Depressive Disorders

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Disclosure Statement

The views expressed are those of the author and do not necessarily reflect the views of the United States Air Force or the United States Government.

I have no financial relationships to disclose.

I will not discuss off-label use and/or investigational use in my presentation.
Overview

The depressive disorders all include disturbances in emotion, ideation, and/or somatic symptoms

- Major depressive disorder (MDD)
- Dysthymic disorder
- Mood disorders due to a general medical condition and substance-induced mood disorder
- Depressive disorder not otherwise specified

The depressive disorders vary by length and severity

There never have been manic, hypomanic, or mixed episode (or the diagnosis would be bipolar disorder)
Some General Medical Conditions that May Cause or Mimic Depression

**Cardiovascular**
- infarct, congestive heart failure

**Endocrine**
- adrenal insufficiency, hypothyroidism

**Nutritional**
- vitamin B12, folate deficiency

**Metabolic**
- anemia, post-ictal, sleep apnea, end-stage renal disease, hypercalcemia, hepatitis, hypoglycemia

**Infectious**
- HIV, encephalitis, aseptic meningitis, post-viral states, systemic

**Neurodegenerative**
- Parkinson’s, Huntington’s

**Tumor**
- primary cerebral, pancreatic CA, systemic neoplasms
Some Drugs that May Cause or Mimic Depression

- Corticosteroids
- Anabolic steroids
- Anticonvulsants
- Antipsychotics
- Centrally acting antihypertensives
- Alcohol, sedatives, narcotics
- Stimulant withdrawal
The prevalence of major depressive disorders in the U.S. is 5.4% to 8.9%

Depression is often undertreated when correctly diagnosed.

Among persons with major depressive disorder, 75% to 85% have recurrent episodes.

In addition, 10 to 30% of persons with a major depressive episode recover incompletely and have persistent residual depressive symptoms or dysthymia, a disorder with symptoms that are similar to those of major depression but last longer and are milder.
Overview

 Persistent major depression lasting more than 2 years occurs in 20% of those diagnosed with depression

 Undertreated depression can evolve into a chronic and disabling condition
Overview

- In the general population, the prevalence of MDD is 3-5% in males and 8-10% in females
- Peak onset is in the fourth decade of life for depression, but may occur at any age
- Depressive episodes at an earlier age of onset generally predict a more severe course
- First or early depressive episodes are often milder than are episodes of returning depression
- Most episodes remit spontaneously or with treatment and last from several months to a year
Risk of Recurrence

- The initial episode of major depression predisposes individuals to an increased probability of having another such episode sometime in their life.
- Approximately 50% of individuals who experience a major depressive episode will have a recurrence within 5 years.
- A history of 2 episodes increases the probability of recurrence to approximately 70%, and after three episodes the probability of recurrence increases to approximately 90%.
- As it recurs, MDD becomes an increasingly chronic, more severe, more frequent, more disabling condition...
Diagnostic Criteria for Major Depressive Episode

Five (or more) of the following symptoms have been present during the same 2-week period and represent a change from previous functioning:

1. Depressed mood most of the day, nearly every day, as indicated by either subjective report (e.g., feels sad or empty) or observation made by others (e.g., appears tearful)

2. Markedly diminished interest or pleasure in all, or almost all, activities most of the day, nearly every day

3. Significant weight loss when not dieting or weight gain (e.g., a change of more than 5% of body weight in a month) or decrease or increase in appetite nearly every day

4. Insomnia or hypersomnia nearly every day

5. Psychomotor agitation or retardation nearly every day
Five (or more) of the following symptoms have been present during the same 2-week period and represent a change from previous functioning:

- At least one of the symptoms is either depressed mood or loss of interest or pleasure

- 6. Fatigue or loss of energy nearly every day

- 7. Feelings of worthlessness or excessive or inappropriate guilt (which may be delusional) nearly every day (not merely self-reproach or guilt about being sick)

- 8. Diminished ability to think or concentrate, or indecisiveness, nearly every day

- 9. Recurrent thoughts of death (not just fear of dying), recurrent suicidal ideation without a specific plan, or a suicide attempt or a specific plan for committing suicide
Diagnostic Criteria for Major Depressive Episode

- The symptoms do not meet criteria for a mixed episode
- The symptoms cause clinically significant distress or impairment in social, occupational, or other important areas of functioning
- The symptoms are not due to the direct physiological effects of a substance (e.g., a drug of abuse, a medication) or a general medical condition (e.g., hypothyroidism)
- The symptoms are not better accounted for by bereavement, i.e., after the loss of a loved one, the symptoms persist for longer than 2 months or are characterized by marked functional impairment, morbid preoccupation with worthlessness, suicidal ideation, psychotic symptoms, or psychomotor retardation
Major Depressive Episode

SIG E CAPS ("Prescribe Energy Capsules")

2 weeks of 5 or more of the following
(one must be dysphoric mood or loss of interests or pleasure)

- **Sleep disturbance**
- **Loss of Interests or Pleasure**
- **Guilt, Rumination**
  - Hopelessness, helplessness, worthlessness
- **Diminished Energy**
- **Trouble Concentrating or Impaired Memory**
- **Appetite Disturbance**
- **Psychomotor Agitation or Retardation**
- **Suicidal Ideation, Homicidal Ideation**
Course of MDD
Specifiers of MDD

- Mild / moderate / severe
- Partial / full remission
- Single episode / recurrent / chronic
- Psychotic features
- Melancholic features
- Atypical features
- Catatonic features
- Postpartum onset
- Seasonal pattern
Morbidity and Mortality in MDD

 Suicide
    10-15%

 Cardiovascular risk
    comparable to obesity, smoking, hyperlipidemia, hypertension, hostility

 Cerebrovascular risk

 Poorer self-care, adherence to medical regimen for any medical illness
Dysthymic Disorder

Depressed mood for more days than not for at least 2 years with 2 (or more) of the following:

- **Appetite Disturbance**
- **Trouble Concentrating or Making Decisions**
- **Diminished Energy**
- **Sleep Disturbance**
- **Low Self-Esteem**
- **Feelings of Hopelessness**
  - Must have social, cognitive, and motivational problems
Course of Dysthymic Disorder
“Double” Depression
Treatment for depressive disorders requires a multimodal approach that includes pharmacotherapy, education, healthy lifestyle interventions, and psychotherapy. The treatment plan should take into consideration:

- The individual’s previous treatment outcomes
- The mood disorder subtype
- The severity of the current episode of depression
- The risk of suicide
- Coexisting psychiatric and somatic conditions
- Nonpsychiatric medications
- Psychological stressors
Classes of antidepressant (ATD) agents are defined by their mechanism of actions.

The several classes of drugs include:

- Selective Serotonin Reuptake Inhibitors (SSRIs)
- Norepinephrine–reuptake inhibitors
- Dual-action agents that inhibit uptake of serotonin and norepinephrine
- Monoamine oxidase inhibitors
- Tricyclic antidepressants

The average duration of treatment for an episode is 6 months.

It is best to treat 6-12 months after full resolution of depressive symptoms – then taper ATD and follow…
Course of Treatment

NORMAL MOOD

DEPRESSION

TIME

- acute 6 - 12 weeks
- continuation 4-9 months
- maintenance 1 or more years

RELAPSE

RECURRENCE

Acute

6 - 12 weeks

Continuation

4-9 months

Maintenance

1 or more years

Normal Mood

Depression

Relapse

Recurrence

Course of Treatment

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Aeromedical Concerns

Depressive disorders can be associated with a variety of cognitive, emotional, and behavioral anomalies that can be incompatible with aviation safety and flying duties, including:

- Depressed mood
- Impaired cognitive/spatial abilities, reasoning, and judgment
- Slowed information processing speed and reaction time
- Impaired memory and/or attention, focus, concentration
- Distractibility and indecisiveness
- Disturbances in energy and sleep, fatigue
- Significant weight loss or gain
- Psychomotor agitation or retardation
- Inappropriate guilt feelings, impaired reality testing, suicidal/homicidal ideation
Furthermore, depression often coexists with anxiety and psychosomatic complaints, as well as substance abuse (especially alcohol, which worsens depression and causes light, broken sleep).

There are aeromedical concerns with the use of psychotropic drugs for treatment as well.

All psychotropic drugs have potentially undesirable or dangerous side effects.

Common side effects of antidepressants (ATDs) include nausea, diarrhea, cramping, vomiting, insomnia, jitteriness, agitation, restlessness, dizziness, headache, syncope, tremor, perspiration and sexual dysfunction.
Aviation, Space, and Environmental Medicine published results from a Canadian clinical trial of bupropion SR in 2002.

The clinical trial was designed to evaluate the effect of bupropion SR on psychomotor performance.

The study found no impact by bupropion SR on traditional psychomotor tests nor on a complex battery simulating flying performance.

In addition, the FAA, Transport Canada, Australia and the U.S. Army have policies allowing selected aviators to fly while on SSRIs.
Waivers are currently not being granted for FC II individuals on ATDs in the USAF.

FC III personnel will be considered for waivers on the following medications and dosages:

- Wellbutrin SR or XL up to 450 mg/day
- Celexa up to 40 mg/day
- Lexapro up to 20 mg/day
- Zoloft up to 200 mg/day

To be considered for a waiver, the aviator needs to be on the medication with a stable dose and clinically asymptomatic for at least 6 months.

The following FC III AFSCs will require ACS review prior to waiver consideration: 1A0X1 (Boom Operator); 1A1X1 (Flight Engineer); 1A2X1 (Loadmaster); 1A7X1 (Aerial Gunner); and 1C2X1 (Combat Control).
Depression is very common & can become very disabling
  - Especially with delayed identification and partial treatment
  - Aeromedically important

Rule out general medical causes or substances causing the mood disorder
Assess for mania/hypomania in depressed patients
Consider multiple treatment modalities, including psychotherapy and healthy lifestyle interventions
Questions/Contacts

❖ Thank you for your attention

❖ Please feel free to contact the ACS Neuropsychiatry Branch with questions:

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Bibliography


National Archives and Records Administration. Special issuance of airman medical certificates to applicants being treated with certain antidepressant medications. Federal Register, 2010;75; 17047-50.


Major depression negatively affects patients physically, socially, and psychologically.

Quality of life is a multidimensional concept.

- Physical Functioning
- Social Functioning
- Psychological Functioning

Hirschfeld 2000; Rabkin 2000.
Major Depression—a Highly Recurrent Disorder

![Bar chart showing risk of recurrence per episode.](chart.png)

- After 1 depressive episode: 60%
- After 2 depressive episodes: 70%
- After 3 depressive episodes: 90%

*DSM-IV-TR 2000.*
Major Depressive disorder may be associated with other medical conditions

<table>
<thead>
<tr>
<th>Patients With</th>
<th>Approximate Rates of Depression</th>
</tr>
</thead>
<tbody>
<tr>
<td>Chronic pain</td>
<td>30%</td>
</tr>
<tr>
<td>Cancer</td>
<td>20%-25%</td>
</tr>
<tr>
<td>Diabetes</td>
<td>20%-25%</td>
</tr>
<tr>
<td>Recent myocardial infarction</td>
<td>20%-25%</td>
</tr>
<tr>
<td>HIV</td>
<td>10%-20%</td>
</tr>
<tr>
<td>Irritable bowel syndrome</td>
<td>18%</td>
</tr>
<tr>
<td>Rheumatoid arthritis</td>
<td>12%</td>
</tr>
</tbody>
</table>

# Major Depression—Psychiatric/Neurological Comorbidities

<table>
<thead>
<tr>
<th>Patients With</th>
<th>Approximate Rates of Depression</th>
</tr>
</thead>
<tbody>
<tr>
<td>Schizophrenia</td>
<td>57%</td>
</tr>
<tr>
<td>Multiple sclerosis</td>
<td>50% (lifetime)</td>
</tr>
<tr>
<td>Alzheimer’s disease</td>
<td>30%-35%</td>
</tr>
<tr>
<td>Huntington’s disease</td>
<td>25%</td>
</tr>
<tr>
<td>Stroke</td>
<td>20%-25%</td>
</tr>
<tr>
<td>Parkinson’s disease</td>
<td>20%</td>
</tr>
</tbody>
</table>

Many patients with anxiety disorders may have major depression at some time during their lives.

- In a 12-month period, 50% of patients with major depression will have a comorbid anxiety disorder.