particularly attention deficit hyperactivity disorder (ADHD) or conduct disorder (CD), or may have features of these disorders as initial symptoms. In contrast, later adolescent- or adult-onset bipolar disorder tends to begin suddenly, often with a classic manic episode, and to have a more episodic pattern with relatively stable periods between episodes. There is also less co-occurring ADHD or CD among those with later onset illness.

A child or adolescent who appears to be depressed and exhibits ADHD-like symptoms that are very severe, with excessive temper outbursts and mood changes, should be evaluated by a psychiatrist or psychologist with experience in bipolar disorder, particularly if there is a family history of the illness. This evaluation is especially important since psychostimulant medications, often

Innovative Educational Services

To take the post-test for CE credit, go to: www.cheapceus.com

DEPRESSION

prescribed for ADHD, may worsen manic symptoms. There is also limited evidence suggesting that some of the symptoms of ADHD may be a forerunner of full-blown mania.

The essential treatment of bipolar disorder in adults involves the use of appropriate doses of mood stabilizing medications, typically lithium and/or valproate, which are often very effective for controlling mania and preventing recurrences of manic and depressive episodes. Treatment of children and adolescents diagnosed with bipolar disorder is based mainly on experience with adults, since as yet there is very limited data on the safety and efficacy of mood stabilizing medications in youth. Researchers currently are evaluating both pharmacological and psychosocial interventions for bipolar disorder in young people.

Using antidepressant medication to treat depression in a person who has bipolar disorder may induce manic symptoms if it is taken without a mood stabilizer, such as lithium or valproate. In addition, using psychostimulant medications to treat ADHD or ADHD-like symptoms in a child or adolescent with bipolar disorder may worsen manic symptoms. While it can be hard to determine which young patients will become manic, there is a greater likelihood among children and adolescents who have a family history of bipolar disorder. If manic symptoms develop or markedly worsen during antidepressant or stimulant use, a child psychiatrist should be consulted, and treatment for bipolar disorder should be considered. Physicians should be aware of the signs and symptoms of mania so that they can educate families on how to recognize these and report them immediately.

Dysthymic disorder (or dysthymia)

This less severe yet typically more chronic form of depression is diagnosed when depressed mood persists for at least one year in children or adolescents and is accompanied by at least two other symptoms of major depression. Dysthymia is associated with an increased risk for developing major depressive disorder, bipolar disorder, and substance abuse. Treatment of dysthymia may prevent the deterioration to more severe illness. If dysthymia is suspected in a young patient, referral to a mental health specialist is indicated for a comprehensive diagnostic evaluation and appropriate treatment.

HOW FAMILY AND FRIENDS CAN HELP

The most important thing anyone can do for the depressed person is to help him or her get an appropriate diagnosis and treatment. This may involve encouraging the individual to stay with treatment until symptoms begin to abate (several weeks), or to seek different treatment if no improvement occurs. On occasion, it may require making an appointment and accompanying the depressed person to

Innovative Educational Services

To take the post-test for CE credit, go to: www.cheapceus.com

DEPRESSION

the doctor. It may also mean monitoring whether the depressed person is taking medication. The depressed person should be encouraged to obey the doctor's orders about the use of alcoholic products while on medication. The second most important thing is to offer emotional support. This involves understanding, patience, affection, and encouragement. Engage the depressed person in conversation and listen carefully. Do not disparage feelings expressed, but point out realities and offer hope. Do not ignore remarks about suicide. Report them to the depressed person's therapist. Invite the depressed person for walks, outings, to the movies, and other activities. Be gently insistent if your invitation is refused. Encourage participation in some activities that once gave pleasure, such as hobbies, sports, religious or cultural activities, but do not push the depressed person to undertake too much too soon. The depressed person needs diversion and company, but too many demands can increase feelings of failure.

Do not accuse the depressed person of faking illness or of laziness, or expect him or her "to snap out of it." Eventually, with treatment, most people do get better. Keep that in mind, and keep reassuring the depressed person that, with time and help, he or she will feel better.

DEPRESSION AND STROKE

Depression can strike anyone, but people with serious illnesses such as stroke may be at greater risk. Appropriate diagnosis and treatment of depression may bring substantial benefits to persons recovering from a stroke by improving their medical status, enhancing their quality of life, and reducing their pain and disability. Treatment for depression also can shorten the rehabilitation process, lead to more rapid recovery and resumption of routine, and save health care costs (e.g., eliminate nursing home expenses).

Stroke can occur in all age groups and can happen even to fetuses still in the womb; but three-fourths of strokes occur in people 65 years of age and over, making stroke a leading cause of disability in older persons. Of the 600,000 American men and women who experience a first or recurrent stroke each year, an estimated 10 to 27 percent experience major depression. An additional 15 to 40 percent experience some symptoms of depression within two months following a stroke.

The average duration of major depression in people who have suffered a stroke is just under a year. Among the factors that affect the likelihood and severity of depression following a stroke are the location of the brain lesion, previous or family history of depression, and pre-stroke social functioning. Stroke survivors who are also depressed, particularly those with major depressive disorder, may be less compliant with rehabilitation, more irritable, and may experience personality change.

Innovative Educational Services

To take the post-test for CE credit, go to: www.cheapceus.com

DEPRESSION

Despite the enormous advances in brain research in the past 20 years, depression often goes undiagnosed and untreated. Stroke survivors, their family members and friends, and even their physicians may misinterpret depressive symptoms as an inevitable reaction to the effects of a stroke. But depression is a separate illness that can and should be treated, even when a person is undergoing post-stroke rehabilitation.

DEPRESSION AND CANCER

Research has enabled many men, women, and young people with cancer to survive and to lead fuller, more productive lives, both while they are undergoing treatment, and afterwards. As with other serious illnesses, such as HIV, heart disease, or stroke, cancer can be accompanied by depression, which can affect mind, mood, body and behavior. Treatment for depression helps people manage both diseases, thus enhancing survival and quality of life.

About 9 million Americans of all ages are living with a current or past diagnosis of cancer. People who face a cancer diagnosis will experience many stresses and emotional upheavals. Fear of death, interruption of life plans, changes in body image and self-esteem, changes in social role, lifestyle, and medical bills are important issues to be faced. Still, not everyone with cancer becomes depressed. Depression can exist before the diagnosis of cancer or may develop after the cancer is identified. While there is no evidence to support a causal role for depression in cancer, depression may impact the course of the disease and a person's ability to participate in treatment.

Despite the enormous advances in brain research in the past 20 years, depression often goes undiagnosed and untreated. While studies generally indicate that about 25 percent of people with cancer have depression, only 2 percent of cancer patients in one study were receiving antidepressant medication. Persons with cancer, their families and friends, and even their physicians and oncologists may misinterpret depression's warning signs, mistaking them for inevitable accompaniments to cancer.

DEPRESSION AND DIABETES

Several studies suggest that diabetes doubles the risk of depression compared to those without the disorder. The chances of becoming depressed increase as diabetes complications worsen. Research shows that depression leads to poorer physical and mental functioning, so a person is less likely to follow a required diet or medication plan. Treating depression with psychotherapy, medication, or a combination of these treatments can improve a patient's well-being and ability to manage diabetes.

Innovative Educational Services

To take the post-test for CE credit, go to: www.cheapceus.com

DEPRESSION

Causes underlying the association between depression and diabetes are unclear. Depression may develop because of stress but also may result from the metabolic effects of diabetes on the brain. Studies suggest that people with diabetes who have a history of depression are more likely to develop diabetic complications than those without depression. People who suffer from both diabetes and depression tend to have higher health care costs in primary care.

DEPRESSION AND HEART DISEASE

Research over the past two decades has shown that depression and heart disease are common companions and, what is worse, each can lead to the other. It appears now that depression is an important risk factor for heart disease along with high blood cholesterol and high blood pressure. A study conducted in Baltimore, MD found that of 1,551 people who were free of heart disease, those who had a history of depression were 4 times more likely than those who did not to suffer a heart attack in the next 14 years. In addition, researchers in Montreal, Canada found that heart patients who were depressed were 4 times as likely to die in the next 6 months as those who were not depressed.

Depression may make it harder to take the medications needed and to carry out the treatment for heart disease. Depression also may result in chronically elevated levels of stress hormones, such as cortisol and adrenaline, and the activation of the sympathetic nervous system (part of the "fight or flight" response), which can have deleterious effects on the heart.

The first studies of heart disease and depression found that people with heart disease were more likely to suffer from depression than otherwise healthy people. While about 1 in 20 American adults experience major depression in a given year, the number goes to about 1 in 3 for people who have survived a heart attack. Furthermore, other researchers have found that most heart patients with depression do not receive appropriate treatment. Cardiologists and primary care physicians tend to miss the diagnosis of depression and even when they do recognize it, they often do not treat it adequately.

The public health impact of depression and heart disease, both separately and together, is enormous. Depression is the estimated leading cause of disability worldwide, and heart disease is by far the leading cause of death in the United States. Approximately 1 in 3 Americans will die of some form of heart disease.

Studies indicate that depression can appear after heart disease and/or heart disease surgery. In one investigation, nearly half of the patients studied one week after cardiopulmonary bypass surgery experienced serious cognitive problems, which may contribute to clinical depression in some individuals.

Innovative Educational Services

To take the post-test for CE credit, go to: www.cheapceus.com

DEPRESSION

There are also multiple studies indicating that heart disease can follow depression. Psychological distress may cause rapid heartbeat, high blood pressure, and faster blood clotting. It can also lead to elevated insulin and cholesterol levels. These risk factors, with obesity, form a constellation of symptoms and often serve as a predictor of and a response to heart disease. People with depression may feel slowed down and still have high levels of stress hormones. This can increase the work of the heart. As high levels of stress hormones are signaling a "fight or flight" reaction, the body's metabolism is diverted away from the type of tissue repair needed in heart disease.

Regardless of cause, the combination of depression and heart disease is associated with increased sickness and death, making effective treatment of depression imperative. Pharmacological and cognitive-behavioral therapy treatments for depression are relatively well developed and play an important role in reducing the adverse impact of depression. With the advent of the selective serotonin reuptake inhibitors to treat depression, more medically ill patients can be treated without the complicating cardiovascular side effects of the previous drugs available. Ongoing research is investigating whether these treatments also reduce the associated risk of a second heart attack. Furthermore, preventive interventions based on cognitive-behavior theories of depression also merit attention as approaches for avoiding adverse outcomes associated with both disorders. These interventions may help promote adherence and behavior change that may increase the impact of available pharmacological and behavioral approaches to both diseases.

Exercise is another potential pathway to reducing both depression and risk of heart disease. A recent study found that participation in an exercise training program was comparable to treatment with an antidepressant medication (a selective serotonin reuptake inhibitor) for improving depressive symptoms in older adults diagnosed with major depression.

DEPRESSION AND HIV/AIDS

Although as many as one in three persons with HIV may suffer from depression, the warning signs of depression are often misinterpreted. People with HIV, their families and friends, and even their physicians may assume that depressive symptoms are an inevitable reaction to being diagnosed with HIV. But the depression is a separate illness that can and should be treated, even when a person is undergoing treatment for HIV or AIDS. Some of the symptoms of depression could be related to HIV, specific HIV-related disorders, or medication side effects.

Innovative Educational Services

To take the post-test for CE credit, go to: www.cheapceus.com

DEPRESSION

RESOURCES

National Institute of Mental Health
Information Resources and Inquiries Branch
6001 Executive Boulevard
Room 8184, MSC 9663
Bethesda, MD 20892-9663
Telephone: 1-301-443-4513
FAX: 1-301-443-4279
Depression brochures: 1-800-421-4211
TTY: 1-301-443-8431
FAX4U: 1-301-443-5158
Website: <http://www.nimh.nih.gov>
E-mail: nimhinfo@nih.gov

National Alliance for the Mentally Ill
2107 Wilson Boulevard, Suite 300
Arlington, VA 22201-3042
Telephone: 1-703-524-7600; 1-800-950-NAMI
Website: <http://www.nami.org>
A support and advocacy organization of consumers, families, and friends of people with severe mental illness-over 1,200 state and local affiliates. Local affiliates often give guidance to finding treatment.

National Depressive and Manic Depressive Association
730 N. Franklin, Suite 501
Chicago, IL 60601
1-312-642-0049; 1-800-826-3632
Website: <http://www.ndmda.org>
Purpose is to educate patients, families, and the public concerning the nature of depressive illnesses. Maintains an extensive catalog of helpful books.

National Foundation for Depressive Illness, Inc.
P.O. Box 2257
New York, NY 10016
1-212-268-4260; 1-800-239-1265
Website: <http://www.depression.org>
A foundation that informs the public about depressive illness and its treatability and promotes programs of research, education, and treatment.

Innovative Educational Services

To take the post-test for CE credit, go to: www.cheapceus.com

DEPRESSION

REFERENCES

- Achterberg W, Pot AM, Kerkstra A, Ribbe M. Depressive symptoms in newly admitted nursing home residents. *International Journal of Geriatric Psychiatry*. 21(12):1156-62, 2006 Dec.
- American Psychiatric Association. Diagnostic and Statistical Manual of Mental Disorders, *Fourth Edition (DSM-IV)*. Washington, DC: American Psychiatric Press, 1994.
- Arthur HM. Depression, isolation, social support, and cardiovascular disease in older adults. [Review] [40 refs] *Journal of Cardiovascular Nursing*. 21(5 Suppl 1):S2-7; quiz S8-9, 2006 Sep-Oct.
- Birmaher B, Brent DA, Benson RS. Summary of the practice parameters for the assessment and treatment of children and adolescents with depressive disorders. American Academy of Child and Adolescent Psychiatry. *Journal of the American Academy of Child and Adolescent Psychiatry*, 1998; 37(11): 1234-8.
- Birmaher B, Ryan ND, Williamson DE, et al. Childhood and adolescent depression: a review of the past 10 years. Part I. *Journal of the American Academy of Child and Adolescent Psychiatry*, 1996; 35(11): 1427-39.
- Brown J, Cohen P, Johnson JG, et al. Childhood abuse and neglect: specificity of effects on adolescent and young adult depression and suicidality. *Journal of the American Academy of Child and Adolescent Psychiatry*, 1999; 38(12): 1490-6.
- Candy M, Jones L, Williams R, Tookman A, King M. Psychostimulants for depression. Cochrane Database of Systematic Reviews. (2):CD006722, 2008.
- Carroll LJ, Cassidy JD, Cote P. Frequency, timing, and course of depressive symptomatology after whiplash. *Spine*. 31(16):E551-6, 2006 Jul 15.
- Cooper C, Katona C, Orrell M, Livingston G. Coping strategies, anxiety and depression in caregivers of people with Alzheimer's disease. *International Journal of Geriatric Psychiatry*. 23(9):929-36, 2008 Sep.
- Cuijpers P, van Straten A, Smit F. Psychological treatment of late-life depression: a meta-analysis of randomized controlled trials. *International Journal of Geriatric Psychiatry*. 21(12):1139-49, 2006 Dec.
- Depression Guideline Panel. *Clinical practice guideline, number 5. Depression in primary care: volume 2. Treatment of major depression*. AHCPR Publication No. 93-0551. Rockville: U.S. Department of Health and Human Services, Agency for Health Care Policy and Research, 1993.
- Duval F, Lebowitz BD, Macher JP. Treatments in depression. [Review] [147 refs] *Dialogues in Clinical Neuroscience*. 8(2):191-206, 2006.
- Egger E, Schmid JP, Schmid RW, Saner H, von Kanel R. Depression and anxiety symptoms affect change in exercise capacity during cardiac rehabilitation. *European Journal of Cardiovascular Prevention & Rehabilitation*. 15(6):704-8, 2008 Dec
- Ell K. Depression care for the elderly: reducing barriers to evidence-based practice. [Review] [240 refs] *Home Health Care Services Quarterly*. 25(1-2):115-48, 2006.
- Elliott RL. Depression in primary care. *Ethnicity & Disease*. 17(2 Suppl 2):S2-28-33, 2007.
- Feely M, Sines D, Long A. Early life experiences and their impact on our understanding of depression. *Journal of Psychiatric & Mental Health Nursing*. 14(4):393-402, 2007 Jun.
- Ferretick AK, Schwartzbaum JA, Frid DJ, Moeschberger ML. Depression as an antecedent to heart disease among women and men in the NHANES I study. National Health and Nutrition Examination Survey. *Archives of Internal Medicine*, 2000; 160(9): 1261-8.
- Geller B, Reising D, Leonard HL, et al. Critical review of tricyclic antidepressant use in children and adolescents. *Journal of the American Academy of Child and Adolescent Psychiatry*, 1999; 38(5): 513-6.
- Hackett ML, Anderson CS, House A, Xia J. Interventions for treating depression after stroke. [Cochrane Database of Systematic Reviews. (4):CD003437, 2008.
- He Q, Zhang J, Tang Y. A controlled study on treatment of mental depression by acupuncture plus TCM medication. *Journal of Traditional Chinese Medicine*. 27(3):166-9, 2007 Sep
- Heok KE, Ho R The many faces of geriatric depression. *Current Opinion in Psychiatry*. 21(6):540-5, 2008 Nov.
- Hepner KA, Rowe M, Rost K, Hickey SC, Sherbourne CD, Ford DE, Meredith LS, Rubenstein LV. The effect of adherence to practice guidelines on depression outcomes. *Annals of Internal Medicine*. 147(5):320-9, 2007 Sep 4.
- Hoyert DL, Kochanek KD, Murphy SL. Deaths: final data for 1997. *National Vital Statistics Report*. DHHS Publication No. (PHS) 99-1120. Hyattsville: National Center for Health Statistics, 1999; 47(19)
- Jayson D, Wood A, Kroll L, et al. Which depressed patients respond to cognitive-behavioral treatment? *Journal of the American Academy of Child and Adolescent Psychiatry*, 1998; 37(1): 35-9
- Jorm AF, Morgan AJ, Hetrick SE Relaxation for depression. Cochrane Database of Systematic Reviews. (4):CD007142, 2008.

Innovative Educational Services

To take the post-test for CE credit, go to: www.cheapceus.com

DEPRESSION

- Kapfhammer HP. Somatic symptoms in depression. [Review] [169 refs] *Dialogues in Clinical Neuroscience*. 8(2):227-39, 2006.
- Klein DN, Schwartz JE, Rose S, et al. Five-year course and outcome of dysthymic disorder: a prospective, naturalistic follow-up study. *American Journal of Psychiatry*, 2000; 157(6): 931-9.
- Kohatsu W. Nutrition and depression. [Review] [32 refs] *Explore-The Journal of Science & Healing*. 1(6):474-6, 2005 Nov..
- Lebowitz BD, Pearson JL, Schneider LS, Reynolds CF, Alexopoulos GS, Bruce MI, Conwell Y, Katz IR, Meyers BS, Morrison MF, Mossey J, Niederehe G, Parmelee P. Diagnosis and treatment of depression in late life: consensus statement update. *Journal of the American Medical Association*, 1997; 278:1186-90.
- Linde K, Berner MM, Kriston L. St John's wort for major depression. Cochrane Database of Systematic Reviews. (4):CD000448, 2008.
- Marcell J. Caregivers at risk for depression. *Caring*. 25(5):28-9, 31, 2006 May.
- McClellan J, Werry J. Practice parameters for the assessment and treatment of children and adolescents with bipolar disorder. American Academy of Child and Adolescent Psychiatry. *Journal of the American Academy of Child and Adolescent Psychiatry*, 1997; 36(Suppl 10): 157S-76S.
- Mead GE, Morley W, Campbell P, Greig CA, McMurdo M, Lawlor DA. Exercise for depression. Cochrane Database of Systematic Reviews. (4):CD004366, 2008.
- Monroe SM, Rohde P, Seeley JR, et al. Life events and depression in adolescence: relationship loss as a prospective risk factor for first onset of major depressive disorder. *Journal of Abnormal Psychology*, 1999; 108(4): 606-14.
- Mufson L, Weissman MM, Moreau D, et al. Efficacy of interpersonal psychotherapy for depressed adolescents. *Archives of General Psychiatry*, 1999; 56(6): 573-9.
- Nguyen HT, Zonderman AB. Relationship between age and aspects of depression: consistency and reliability across two longitudinal studies. *Psychology & Aging*. 21(1):119-26, 2006 Mar.
- Nierenberg AA. An analysis of the efficacy of treatments for bipolar depression. *Journal of Clinical Psychiatry*. 69 Suppl 5:4-8, 2008.
- Quelhas AC, Power MJ, Juhos C, Senos J. Counterfactual thinking and functional differences in depression. *Clinical Psychology & Psychotherapy*. 15(5):352-65, 2008 Sep.
- Reinecke MA, Ryan NE, DuBois DL. Cognitive-behavioral therapy of depression and depressive symptoms during adolescence: a review and meta-analysis. *Journal of the American Academy of Child and Adolescent Psychiatry*, 1998; 37(1): 26-34
- Robins LN, Regier DA (Eds). *Psychiatric Disorders in America, The Epidemiologic Catchment Area Study*, 1990; New York: The Free Press.
- Rollman BL, Weinreb L, Korsen N, Schulberg HC. Implementation of guideline-based care for depression in primary care. [Review] [53 refs] *Administration & Policy in Mental Health*. 33(1):43-53, 2006 Jan.
- Shaffer D, Craft L. Methods of adolescent suicide prevention. *Journal of Clinical Psychiatry*, 1999; 60(Suppl 2): 70-4; discussion 75-6, 113-6.
- Smits JA, Berry AC, Rosenfield D, Powers MB, Behar E, Otto MW. Reducing anxiety sensitivity with exercise. *Depression & Anxiety*. 25(8):689-99, 2008.
- St John PD, Blandford AA, Strain LA. Depressive symptoms among older adults in urban and rural areas. *International Journal of Geriatric Psychiatry*. 21(12):1175-80, 2006 Dec.
- Starkstein SE, Mizrahi R. Depression in Alzheimer's disease. [Review] [49 refs] *Expert Review of Neurotherapeutics*. 6(6):887-95, 2006 Jun.
- Teachman BA. Aging and negative affect: the rise and fall and rise of anxiety and depression symptoms. *Psychology & Aging*. 21(1):201-7, 2006 Mar.
- Thomas SA, Lincoln NB. Factors relating to depression after stroke. *British Journal of Clinical Psychology*. 45(Pt 1):49-61, 2006 Mar.
- Timbremont B, Braet C, Bosmans G, Van Vlierberghe L. Cognitive biases in depressed and non-depressed referred youth. *Clinical Psychology & Psychotherapy*. 15(5):329-39, 2008 Sep.
- Weissman MM, Wolk S, Goldstein RB, et al. Depressed adolescents grown up. *Journal of the American Medical Association*, 1999; 281:1701-13.
- Wells KB, Miranda J. Reducing the burden of depression: building villages for coordinated care. *JAMA*. 298(12):1451-2, 2007 Sep 26.
- Wells VE, Deykin EY, Klerman GL. Risk factors for depression in adolescence. *Psychiatric Development*, 1985; 3(1):83-108.
- Young AS, Klap R, Shoai R, Wells KB. Persistent depression and anxiety in the United States: prevalence and quality of care. *Psychiatric Services*. 59(12):1391-8, 2008 Dec.

Innovative Educational Services

To take the post-test for CE credit, go to: www.cheapceus.com

DEPRESSION

DEPRESSION POST-TEST

1. What is the leading cause of disability in the U.S. and worldwide?
 - A. Back injuries
 - B. Sleep disorders
 - C. Major depression
 - D. Nutritional disorders

2. Which of the following is NOT one of the three most common types of depressive disorders?
 - A. Major depressive disorder
 - B. Causative depressive disorder
 - C. Dysthymic disorder
 - D. Bipolar disorder

3. Persistent over-activation of which system may contribute to the development of depression?
 - A. Hypothalamic-Pituitary-Adrenal
 - B. Hypothalamic-Thymus
 - C. Pituitary-Thymus
 - D. Thymus-Pineal

4. Tricyclic antidepressants work by affecting
 - A. Norepinephrine and serotonin
 - B. Oxytonin and cortisol
 - C. Norepinephrine and cortisol
 - D. Oxytonin and serotonin

5. People who take MAOI's should avoid eating foods that contain high levels of
 - A. Potassium
 - B. Tyramine
 - C. Adenine
 - D. Beta Proteins

Innovative Educational Services

To take the post-test for CE credit, go to: www.cheapceus.com

DEPRESSION

6. The short term psychotherapy that focuses on changing a person's negative style of thinking and behaving is known as
 - A. Positive imaging
 - B. Restructuring therapy
 - C. Interpersonal therapy
 - D. Cognitive / behavioral therapy

7. What percentage of older adults who commit suicide, visit their doctor on the same day that they kill themselves?
 - A. 5%
 - B. 10%
 - C. 15%
 - D. 20%

8. By the age of 15, females are _____ as likely to have experienced a major depressive episode as males.
 - A. half
 - B. twice
 - C. three times
 - D. four times

9. Which of the following is NOT a tool used to screen children and adolescents for depression?
 - A. Children's Depression Inventory
 - B. Beck Depression Inventory
 - C. Center for Epidemiologic Studies Depression Scale
 - D. Glickman Pediatric Depression Inventory

10. What percentage of people with cancer, suffer from depression?
 - A. 10%
 - B. 25%
 - C. 50%
 - D. 75%

Innovative Educational Services

To take the post-test for CE credit, go to: www.cheapceus.com