Screening, Diagnosis and Management of Depression in Adolescents

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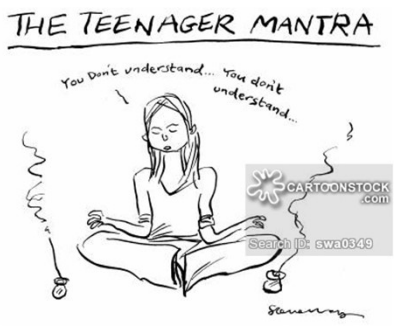
1

Learning Objectives

1. To identify signs and symptoms related to depression in adolescents
2. To understand how to screen and assess in the primary care setting
3. To understand the interventions PCPs can use in the primary care setting

2



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CASE

CM is a 16yo M well known to your practice who has been receiving in school therapy for adjustment disorder for several years.

He transitions to a new high school and he and his mother are here today with concerns for increased irritability and poor motivation at school. Grades are slipping a bit.

They are asking for a therapist and wondering what you think about medication for his "anger."

4

Poll

- What is your first question?
  - How did adjustment disorder last so long?
  - Can he get a school counselor like he did last time, our therapists are swamped?
  - What is the PHQ 9 score?
  - What medication for anger are they hoping for?
  - What is a school day really like for this young man?

5

Stages of Adolescent Development

Stages of Adolescence	Physical Development	Cognitive Development	Social-Emotional Development
Early Adolescence **Approximately 11 – 13 years of age**	• Puberty: grow body hair, increase perspiration and oil production in hair and skin, Girls – breast and hip development, onset of menstruation Boys – growth in testicles and penis, wet dreams, deepening of voice • Tremendous physical growth: gain height and weight • Greater sexual interest	• Growing capacity for abstract thought • Mostly interested in present with limited thought to the future • Intellectual interests expand and become more important • Deeper moral thinking	• Struggle with sense of identity • Feel awkward about one's self and one's body; worry about being normal • Realize that parents are not perfect; increased conflict with parents • Increased influence of peer group • Desire for independence • Tendency to return to "childish" behavior, particularly when stressed • Moodiness • Rule- and limit-testing • Greater interest in privacy
Middle Adolescence **Approximately 14 – 18 years of age**	• Puberty is completed • Physical growth slows for girls, continues for boys	• Continued growth of capacity for abstract thought • Greater capacity for setting goals • Interest in moral reasoning • Thinking about the meaning of life	• Intense self-involvement, changing between high expectations and poor self-concept • Continued adjustment to changing body; worries about being normal • Tendency to distance selves from parents, continued drive for independence • Driven to make friends and greater reliance on them, popularity can be an important issue • Feelings of love and passion
Late Adolescence **Approximately 19 – 21 years of age**	• Young women, typically, are fully developed • Young men continue to gain height, weight, muscle mass, and body hair	• Ability to think ideas through • Ability to delay gratification • Examination of inner experiences • Increased concern for future • Continued interest in moral reasoning	• Firmer sense of identity • Increased emotional stability • Increased concern for others • Increased independence and self-reliance • Peer relationships remain important • Development of more serious relationships • Social and cultural traditions regain some of their importance

6

Why Should We Care

- Globally, one in seven 10-19-year-olds experiences a mental health issues accounting for 13% of the global burden of disease in this age group.
- Depression, anxiety and behavioral disorders are among the leading causes of illness and disability among adolescents.
- Suicide is the 4th leading cause of death among 15-29 year olds.
- Adolescents with mental health conditions are particularly vulnerable to social exclusion, discrimination, stigma (affecting readiness to seek help), educational difficulties, risk-taking behaviors, physical illness and human rights violations
- **The consequences of failing to address adolescent mental health conditions extend to adulthood, impairing both physical and mental health and limiting opportunities to lead fulfilling lives as adults**

7

Treatment and Prevention is Critical

These disorders are prevalent & recurrent

Have high rates of comorbidity

Accompanied by poor psychosocial outcomes

Associated with high risk for suicide

Associated with high risk for substance use

8

What is Depression?

- Sad mood
- Irritable Mood

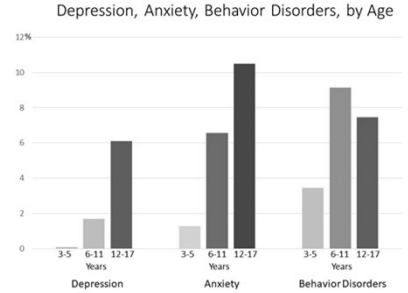
9

What is Depression?

- Severe expression of a continuously distributed trait or state?
- Distinct Pathological entity?
- Consensus around
  - Pervasive
    - Present most of the day nearly every day or most of the day more days than not (not "sometimes")
  - Distressing
  - **Functionally impairing**

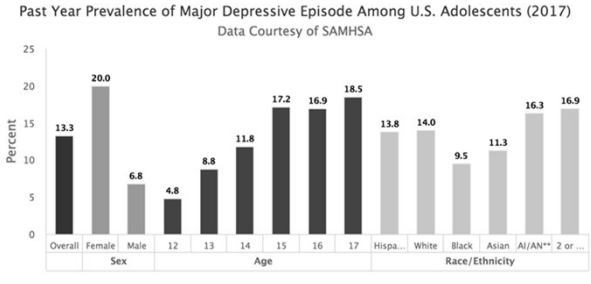
10

How Common is Depression



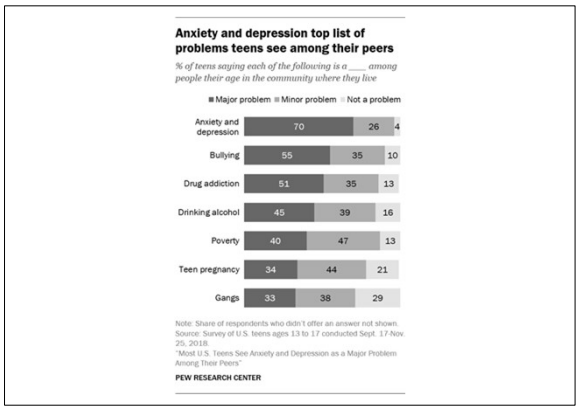
https://www.cdc.gov/childrensmentalhealth/data.html

11



2017 National Survey on Drug Use and Health

12



https://www.pewresearch.org/social-trends/2019/02/20/most-u-s-teens-see-anxiety-and-depression-as-a-major-problem-among-their-peers/

13

Gender Differences

- Depressed adolescent girls appear to be a higher risk due to:
  - an earlier onset of puberty
  - approaches to problem-solving that are more introspective
  - concerns about body image
  - higher risk of sexual abuse
  - pressures to conform to a more limited range of social roles
- Depressed adolescent boys are more likely to exhibit:
  - risk-taking behavior
  - substance use

14

Racial Inequities

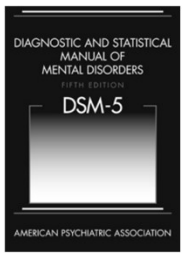
- Data from the National Comorbidity Survey Adolescent Supplement indicate that compared to their white counterparts, Black adolescents are significantly less likely to receive care for depression.
- Black youth may express their depression symptoms differently than White youth, including through externalizing behaviors

Ring the Alarm: The Crisis of Black Youth Suicide in America 2022

15

What are the types of Depressive Disorders?

- DSM 5
  - **Major Depressive Disorder**
  - Persistent Depressive
  - Disruptive Mood Dysregulation
  - Premenstrual Dysphoric
  - Substance/medication-induced
  - Due to another medical condition
  - **Unspecified**



16

Depressive Disorders on a Continuum

Adjustment Disorders	**Unspecified Depressive Disorders**	**Persistent Depressive Disorder**	Major Depressive Disorder
• Self Limiting • Clear Stressor in last 3 months an symptoms stop after 6 months of stressor • Very Mild Impairment	Depressed mood, but not meeting the criteria	Depressed mood at least 1 year with at least 2 depression symptoms: appetite, sleep, energy, self-esteem, concentration	**Mild**=4/6 symptoms; little to no impairment in functioning **Moderate**=5/6 symptoms + some impairment in fxning **Severe**=depressed mood + all symptoms; psychosis; significant suicidal behaviors or severe impairment in fxning

17

Clinical Presentation of Depression: **Somatic, Behavioral & Psychological**

Adults - Major Depressive Episode criteria	**Pediatric clinical presentation**
5+ sx, 2-wk period, nearly every day, change from prior; at least one sx is either depressed mood or anhedonia	**Depressed OR irritable mood**: quick temper, anger, tearfulness, unhappiness, slumped posture
• **Depressed mood** • **S leep Changes** • **I nterest** • **G uilt** • **E nergy** • **C ognition / C oncentration** • **A ppetite** • **P sychomotor** • **S uicide/death**	Anhedonia=Lack of enthusiasm for play, socializing, usual activities; boredom No play after school; tiredness Failure to make expected wt gains Self-deprecation; thoughts of disaster, abandonment; hopelessness
2. Clinically significant distress/impairment	**+ S** - Somatic sx (headache, stomachache)
3. Not due to substance or general med condition	Falling grades, conflict at home/school

Fisher H, Long M. Adolescent depression: an interactive case-based session for medical students. MedEdPORTAL Publications. 2016;12:10499

18

Persistent Depressive Disorder

- Pervasive (most of the day, more days than not) sad or irritable mood for over a year
- Accompanied by neurovegetative symptoms
  - Appetite, sleep energy
  - Distractibility, low self-esteem, hopeless
- On average, remit in 3-4 years if untreated

19

Adolescent/Young Adult Onset

- Major Depressive Disorder
  - Pervasive (most of the day, nearly every day) sad or irritable mood and/or loss of interest or pleasure for 2+ weeks
  - Pervasive neurovegetative symptoms
    - Appetite, sleep energy
    - Worthlessness, guilty, distractibility, suicidality
    - Psychomotor agitation or retardation
  - On avg, remits in 3-12 months if untreated, can become chronic in 20% of cases
  - High reoccurrence (50% in 2 years, 70% after 5 years)

20

Depression due to Another Medical Condition

- Endocrine
  - Hypothyroidism, Diabetes
- Cardiovascular
  - Stroke
- Neurologic
  - Epilepsy, post-concussion syndrome
- Infectious
  - AIDS, encephalitis, hepatitis, mono, pneumonia, bacterial endocarditis, TB
- Other
  - Inflammatory bowel disease, eczema, malignancy, anemia, failure to thrive, sickle cell disease

21

Substance/Medication-Induced Depression

- Substances
  - Alcohol, PCP, other hallucinogens, inhalants, opioids, sedatives/hypnotics/anxiolytics, amphetamine, cocaine
- Medications
  - Anti-virals, cardiovascular agents, anticonvulsants, smoking cessation agents, steroids, chemotherapeutic drugs, etc

22

Unspecified Depression

- Symptoms cause clinically significant distress or impairment but do not meet full criteria for any disorders in this category
- Can be applied in situations where there is insufficient information to make a more specific diagnosis

23

What Causes Depression

- Genes and Environment Interaction
- Genetic factors account for 40% of variability in risk (higher in adolescents)
- Environmental factors account for most of the remaining variability

24

Genetic Factors

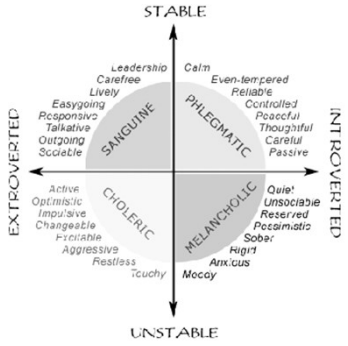
- Cerebral structure and function
- Neuroendocrine function
- Temperament/personality style
- Cognitive style

25

Environmental Factors

- Abuse, neglect
- School difficulties (including bullying)
- Social isolation
- LGBTQ+
- Chronic illness
- Family/marital discord
- Interpartner violence
- Disrupted family constellation
- Parent psychopathology

26



27

Assessing Severity

- Questionnaires
  - Mood and Feelings Questionnaire(MFQ)
    - Ages 8-18
  - Patient Health Questionnaire-9 (PHQ9)
    - Ages 12-adulthood
- Distress and Impairment
- Risks
  - Suicidality, self-injury
  - Altered mental status (intoxication, psychosis, agitation)
  - Abuse, neglect, other traumatic exposures
  - reoccurrence

28

Assessing Risk

- suicidal intent
- degree of planning that has taken place
- level of danger and availability associated with intended method
- behavior that the youth has been exhibiting
- substance use
- history of suicide attempts by youth, family members or significant others
- trigger events
- other risk factors
- factors that lower risk

29

Suicide Risk Factors

- Predisposing Factors
  - Psychiatric disorders
  - Substance use disorders
  - Previous suicide attempt
  - Family history of suicide attempts and completion
  - History of physical or sexual abuse
  - Social isolation
  - impulsivity
- Precipitating Factors
  - Interpersonal problems (relationships/family conflict)
  - Disciplinary problems
  - Bullying
  - Profound loss
  - Access to means
  - Substance use
  - Exposure to suicide

30

Safety Planning

Decide	decide who needs to be involved in the safety planning
Limit or remove	limit or remove the means and method of intended suicide
Provide	provide adequate support and supervision

31

PHQ 9 for case = 10

		Not at all	Several days	More than half the days	Nearly every day
1.	Little interest or pleasure in doing things	0	1	(2)	3
2.	Feeling down, depressed, or hopeless	0	(1)	2	3
3.	Trouble falling or staying asleep, or sleeping too much	0	1	2	(3)
4.	Feeling tired or having little energy	0	(1)	2	3
5.	Poor appetite or overeating	0	(1)	2	3
6.	Feeling bad about yourself — or that you are a failure or have let yourself or your family down	0	1	(2)	3
7.	Trouble concentrating on things, such as reading the newspaper or watching television	0	(1)	2	3
8.	Moving or speaking so slowly that other people could have noticed? Or the opposite — being so fidgety or restless that you have been moving around a lot more than usual	(0)	1	2	3
9.	Thoughts that you would be better off dead or of hurting yourself in some way	(0)	1	2	3

32

Depression or Just being a Teenager

- Duration
- Severity
- Other depressive symptoms
- *Impact on functioning*

*As compared to peers of same developmental stage

33

Treatments

- Treatment depends on severity
  - Mild
    - Guided self-help
  - Moderate
    - Brief intervention
  - Severe
    - Cognitive Behavioral Therapy (CBT)
    - Interpersonal Therapy (IPT)
    - Problem Solving therapy (PST)
    - Family Therapy
    - Antidepressant Medication

34

Self-Help

- Bibliotherapy
- Internet Sites
  - http://www.schoolmentalhealth.org/Resources/Clin/ClinDisordClin.html
  - http://www2.massgeneral.org/schoolpsychiatry/intervention_depression.asp
- Lifestyle guidance
  - Exercise, sleep, relaxation
- Problem-focused guidance

35

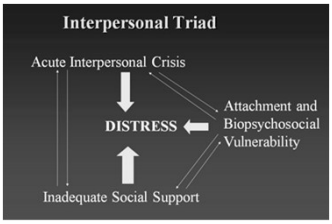
CBT

- Key Components
  - Psychoeducation
  - Feelings identification and monitoring
  - Behavioral activation
  - Cognitive restructuring
    - Challenging negative expectations
    - Modifying negative self talk
- 12-16 one hour sessions
- Requires special training

36

Interpersonal Therapy

- Identifying problematic relationships
- Resolution of interpersonal stress through interpersonal skills-building
  - Loss
  - Role disputes
    - Within a relationship
  - Role transitions
    - New role (school, puberty)



38

Problem Solving Therapy

- Problem definition and formulation
- Generation of alternative solutions
- Decision-making
- Solution implementation and verification

39

Evidence for Brief Intervention

- 2012 Systematic reviews/meta-analysis of 15 RCTs of brief (6-8 sessions) intervention in adults with depressive diagnoses or symptoms
  - Effect Size (ES) .25 (systematic reviews)-small
  - Effect Size (ES) .42 (meta analysis)-medium
- Problem solving approaches seem to be most effective

40

Evidence for Specialized Therapies

- Adolescents
  - CBT
    - Well established (ES .53)
  - IPT
    - Well established (ES .57)
  - PST
    - Well established in adults
  - Family Therapy
    - Experimental (ES .41)
- Children
  - CBT
    - Well established (ES .50)
  - CBT + parent
    - Well established (ES .60)
  - Family therapy
    - Experimental (ES .41)

41

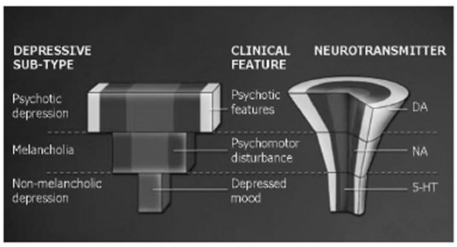


Figure 1. The Black Dog hierarchical model of depression

42

Evidence for Antidepressant Medication

- 2007 Meta Analysis, 13 RCTs in 2,910 youth <19 years of age, MDD diagnosis
  - SSRI response rate
    - 61% vs 50% for placebo (ES .25, NNT 10)
  - Fluoxetine (Prozac) performed better than other SSRIs for both safety and efficacy
- Other classes of antidepressants not different from placebo in rigorous trials
- Suicide Risk for SSRIs: Increased risk of suicidal ideation in first weeks after commencement of therapy, but overall, the benefits of antidepressants are considered greater than the risks of suicide attempts.

43

Evidence for Antidepressants

- 2012 Cochrane Review: 19 RCTs, 3,335 children and adolescents, depressive diagnosis
  - Antidepressant treatment lowered symptom severity and increased remission/response, but effects may not have been clinically significant
  - Antidepressant treatment increased suicide risk
  - Fluoxetine and escitalopram (Lexapro) possibly outperformed other antidepressants for effectiveness and safety
  - Venlafaxine (Effexor) had no effect on symptoms or remission/response, but increased suicide risk

44

Specialized Treatment

- 2013 Cochrane Review
  - 10 RCTs, 1,235 children and adolescents with MDD
  - Limited evidence that medication was more effective than therapy in achieving remission (68% vs 54%)
  - Limited evidence that combination treatment was more effective that medication alone in achieving remission (66% vs 58%)
  - For most outcomes, no differences between treatments

45

Back to Our Case

- CM describes feeling this way "always" and noting it is getting worse
- Brought up now because sleep getting really bad for 1 month
- Never wants to do anything unless forces
- Denies any substance use
- Feels supported at home
- Has made good friends at new school and they are worried about him

46

Back to Our Case

- Weight actually getting a little better because no appetite (was obese)
- Thinks therapy was helpful in the past but was more focused on some interpersonal conflicts in his old school
- Denies any self harm thoughts or actions
- Not dating currently because he feels so low
- Wondering about medication to feel better

47

Management in Primary Care

ALL PATIENTS

CONDUCT A RISK ASSESSMENT

ESTABLISH SEVERITY

[clinical assessment +depression rating scale]

SUPPORTIVE MANAGEMENT

-Build rapport

-Psycho-education

-Self-help

-Healthy lifestyle: exercise, sleep hygiene

-Supportive psychotherapy (problem solving, stress management, pleasant events)

48

American Academy of Pediatrics

From: **Guidelines for Adolescent Depression in Primary Care (GLAD-PC): Part I. Practice Preparation, Identification, Assessment, and Initial Management**

Pediatrics. 2018;141(3). doi:10.1542/peds.2017-4081

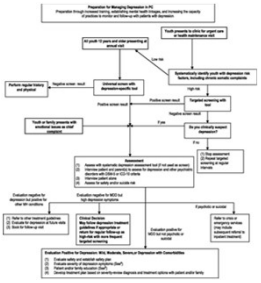


Figure Legend:

Clinical assessment flowchart. ICD-10, International Classification of Diseases, 10th Revision; MH, mental health. [a] See part I of the guidelines for definitions of mild, moderate, and severe depression. Please consult the tool kit for methods that are available to aid clinicians in distinguishing among mild, moderate, and severe depression. [b] Psychoeducation, supportive counseling, facilitation of parental and patient self-management, referring for peer support, and regular monitoring of depressive symptoms and suicidality.

49

Management

- **Mild:** supportive management, CBT, or IPT→ no response→ CBT, IPT, or antidepressant medication
- **Moderate:** supportive management, CBT, IPT or medication→ no response–add medication
- **Severe:** CBT/IPT and medication
- **Psychotic depression**: CBT/IPT and medication and second generation antipsychotic drug

50

When to Consider Medication

- Moderate to Severe Depression
- Recurrent Depression
- Family Hx Suicide/MDD
- Depression with psychotic features
- Lack of response to psychotherapy
- Family preference

51

SSRIs

- FDA approval
  - Fluoxetine (Prozac) ages 8+
  - Escitalopram (Lexapro) age 12+
- Fluoxetine has most favorable risk-benefit profile and long half-life

52

Common Side Effects of Antidepressants

- Generally well tolerated
  - Gastrointestinal distress
  - Sleep changes
  - Restlessness
  - Diaphoresis
  - Headaches
  - Akathisia
  - Appetite changes
  - Sexual dysfunction

53

Treatment with Medications

- Few pharmacokinetic & dose-range studies
- SSRIs may induce mania, hypomania, behavioral activation (impulsive, silly, agitated, daring)
- Long-term effects of SSRI's not known

54

Serious Side Effects of Antidepressants

- Behavioral activation
- Serotonin syndrome
- Bleeding
- Suicidality (spontaneously reported)
  - Overall risk ratio: 1.95 (1.66 for SSRI's/MDD)
  - NNH: 112
  - No completed suicides

55

Medication-Specific Side Effects

- Venlafaxine (Effexor)
  - Increased blood pressure, tachycardia
- Mirtazapine (Remeron)
  - Increased appetite/weight, somnolence
- Trazodone (Desyrel)
  - Priapism
- Bupropion (Wellbutrin)
  - Seizures (high doses, bulemia)

56

SSRI Withdrawal Effects

- F – Flu-like symptoms
- L – Lightheadedness
- U – Uneasiness (depressed/anxious)
- S – Sensory (paresthesias) or sleep disturbance
- H - Headache

57

Medication	FDA Approved (dx and ages)	Starting Daily Dose	Usual effective Daily dose	Max daily rec dose
Citalopram	None	5-10mg	20-40mg	40mg
Escitalopram	MDD: 12 & up	2.5-5mg	5-20mg	30mg
Fluoxetine	MDD: 8 & up OCD: 7 & up	5-10mg	10-40mg	60mg
Fluvoxamine	OCD: 8 & up	25-50mg	50-200mg	300mg
Paroxetine	None	5-10mg	10-40mg	60mg
Sertraline	OCD: 6 & up	12.5mg-25mg	25-100mg	200mg

58

Severe Depression and Treatments

- Specific somatic treatments may be indicated for certain types of depression
  - Psychotic depression
    - Adjunctive antipsychotic medication
    - ECT
  - Seasonal affective disorder
    - Bright light therapy
  - Bipolar depression
    - Adjunctive mood stabilizer medication or psychotherapy alone

59

Each phase of treatment should include psychoeducation, supportive management, and family & school involvement

60

Psychoeducation

- Can improve adherence to treatment & reduce symptoms of depression
- Includes information about:
  - Causes, symptoms, course & treatments of depression
  - Risks associated with treatment and with no treatment

61

Supportive Management

- Includes:
  - Engagement techniques (e.g., motivational interviewing
  - Active listening & reflection
  - Restoration of hope
  - Problem solving & coping skills

62

Family Involvement

- Includes:
  - Strengthening the parent/child relationship
  - Providing parenting guidance
  - Reducing family dysfunction
  - Facilitating treatment for caregivers or siblings with psychiatric disorders and/or marital conflict

63

School Involvement

- Includes:
  - Psychoeducation
  - Confidentiality
  - Accommodations (504 Plan)

64

Other Factors Influencing Type of Treatment

- Availability of evidence-based treatments
- Patient & family preference
- Inability of patient to participate in therapy due to:
  - Agitation or psychosis
  - Low motivation or poor concentration
  - Sleep disturbances
  - Comorbid disorders affecting cognitive function

65

Factors Associated with Non-Response

- Misdiagnosis
- Unrecognized/untreated comorbidities
- Unrecognized/untreated medical conditions
- Inappropriate/ineffective medications or therapy
- Inadequate length of treatment or dose of medication
- Lack of adherence to treatment
- Exposure to chronic or severe life events
- Personal identity issues
- Cultural/ethnic factors
- Poor "fit" with therapist/pharmacologist
- Inadequate skills of therapist/pharmacologist

66

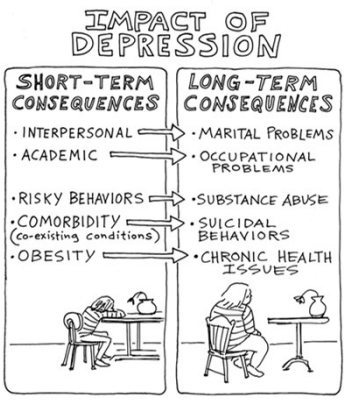
Prevention/Early Intervetion

- Youths with risk factors for depression should have access to early intervention services
- Early intervention strategies:
  - Psychoeducation
  - Cognitive, coping, & social skills training
  - Family therapy
  - Lifestyle modifications
    - Adequate sleep & exercise, relaxation exercises, avoidance of stressful situations
- Effects are small to modest but important

67

988 Crisis Line

68



69

- https://www.aacap.org/AACAP/Families_and_Youth/Facts_for_Families/FFF-Guide/The-Depressed-Child-004.aspx
- https://www.samhsa.gov/find-help/988
- https://nami.org/Home
- https://www.aacap.org/AACAP/Resources_for_Primary_Care/Information_for_Patients_and_Their_Families/Home.aspx
- https://publications.aap.org/pediatrics/article/141/3/e20174081/37626/Guidelines-for-Adolescent-Depression-in-Primary?autologincheck=redirected?nfToken=00000000-0000-0000-0000-000000000000

70