

Major Depression in Children and Adolescents Fact Sheet

What are the symptoms of a major depressive episode?

DSM-IV criteria for a Major Depressive Episode indicates that five or more of the following symptoms must be present during the same 2-week period and represent a change from previous functioning; at least one is either (1) depressed mood or (2) loss of interest or pleasure.

- Depressed mood most of the day, nearly every day
- Markedly diminished interest or pleasure in almost all activities
- Significant weight loss or gain, or a noticeable change in appetite
- Insomnia or hypersomnia nearly every day
- Psychomotor agitation or retardation nearly every day
- Fatigue or loss of energy nearly every day
- Feelings of worthlessness or excessive guilt
- Diminished ability to think or concentrate
- Recurrent thoughts of death or recurrent suicidal ideation

What factors should be considered when conducting a diagnostic assessment?

- Information obtained from multiple sources (e.g. child, parents, teachers, other healthcare providers)
- Review of medical history (including substance induced mood disorders)
- Review of psychiatric history (including co-morbid psychiatric disorders)
- Review of family psychiatric history
- Assessment of severity and impairment
- Assessment of safety and suicidal thoughts, plans, or behaviors (including safety plan if only suicidal ideation is present)
- Assessment of required level of care (inpatient, outpatient, etc.)

Should treatment begin after a diagnosis of MDD is made?

After a working diagnosis of MDD is made, the level of care needs to be determined. For children or adolescents who are not able to maintain safety and/or who are severely impaired with psychosis, higher levels of care (e.g., day hospital, inpatient psychiatric hospitalization) may be needed to stabilize the patient. Once the level of care needed is determined, a clinician may initiate treatment targeting depression.

General Management:

- Foster strong therapeutic alliance with child and parents
- Provide psycho education about depression and treatment options
- Engage child and family in treatment decisions
- Assess symptom change throughout treatment

Treatment of mild to moderate depression:

For patients with mild to moderate, short, uncomplicated depression, an active monitoring or watchful waiting period up to 4 weeks is recommended, prior to the initiation of specific treatment (specific psychotherapies or antidepressants). There are at least two lines of empirical support for this recommendation; first, children and adolescents with mild form of MDD and limited functional impairment often spontaneously improve without specific interventions; second, children are more likely to have a high placebo response (Bridge et al., 2007). Youth with mild MDD may respond to supportive therapy, case management, life-style change, and psycho education. If a child does not improve through active monitoring/watchful waiting, additional interventions are required.

Treatment of moderate to severe depression.

An antidepressant or a specific psychotherapy (CBT or interpersonal psychotherapy) or the combination of the two may be initiated. In a thorough meta-analysis of 35 psychotherapy studies, Weisz and colleagues found small effect sizes of psychotherapy in treating pediatric depression (2006). Regardless of whether pharmacological treatment is initiated as a monotherapy or in conjunction with a specific psychotherapy, treatment comprises three phases: acute, continuation, and maintenance.

Phases of Treatment

	Acute	Continuation	Maintenance
Who	Youths who do not respond to active monitoring	All youths who have responded to treatment	Youths who are at high risk for recurrence (i.e. family history of mood disorder, multiple episodes, severe and complicated MDD)
How Long	6 to 12 weeks	6 to 9 months	1 to 2 years
Goal	Remission	Consolidate remission; Prevent relapse	Prevent recurrence of MDD

Which antidepressants should be prescribed for children and adolescents with MDD?

The acute phase of psychopharmacological treatment may start with one of the four SSRIs: fluoxetine, escitalopram, sertraline, and citalopram.

FIRST LINE ANTIDEPRESSANT OPTIONS

Fluoxetine*
Escitalopram**
Citalopram
Sertraline

* Fluoxetine is FDA approved for treatment of children and adolescents with MDD (ages 8-17 years)

** Escitalopram is FDA approved for treatment of adolescents with MDD (ages 12-17 years)

What are some important considerations for choosing medications?

- Prior antidepressant response
- Family treatment history
- Patient/family preference
- Avoidance of specific side effects
- Comorbid psychiatric illnesses
- Pharmacodynamics of the medication (including drug-drug interactions)
- Cost

What are the dosing recommendations for antidepressants?

Medication	Starting Dose (mg/day)	Minimal Therapeutic Dose by weeks 2-4 (mg/day)	High Therapeutic Dose by week 6-8 (mg/day)	Maximum Dose (mg/day)
Fluoxetine	10	20	30-40	60
Escitalopram	5-10	10	20	30
Sertraline	12.5-25	50-100	150	200
Citalopram	10	20	30-40	60
Paroxetine	10	20	30-40	50

What should be done if the patient is not improving?

The timing of symptom improvement varies from person to person. However, it is expected that by 4 weeks, there should be some evidence of improvement if the medication is effective for that patient. If there is at least some improvement by 4 weeks, but significant depressive symptoms remain, the dose should be increased if the patient is able to tolerate the medication.

Many times clinicians continue patients on a sub-optimal treatment. The goal of treatment is remission (no or minimal depressive symptoms), and it is recommended that patients who have not achieved remission by 3 months be switched to a new treatment.

What is recommended when the patient has not responded to the prescribed antidepressant?

Once it is determined that the initial antidepressant is not working, a second antidepressant should be prescribed. When switching antidepressants, cross-titration is preferred to minimize withdrawal symptoms and shorten the time needed to reach stable blood level of the new medication. This is particularly critical when switching from a short-acting SSRI to a long-acting SSRI (fluoxetine). If the patient does not respond to second line antidepressant options, consider re-evaluating or referring him or her to a child psychiatrist.

SECOND LINE ANTIDEPRESSANT OPTIONS

Fluoxetine
Escitalopram
Citalopram
Sertraline
Paroxetine (adolescents only)

THIRD LINE ANTIDEPRESSANT

Bupropion
Duloxetine
Mirtazapine
Venlafaxine

In addition, a recent study of adolescents not responding to an initial trial of an SSRI demonstrated that switching to a new antidepressant and adding cognitive behavioral therapy is more effective than switching medication alone (Brent et al., 2008). Therefore, referral to psychotherapy (if not already in therapy) should be considered for treatment resistant youth.

How long should patients continue antidepressant treatment?

Relapse rates are high in pediatric depression. Once a patient is in remission, it is recommended to continue on with the same treatment for an additional 6 to 9 months to prevent relapse. A continuation study by Emslie and colleagues examined 102 depressed children and adolescents who responded to 12 weeks of fluoxetine treatment. Youth who continued on fluoxetine had reduced relapse rates compared to those switched to placebo (42% for the fluoxetine group versus 69.2% for placebo group) (Emslie et al., 2008). However, even with continued antidepressant treatment, relapse rates were high. Therefore, continued monitoring depressive symptoms and patient education about relapse is very important.

Maintenance treatment lasting 1-2 years may be important for some patients, particularly those with significant family history of mood disorders, severe and complex episode that slow and difficult to respond to treatment, history of chronic depression, and multiple MDD episodes.

What are the side effects of antidepressants?

- Common side effects
 - Headaches
 - GI symptoms: stomachaches, nausea, diarrhea
 - Sedation
 - Insomnia
 - Sweating
 - Sexual side effects
- Uncommon adverse effects
 - Activation
 - Bipolar switching
 - Suicidality
 - Serotonin syndrome
 - Bleeding

References:

Brent D, Emslie G, Clarke G, Wagner KD, Asarnow JR, Keller M, Vitiello B, Ritz L, Iyengar S, Abebe K, Birmaher B, Ryan N, Kennard B, Hughes C, DeBar L, McCracken J, Strober M,

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Bridge JA, Iyengar S, Salary CB, Barbe RP, Birmaher B, Pincus HA, Ren L and Brent DA. Clinical response and risk for reported suicidal ideation and suicide attempts in pediatric antidepressant treatment: a meta-analysis of randomized controlled trials. *JAMA*. 2007;297:1683-96.

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