

## REVIEW: DEPRESSION AS A COMMON DISORDER IN TEENAGERS AND ITS TREATMENT

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## ABSTRACT

Depression is major mental disorder which can be seen commonly seen in youngsters. This review article includes various types of depression, its causes, sign and symptoms and different approaches for preventing or treatment of depression including alternative therapies: nutritional, yoga, musical, aroma, electroconvulsive and psychiatric medication: includes antipsychotics, mood stabilizers, stimulants, anxiolytics and hypnotics. The sign and symptoms and treatment in this article suggest efficient and effective remission of depression.

## KEYWORDS

Depression, Peptic ulcer disease, gastrointestinal disorder.

## INTRODUCTION

Depression is one of the most common problems among teenagers, middle and old aged people. Occurrence of depression is related to the age, sex, social status, marital status etc. In India, very few cases are reported as comparison to affected people. This may be due to unawareness towards sign and symptoms of depression and its treatment which end to suicidal thoughts or even death. Epidemiologically, women (10-12%) are more affected than men (4-5%). Therefore, its treatment should be carried out as soon as possible. Depression is a common mental disorder that presents with depressed mood, loss of interest or pleasure, feelings of guilt or low self-worth, disturbed sleep or appetite, low energy, and poor concentration. These problems can become chronic or recurrent and lead to substantial impairments in an individual's ability to take care of his or her everyday responsibilities.

**Types of depression:** Different types of depression often have slightly different symptoms and may require different treatments.

The five main types of depressions are listed below:

**Major depression** - Major depression is probably one of the most common forms of depression. A major depressive episode occurs with symptoms that last for most of the day, nearly every day for at least two weeks. This may also be referred to as clinical depression or unipolar depression. A symptom must either be 1) depressed mood or 2) a noticeable decrease in interest or pleasure in all or most activities. At least four (or more) additional symptoms are present:

- Significant weight loss / weight gain or decrease / increase in appetite.
- Difficulty sleeping or increase in sleeping.
- Excessive movement or slowing down associated with mental tension (observed by others).
- Fatigue or loss of energy.
- Feeling worthless or excessive guilt.
- Difficulty thinking, concentrating or making decisions.
- Repeatedly thinking about death or suicide, trying to attempt suicide or having a specific plan to commit suicide.<sup>1,6</sup>

**Psychotic depression** - A depressed mood which includes symptoms of psychosis. Psychosis

involves seeing or hearing things that are not there (hallucinations), feeling everyone is against you (paranoia) and having delusions.<sup>4</sup>

**Dysthymia** - Dysthymia involves long lasting chronic symptoms that do not seriously disable but keep one from functioning well or feeling good. Many people just walk around seeming depressed- simply sad, blue or melancholic. They have been this way all of their lives. This is dysthymia- a condition that people are not even aware of but just live with daily. They go through life feeling unimportant, dissatisfied, frightened and simply don't enjoy their lives. Medication is beneficial for this type of depression. Nearly constant depressed mood lasts for at least 2 years accompanied by at least two (or more) of the following:

- Decrease or increase in eating.
- Difficulty sleeping or increase in sleeping.
- Low energy or fatigue.
- Low self-esteem.
- Difficulty concentrating or making decisions.
- Feeling hopeless.

Symptoms do not occur for more than two months at a time. Generally, this type of depression is described as having persistent but less severe depressive symptoms than Major Depression.<sup>6</sup>

**Manic Depression:** Manic depression can be defined as an emotional disorder characterized by changing mood shifts from depression to mania which can sometimes be quite rapid. People who suffer from manic depression have an extremely high rate of suicide. It is now known as Bipolar Disorder. This kind of depression includes periods of mania and depression. Cycling between these two states can be rapid or only mania can be present without any depressive episodes. A manic episode consists of a persistent elevated or irritable mood that is extreme, which lasts for at least one week. At least three (four if only irritable mood) other features are also present:

- Inflated self-esteem or self-importance.
- Decreased need for sleep.
- More talkative than usual or compelled to keep talking.
- Experiencing racing thoughts or ideas.
- Easily distracted.

- Increase in goal-oriented activity (social, work, school, sexual) or excessive movement.
- Excessive involvement in potentially risky pleasurable behavior (e.g. over spending, careless sexual activity, unwise business investments).

Symptoms can be severe enough to warrant hospitalization to prevent harm to self or others or include psychotic features (e.g. hallucinations, delusions).<sup>1</sup>

**Atypical Depression:** Atypical depression is a variation of depression that is slightly different from major depression. The sufferer is sometimes able to experience happiness and moments of elation. Symptoms of atypical depression include fatigue, oversleeping, overeating and weight gain. People who suffer from atypical depression believe that outside events control their mood (i.e. success, attention and praise). Episodes of atypical depression can last for months or a sufferer may live with it forever.

## CAUSES OF DEPRESSION

There is no one cause of depression - it is often an interaction of genetic factors, body chemistry and life events. It spans the spectrum of negative states from feeling low to severe or clinical depression. There is no simple answer to what causes depression, because several factors may play a part in the onset of the disorder. These include: a genetic or family history of depression, psychological or emotional vulnerability to depression, biological factors, and life event or environmental stressors.

Depression results in chemical imbalances in the neurotransmitters in the brain – whether this is the cause or result of the illness is less certain. Mid-life is the most common time for depression to strike, but it can affect all age groups<sup>17</sup>. There are chemicals in the brain that help us to guard against danger - our reflexes are able to help us to protect ourselves, but if there is a chemical imbalance, then we cannot react as quickly. Also, keeping feelings dormant only serves to bring out morbid thoughts and feelings and an inability to handle any form of anxiety or stress. Everyone

has a certain number of “risk” or “vulnerability” factors. The more risk factors a person has, and the greater the levels of stress on the person, the greater the chance of having a depressive episode. This is known as the stress-vulnerability model.<sup>6</sup>

### **The Stress-Vulnerability Model — Risk Factors in Depression**

#### **1. Genetic and family history**

A family history of depression does not necessarily mean children or other relatives will develop major depression. However, those with a family history of depression have slightly higher chances of becoming depressed at some stage in their lives. There are several theories to explain this phenomenon. Studies of twins raised separately have shown that if one twin develops the disorder, the other has a 40 to 50 per cent chance of also being affected. A genetic predisposition alone, however, is unlikely to cause depression. Other factors, such as traumatic childhood or adult life events, may act as triggers. The onset of depression may also be influenced by what we learn as children. Some people may have been exposed to the depressive symptoms of their parents and have learned this as a way of reacting to certain problems. As adults, they may go on to use these strategies to deal with their own life stressors. Growing up with one parent who has been depressed puts a child at a 10 per cent risk of developing the disorder. It is important to note that these figures are actually lower than those for other types of illness that may be passed on from parent to child. If you have a family history of depression, it is important to educate yourself about the disorder and what you can do to protect yourself against it.

#### **2. Psychological vulnerability**

Personality style, and the way you have learned to deal with problems, may contribute to the onset of depression. If you are the type of person who has a low opinion of yourself and worries a lot, if you are overly dependent on others, if you are a perfectionist and expect too much from yourself or others, or if you tend to hide your feelings, you may be at greater risk of becoming depressed.

#### **3. Environmental Causes**

Some studies suggest that early childhood trauma and losses, such as the death or separation of parents, or adult life events, such as the death of a loved one, divorce, the loss of a job, retirement, serious financial problems, and family conflict, can lead to the onset of depression. Suffering several severe and prolonged difficult life events increases a person's chances of developing a depressive disorder. Once depressed, it is common for a person to remember earlier traumatic life events, such as the loss of a parent, or childhood abuse, which make the depression worse. Once a person develops a serious depression, he or she may need intensive treatment before feeling able to deal with the situation or life stressors that triggered the onset of the illness.

#### **4. Medical Conditions and Drugs as a Cause of Depression**

There are certain ailments like hyperthyroidism that can seriously affect a person's ability to handle situations regarding a job loss or the death of a loved one. Attacks of panic frequently occur, as the person is unable to handle any emotional blow. Handling pain effectively can be difficult under these circumstances. Drugs like cocaine can have a devastating effect on the brain, and can damage the brain cells, cause attacks of paranoia and produce imbalance, so that the person is in a constant state of nervousness and fear. The human race is complicated and in order to deal with depression effectively, it is very important to analyze the root of the problem, which may go far back to one's childhood experiences or to certain shocks like the loss of a job or a loved one, traumatic changes in one's life as a result of these devastating losses - all these need to be focused upon and dealt with accordingly, and with the help of medication and treatment available, you will be on the road to recovery.

### **THERAPIES FOR DEPRESSION**

As we know Depression is a state of low mood and aversion to activity that can affect a person's thoughts, behavior, feelings and physical well-being. A depressed person may contemplate or attempt suicide, insomnia, excessive sleeping,

fatigue, loss of energy, or aches, pains or digestive problems that are resistant to treatment may be present. Depressed mood is a normal reaction to certain life events, a symptom of some medical conditions, and a side-effect of some medical treatments. Depressed mood is also a main or common feature of certain psychiatric syndromes. Depression, for the purposes of this article, refers to mental disorder known as major depressive disorder.

The most commonly indicated treatments for depression are:

- ✓ Psychotherapy
- ✓ Electroconvulsive therapy
- ✓ Alternate therapies
- ✓ Psychiatric medication

### Psychotherapy

Psychotherapy is the first form of treatment for depression. The word psychotherapy actually involves a variety of treatment techniques. During psychotherapy, a person with depression talks to a trained mental health care professional who helps the person identify and work through the factors that may be triggering the depression. There are a number of different psychotherapies for depression, which may be provided to individuals or groups. Psychotherapy can be delivered by a variety of mental health professionals, including psychotherapists, psychiatrists, psychologists, clinical social workers, counselors, and psychiatric nurses. Psychotherapy is the treatment of choice in people under 18.

### Types of Therapy:

Therapy can be given in a various types, including:

- Individual — this therapy involves only the patient and the therapist.
- Group counseling — sessions give you a chance to meet other people who are suffering with depression. People can share their experiences and coping strategies. The give-and-take at group sessions is often a productive way of learning new ways to think about your illness.
- Marital/couples — this type of therapy helps spouses and partners understand why their loved one has depression, what changes in

communication and behaviors can help, and what they can do to cope.

- Family counseling — family counseling treats the entire family because it's not only the person with the diagnosis who is affected by depression. If you're depressed, your family feels it too. And unfortunately, although family members might have the best of intentions, without professional guidance, they sometimes make things worse.

### Cognitive behavioral therapy (CBT)

The most studied form of psychotherapy for depression is cognitive behavioral therapy (CBT), thought to work by teaching clients to learn a set of cognitive and behavioral skills, which they can employ on their own. Cognitive behavioral therapy helps people with depression to identify and change inaccurate perceptions that they may have of themselves and the world around them. The therapist helps patients establish new ways of thinking by directing attention to both the "wrong" and "right" assumptions they make about themselves and others.

Cognitive-behavioral therapy is recommended for patients:

- Who think and behave in ways that trigger and perpetuate depression
- With mild-to-moderate depression as the only treatment or in addition to treatment with antidepressant medication
- Who refuse or are unable to take antidepressant medication
- Of all ages who have depression that causes suffering, disability, or interpersonal problems.<sup>7</sup>

### Interpersonal Therapy

Interpersonal therapy focuses on the behaviors and interactions a depressed patient has with family and friends. This type of depression is caused by loss (grief), relationship conflicts and role transitions (such as becoming a mother or caregiver). The primary goal of this therapy is to improve communication skills and increase self esteem during a short period of time. Therapy usually lasts three to four months and works well for depression caused by mourning, relationship conflicts, major life events, and social isolation.

Therapy can be used to help a person develop or improve interpersonal skills in order to allow him or her to communicate more effectively and reduce stress.

Benefits of Psychotherapy: There are number of benefits mentioned as below:

- It can help reduce stress in your life.
- It can give you a new perspective on problems with family, friends, or co-workers.
- It can make it easier to stick to your treatment.
- You can use it to learn how to cope with side effects from depression medication.
- You learn ways to talk to other people about your condition.
- It helps catch early signs that your depression is getting worse.

### **Electroconvulsive Therapy**

Electroconvulsive therapy (ECT) is a treatment where seizures are electrically induced in anesthetized patients for therapeutic effect. ECT is safe and among the most effective treatments available for depression. With ECT, electrodes are put on the patient's scalp and a finely controlled electric current is applied. The current causes a brief seizure in the brain. The treatment is performed under full general anesthetic, so that the patient is unaware of the seizure. A muscle relaxant is also given to reduce the shaking movements and prevent injury. ECT is one of the fastest ways to relieve symptoms in severely depressed or suicidal patients. It's also very effective for patients who suffer from mania or other mental illnesses. The treatment is usually given twice a week. A course of ECT usually comprises between 6 and 12 treatments. The patient is usually awake within a few minutes, groggy for 30-60 minutes, and feeling back to normal after that. Depression is caused by a fall in some brain chemicals and ECT appears to increase these brain chemicals. It has a quicker effect than antidepressant therapy, and thus may be the treatment of choice in emergencies such as catatonic depression where the patient has ceased oral intake of fluid or nutrients, or where there is severe suicidality. The most common side effect is short-term memory loss, which resolves quickly. After the

initial course of treatment, ECT can be safely done as an outpatient procedure.

### **Vagus Nerve Stimulation:**

Vagus Nerve Stimulation (VNS) uses an implanted electrode and generator to deliver electrical pulses to the vagus nerve, one of the primary nerves emanating from the brain. A VNS device was approved by the FDA for adult patients with long-term or recurrent major depression. Some of these patients take seven to 10 drugs at a time and continue to suffer with depression. The small stimulator is implanted in front of the armpit and runs under the skin to the vagus nerve in the neck. The device emits electrical pulses to stimulate the brain.

### **Transcranial Magnetic Stimulation (TMS):**

The FDA has cleared the NeuroStar TMS brain-stimulating device for treating depressed adults for whom one antidepressant has failed to work. While ECT uses an electric current to induce seizure, TMS creates a magnetic field to induce a much smaller electric current in a specific part of the brain without causing seizure or loss of consciousness.

TMS is used to treat milder depression and works best in patients who have failed to benefit from one, but not two or more, antidepressant treatments. Also, unlike ECT, TMS does not require sedation and is administered on an outpatient basis. Patients undergoing TMS must be treated four or five times a week for four weeks. One of the authors of the latter study cautioned that CES should not be used as a treatment of choice for patients with a primary diagnosis of depression, and should be used with caution if this diagnosis is suspected.

### **Alternative Treatments**

There is no evidence that any alternative treatment is effective for treating moderate to severe depression. For some people, however, they may be used as an addition to other treatments -- providing relaxation, relief from depressive symptoms, and helping you cope with some of the causes of depression such as grief, anxiety etc.

Alternative treatment is a health\_treatment that is not classified as standard western medical practice is referred to as "alternative" or "complementary." Alternative therapy

encompasses a variety of disciplines that include everything from diet and exercise to mental conditioning and lifestyle changes. Examples of alternative therapies include acupuncture, guided imagery, chiropractic treatments, yoga, hypnosis, biofeedback, aromatherapy relaxation, herbal remedies, massage, and many others.

### **Some alternative therapies used to treat depression are as follows:**

#### **Exercise therapy:**

Different forms of exercise can lower your stress, relax you, reduce depression and increase your energy, balance, and flexibility. In general, exercise is a safe, effective, and easy way to improve your well-being; but, always check with your doctor before starting a new program. Daily exercise increases the body's natural production of endorphins, which naturally improve the mood. Endorphins are more apt to be released during long, moderate to high-intensity aerobic workouts. Exercises that are more apt to produce endorphins include running, swimming, cross-country skiing, long distance rowing, bicycling, aerobics, or playing a sport such as basketball, soccer, or football. Exercising outdoors is preferred, so that the individual can take in fresh air and sunlight.

#### **Nutritional Therapy:**

There are key nutrients in the diet that can help improve your mood. If these nutrients are lacking, depression may be a result. Like most things in life, moderation is the key. The body needs carbohydrates to manufacture serotonin, but excess intake of carbohydrates and simple sugars can lower serotonin levels and be factors in symptoms of depression. Turkey, salmon, and dairy products can help elevate levels of serotonin. Caffeine and alcohol have powerful effects on the central nervous system and should be avoided by those suffering from depression. Food allergies can also have a powerful effect on the brain, and individuals with depression should avoid foods known to trigger sensitivities/allergies. High or low blood sugar (hyper- or hypoglycemia) can mimic symptoms of depression. Enjoy foods rich in calcium, magnesium and B vitamins like whole grains, organic dairy products, nuts, seeds, green leafy

vegetables. These will help to maintain proper nutrient balance and help prevent depression.<sup>3</sup>. Omega-3 fatty acids have been studied in clinical trials for major depression primarily as an adjunctive to antidepressant therapy. In today's society we have become "fat free" in our search for losing weight. Interestingly enough, the quickest way to gain weight is to eat these "fat free" foods as they are all high in sugar. Because of the amount of "bad fats" we get from fast foods, processed foods, packaged foods, we have to give our bodies some ammunition in the form of "good fats" to deal with all these bad fats. Omega 3 and 6 good fats are the answer. You want to lose weight, improve your skin, and be smarter? Take your Omegas every day!!! They also reduce cravings as your brain is fed very essential fats.

Multivitamins and minerals are available in specialized formulas for individuals with special health conditions, such as depression. Medications that treat depressive disorders can deplete vitamin and mineral stores in the body, increasing the need for supplemented nutrition. Vitamin B-12 plays a role in red blood cell formation, brain function energy metabolism and DNA synthesis. According to the Agency for Healthcare Research Quality, meat, milk, cheese, eggs and fortified breakfast cereals contain vitamin B-12. For individuals who suffer from depression and do not eat an adequate amount of foods rich in vitamin B-12, supplementation may help.<sup>9</sup>

Vitamin C or ascorbic acid, is an antioxidant necessary for combating disease, colds and used for improving cellular activity in the body. Proponents of using vitamin C for depression report that individuals with an autoimmune disease or lower immunity due to colds and flu require supplementation. Environmental stress can exacerbate the illness and compromise the body's ability to recover from illness.<sup>8</sup>

#### **Bright Light Therapy:**

Light therapy is probably one of the safer antidepressant treatments for bipolar depression. Low doses can be safe for many people. But too big a dose can cause main symptoms, just like any other antidepressant. So you have to be careful. Have your doctor help

you find a safe dose- one which does not produce any manic side symptoms or interfere with sleep. A meta-analysis of bright light therapy commissioned by the American psychiatric association found it to be more effective than placebo—usually dim light—for both seasonal affective disorder and for non-seasonal depression, with effect sizes similar to those for conventional antidepressants. For non-seasonal depression, adding light therapy to the standard antidepressant treatment was not effective. A meta-analysis of light therapy for non-seasonal depression conducted by Cochrane Collaboration, studied a different set of trials, where light was used mostly as an addition to medication or sleep deprivation. A moderate statistically significant effect of light therapy was found; however, it disappeared if a different statistical technique was used. Both analyses noted poor quality of most studies and their small size, and urged caution in the interpretation of their results. The short 1–2 weeks duration of most trials makes it unclear whether the effect of light therapy could be sustained in the longer term.<sup>10</sup>

**Acupuncture:**

Acupuncture is an ancient Chinese method of healing that prevents and cures specific diseases and conditions by sticking very fine, solid needles into specific points on the body. It stimulates the body's ability to resist or overcome illnesses and conditions by correcting imbalances. Acupuncture also prompts the body to produce chemicals that decrease or eliminate painful sensations. Acupuncture is most effective at treating long-term pain, such as headaches, menstrual cramps and low back, neck, or muscle pain. It can also be used to treat arthritis, facial pain, pain from shingles, spastic colon, colitis, obesity, and addictions to nicotine or other drugs. Acupuncture depression treatment works because it releases endorphins in to the central nervous system which are 'feel good' hormones which increase energy and rebalance the emotional imbalances that lead to mental imbalances which result in depression. It kick starts the process of realigning the mental processes and begins a positive cycle to combat the negative, depressive cycle.

Initially, acupuncture depression treatment is not enough to treat depression on its own, it is a catalyst. It helps other treatments take hold easily and work better on the depression. Eventually, you are able to decrease any medication or other therapy and use acupuncture as your primary depression treatment. In acupuncture, the target areas of inserting the filiform needles are twelve main nerve pathways or tracts, known as meridians and eight minor or less important nerve pathways. Almost 2000 pressure points are supposed to be present along the major and the minor nerve pathways. All these points are thought to be the channels through which energy is transmitted to the different regions of the body. So, different illnesses or disorders require the use of different specific points. Many experiments have shown positive effects of acupuncture on patients with depression, with a significant reduction in their symptoms.

**Aromatherapy:**

It is an essential oil therapy which may help in mild forms of depression. It may ease mental tension, fatigue, help with insomnia, and elevate the mood. Essential oils can be added to massage oils, bath water, put in a diffuser, or diluted and applied to the skin. Ylang ylang, clary sage, basil, jasmine, and rose have all been used to help ease depressive symptoms. The use of essential oils for uplifting the psyche and spirit is becoming more widespread because of oil's broad and dramatic effects. While the oils themselves may not directly affect the underlying cause of depression, they may help individuals break free from depressive cycles—they may provide the impetus to "get off the couch", so to speak and begin creating long lasting change. Aromatherapy can be a very powerful means to infuse one's body and mind with the most concentrated, sublime botanicals nature has to offer.

**Yoga:**

When depression deepens or persists for a long time, it can suppress your energy for living and make you more vulnerable to disease by dampening the immune system. Depression is sometimes a warning that may help you to protect your mental and physical health. The first

thing a depressed person stops doing is moving. Regular exercise becomes intolerable. But Yoga exercise, starting with as few as three poses a day in just a few minutes' time, coupled with correct breath patterns, can become so pleasant to you that soon you will want to do more and more. The heavy, unmoving feeling of depression will be on the run! Yoga exercises put pressure on glands and organs, helping them to produce the soothing, healing chemical balance that is needed to feel well and be well. Yoga exercises improve circulation, sending invigorating oxygen to your brain and all your muscles. The stretching and strengthening movements flush toxins from the body as well. Often depression sneaks in slowly, as breathing patterns change from too much sitting at a desk, stress, age, or illness. The deep, invigorating breath techniques of Yoga bring large amounts of fresh oxygen to the brain and other parts of the body. Like a spring wind, it blows through the system bringing new light and strength to the unused parts of the body and mind where depression hides. Regular practice of Yoga will protect you from depression and help you stay bright-minded, while recognizing the signals that depression is giving you. To begin with, choose three exercises that appeal to you, and do them every day. Then, as you get more comfortable, expand your routine to give yourself more of a challenge and increase the beneficial effects.<sup>11</sup>

#### **Music Therapy:**

"Music therapy can be used to improve treatment of depression, at least in the short term". Depression is usually treated with medication and psychiatric counseling. Previous studies have found that music therapy is a promising additional treatment for depression. Doctor will prescribe at least 20 minutes per day of listening to instrumental or light vocal music while focusing on the feelings involved in depression. Music causes the mind and body to respond to its familiarity and feelings associated. Some of the music will be what is considered relaxing and comforting to the patient; other music may include different types of music as recommended by the doctor to elicit different responses and find out what feelings are provoked by the music. Music acts as a non-

invasive tool to stimulate and regulate brain systems to help with depression. Music therapy is a psychotherapeutic method where musical interaction and discussion are combined to help people with depression to develop relationship and address issues using non-verbal techniques. In music therapy, two modes are used: music-listening and music-making. In some cases, the therapist plays live or recorded music for the patient. Other types of sessions consist of active playing of musical instruments and singing. The relaxation effects of music are considered to be a key contributor to the relief of depression and anxiety symptoms.

**Benefits of Music Therapy Depression Treatment:** There are many benefits to music therapy depression treatment. This therapy is usually used in conjunction with psychotherapy and may be included in a drug regimen. The benefits include:

- Positive changes in the depressive state
- A sense of success in treatment
- The ability to open up during therapy session
- Relaxing therapy in between sessions
- The development of coping skills
- Improvements in thought processes and feelings
- Improved behavior patterns
- Affordable therapy which can be continued after therapy has ended as self soothing techniques

#### **PSYCHIATRIC MEDICATION**

With more complex and chronic forms of depression the most effective treatment is often considered to be a combination of medication and psychotherapy. A psychiatric medication is a licensed psychoactive drug taken to exert an effect on the mental state and used to treat mental disorders.

Various types of psychiatric medications are used to treat depression: The six main groups of psychiatric medications are Antidepressants, Stimulants, Antipsychotics, Mood Stabilizers, Anxiolytics and Hypnotics.

#### **Antidepressants:**

These are the drugs which can elevate mood in depressive illness. All antidepressants affect monoaminergic transmission in the brain in one way or the other and many of them have other



associated properties. Following is the classification of antidepressants:

- Reversible inhibitors of MAO-A (RIMAs) : moclobemide , clorgyline
- Tricyclic antidepressants (TCAs): imipramine, amitriptyline, clomipramine, desipramine. Nortriptyline, reboxetine.
- Selective serotonin reuptake inhibitors (SSRIs): fluoxetine, paroxetine, sertraline, citalopram.
- Atypical antidepressants: trazodone, mirtazapine, duloxetine, bupropion.<sup>2</sup>

#### Antipsychotics:

Antipsychotics are drugs used to treat various symptoms of psychosis, such as those caused by psychotic disorders or schizophrenia. There are two categories of antipsychotics: typical antipsychotics and atypical antipsychotics.

Commonly used antipsychotics drugs are:

Typical Antipsychotics: Chlorpromazine (Largactil<sup>®</sup>, Thorazine<sup>®</sup>), Haloperidol (Haldol<sup>®</sup>, Serenace<sup>®</sup>), Perphenazine (Trilafon<sup>®</sup>), Thioridazine (Mellaril<sup>®</sup>), Thiothexene (Navane<sup>®</sup>), Flupenthixol, Trifluoperazine (Stelazine<sup>®</sup>).<sup>2</sup>

Atypical Antipsychotics: Aripiprazole (Abilify<sup>®</sup>), Clozapine (Clozaril<sup>®</sup>), Olanzapine (Zyprexa<sup>®</sup>), Quetiapine (Seroquel<sup>®</sup>), Risperidone (Risperdal<sup>®</sup>), Ziprasidone (Geodon<sup>®</sup>, Zeldox<sup>®</sup>).<sup>2</sup>

#### Mood Stabilizers:

Many antipsychotics are used as mood stabilizers as a drugs of choice. Lithium carbonate is the first mood stabilizer to be approved by U.S.FDA. The mechanism of action of mood stabilizers is neither well elucidated nor understood. Common mood stabilizers are:

- Lithium carbonate, first and typical mood stabilizer
- Carbamazepine, anticonvulsant and mood stabilizer (Tegretol<sup>®</sup>)
- Valproic acid, and Valproic acid salts, anticonvulsant and mood stabilizer (Depakene<sup>®</sup>, Depakote<sup>®</sup>, Depacon<sup>®</sup>, Epilim<sup>®</sup>)
- Lamotrigine, atypical anticonvulsant and mood stabilizer (Lamictal<sup>®</sup>)
- Gabapentin, atypical GABA -related anticonvulsant and mood stabilizer (Neurontin<sup>®</sup>)

- Pregabalin, atypical GABA-ergic anticonvulsant and mood stabilizer
- Topiramate, GABA -receptor related anticonvulsant and mood-stabilizer (Topamax<sup>®</sup>)
- Olanzapine, atypical antipsychotic and mood stabilizer.<sup>2,12</sup>

#### Stimulants:

Stimulants are some of the most widely prescribed drugs today. A stimulant is any drug that stimulates the central nervous system. Adderall, a collection of amphetamine salts, is one of the most prescribed pharmaceuticals in the treatment of Attention – Deficit Hypersensitivity Disorder (ADHD). Stimulants can be addictive, and patients with a history of drug abuse are typically monitored closely or even barred from use and given an alternative. Discontinuing treatment without tapering the dose can cause psychological withdrawal symptoms such as anxiety and drug craving. Many stimulants are not physiologically addictive.

Commonly used stimulants are: Caffeine (Cafergot<sup>®</sup>, Micropyrin<sup>®</sup>), typical methylxanthine stimulant, found in many edibles worldwide

- Methylphenidate (Ritalin<sup>®</sup>, Ritalin SR<sup>®</sup>, Metadata-CD<sup>®</sup>), atypical stimulant
- Dexamethylphenidate, active D-isomer of methylphenidate
- Dextroamphetamine (Dexedrine<sup>®</sup>, Dexedrine spansules<sup>®</sup>), more active amphetamine isomer
- Dextroamphaetamine & levoamphetamine (Adderall<sup>®</sup>), D,L -Amphetamine salt mix
- Methamphetamine (Methedrine<sup>®</sup>), potent amphetamine-based stimulant
- Modafinil (Modalert<sup>®</sup>), a stimulant related to sildenafil.<sup>2,14</sup>

#### Anxiolytics and Hypnotics:

These are an ill-defined group of drugs, mostly mild CNS depressants, which are aimed to control the symptoms of anxiety, produce a restful state of mind without interfering with normal mental or physical functions. The anxiolytic-sedative drugs differ from antipsychotics and more closely resemble sedative-hypnotics. They have no therapeutic effect to control thought disorder of

schizophrenia. They do not produce extra pyramidal side effects. They have anticonvulsant property. They produce physical dependence and carry abuse liability. They do not selectively block conditioned avoidance response in animals. Common anxiolytics and hypnotics are:

- Diazepam (Valium<sup>®</sup>, Placidox<sup>®</sup>, Calmpose<sup>®</sup>), benzodiazepine derivative, anxiolytic
- Nitrazepam (Sedamon<sup>®</sup>, Hypnotex<sup>®</sup>, Nitrevet<sup>®</sup>), benzodiazepine derivative, hypnotic
- Zolpidem (Nitrest<sup>®</sup>, Zoldem<sup>®</sup>, Dem<sup>®</sup>), an imidazopyridine, non-benzodiazepine hypnotic
- Zopiclone (Zopitran<sup>®</sup>, Zopicon<sup>®</sup>, Zolium<sup>®</sup>) non-benzodiazepine hypnotic ("Z-drug")
- Zaleplon (Zaplon<sup>®</sup>, Zalep<sup>®</sup>, Zaso<sup>®</sup>), non-benzodiazepine hypnotic ("Z-drug")
- Chlordiazepoxide (Librium<sup>®</sup>, Equilibrium<sup>®</sup>), benzodiazepine derivative, anxiolytic
- Alprazolam (Alprax<sup>®</sup>, Alzolam<sup>®</sup>, Alprocontin<sup>®</sup>, Restyl-SR<sup>®</sup>), benzodiazepine derivative, anxiolytic
- Temazepam (Adva tab<sup>®</sup>, Restoril<sup>®</sup>), benzodiazepine derivative
- Clonazepam (Klonopin<sup>®</sup>), benzodiazepine derivative
- Lorazepam (Larpose<sup>®</sup>, Ativan<sup>®</sup>, Calmese<sup>®</sup>), benzodiazepine derivative, anxiolytic.<sup>2,12,15</sup>

**CONCLUSION:** Depression is a major disorder and its remission is necessary as quickly as possible. Detailed explanation of depression

contributes to better understanding of disorder and its treatment.

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