



CARE FOR KIDS



Early & Periodic Screening, Diagnosis & Treatment

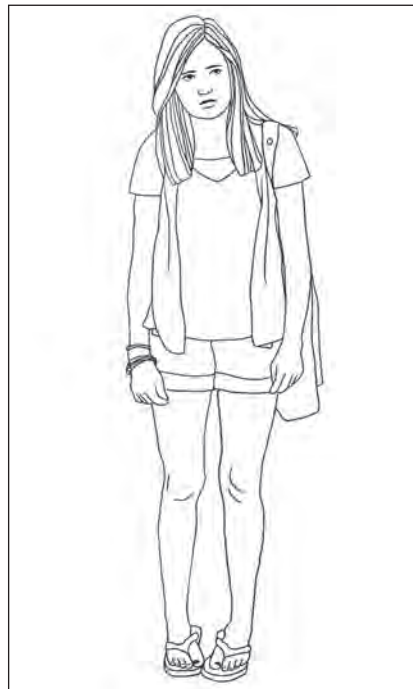
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Screening for Depression in Primary Practice

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Depression is a mental health disorder that affects millions of children and adolescents each year. Symptoms include persistent and debilitating sadness, loss of interest in activities, discouragement, physical symptoms, changes in sleeping and eating habits, and loss of self-worth. Reports from the Substance Abuse and Mental Health Services Administration (SAMHSA) estimate that approximately 8.5% of those ages 12 to 17 experienced one major depressive episode in the past year, with females being twice as likely to have had a depressive episode. Of these youths, approximately 70% indicated that they suffered severe or very severe impairment in at least one of the following areas: home, school/work, fam-



ily relationships, or social life. This impairment left them unable to carry out their normal daily activities for between 25 to 58 days that year.

These statistics make clear that depression can be debilitating for children and adolescents, yet only 38.9% of these youths reported that they received some sort of treatment for their depression. Among those who received treatment, 36.8% saw a psychologist, 27.3% saw a psychiatrist, and 26.6% saw their general practitioner. There are many reasons youth may not receive treatment, including not recognizing or understanding their symptoms and the stigma surrounding mental health. The low number who seek treatment compared to the number who report severe impairment makes clear that more needs to be done to identify children and adolescents with depression.

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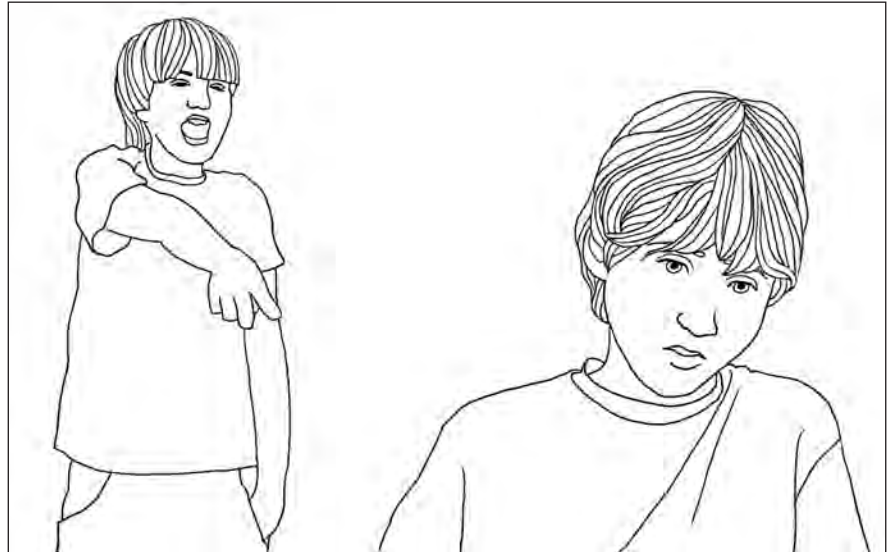
Screening for Depression in Primary Practice (continued from page 1)

Pediatricians and other practitioners who follow youth on an on-going basis are in a prime position to identify depression symptoms. Early identification and appropriate treatment may lessen the likelihood of severe impairment.

There are several measures that may help practitioners screen for depression in children and adolescents during routine primary care visits.

The Children's Depression Inventory 2 (CDI 2) is a well-normed self-reporting measure for those from 7 to 17 years of age. Having parents and teachers complete appropriate versions of the inventory provides additional information. The original version contains 28 items and looks at several aspects of depression including negative mood, negative self-esteem, interpersonal problems, and ineffectiveness. For a primary care setting, there is a 10-item, short version of the CDI 2 that could easily be integrated into routine visits.

For adolescents and adults, the Beck Depression Inventory-FastScreen (BDI-FS) is a self-reporting measure that has shown to have good sensitivity and specificity. The seven-item FastScreen is normed for ages 13 to 80, so it is appropriate for wide patient population. The



BDI-FS is a new, shorter version of the BDI-II, which is well suited for the quick pace of busy primary care clinics.

Another screening tool for depression is the Center for Epidemiologic Studies Depression Scale for Children (CES-DC). While this 20-item measure has been used for children as young as 8 years old, psychometric properties indicate that it is more appropriate for ages 11 to 18. An adult version also is available: both instruments have been widely used for clinical and epidemiological research. A version of the CES-DC can be found in the Bright Futures Clinical Toolbox.

In addition to depression, the Pediatric Symptoms Checklist (PSC) and Strengths and Difficulties Questionnaire (SDQ) screen for a variety of internalizing and externalizing behaviors in children and adolescents.

The Pediatric Symptom Checklist (PSC) is a tool that uses a Likert scale to assess a wide range of mental health and behavioral symptoms. It is available in an original 35-item version or a 17-item short version (PSC-17) and is appropriate for ages 4 to 18. There are forms for parents to complete, as well as a self-report for older children and adolescents. Both forms suggest specific cutoff scores that indicate further evaluation may be warranted.

The Strengths and Difficulties Questionnaire (SDQ) is a screening tool that often is used both clinically and in research. The main screening tool contains 25 items asking about symptoms in five different areas: emotional symptoms, conduct problems, hyperactivity/inattention, peer relationships, and prosocial behavior. The SDQ

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Screening for Depression in Primary Practice
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is appropriate for those ages 3 to 16 and there are several versions available for completion by parents, teachers, and a self-report for youths 11 to 16 years old. Extended versions include the impact of the symptoms on the youth and follow-up questions following an intervention.

Completion of any screening tool will provide valuable information about depression symptoms and a good starting point for interviewing and talking with children and adolescents about depression and other mental health issues. While not every child who scores high on a screening tool will have significant difficulties, these tools will help you as a primary care practitioner to identify those

patients who should be referred for further evaluation or treatment by a mental health professional.

Resources

Substance Abuse and Mental Health Services Administration, Office of Applied Studies. (May 11, 2009). *The NSDUH Report: Major Depressive Episode and Treatment among Adolescents*. Rockville, MD.

Substance Abuse and Mental Health Services Administration, Office of Applied Studies. (May 13, 2008). *The NSDUH Report—Major Depressive Episode among Youths Aged 12 to 17 in the United States: 2004 to 2006*. Rockville, MD.

Faulstich ME, Carey MP, Ruggiero L, et al. 1986. Assessment

of depression in childhood and adolescence: An evaluation of the Center for Epidemiological Studies Depression Scale for Children (CES-DC). *American Journal of Psychiatry* 143(8):1024–1027.



Screening Tool	Cost	Source
CDI 2	\$84.00 for manual \$53 for pkg of 25 Record Forms	http://psychcorp.org
BDI-FastScreen	\$99.00 for complete kit (manual and 50 record forms)	http://psychcorp.org
CES-DC	No Fee	http://www.brightfutures.org/mentalhealth/pdf/professionals/bridges/ces_dc.pdf
SDQ	No Fee	http://www.sdqinfo.com
PSC and PSC-17	No Fee	http://psc.partners.org

Pediatric Lipid Screening Guidelines

by Sonali Patel, MD, PhD, Pediatric Cardiology, University of Iowa Children's Hospital

Cardiovascular disease is the leading cause of mortality and morbidity in the United States. While most occurs during adulthood, the percentage of individuals with cardiac disease is exponentially increasing. Projections estimate that over 40% of adults will have cardiovascular disease by the year 2030. It is important to note that this is an acquired disease. Autopsy studies and studies of accident, trauma, and homicide victims make clear that the atherosclerotic process begins in childhood. The progression from fatty streaks to fibrous plaque to atherosclerotic plaque has been well characterized. It also has been estimated that 50% of the pediatric population has evidence of fatty streaks, with much smaller percentages comprising the remaining two stages. Using the adult population as a reference, it has been demonstrated that risk reduction delays progression to clinical disease. Armed with this knowledge, it is becoming increasingly important that cardiovascular risk reduction take place during childhood.

The prevalence of lipid abnormalities in childhood is increasing. The Child and Adolescent for Cardiovascular Health Trial evaluated over 3,000 third-grade students and discovered

that more than 13% of seemingly healthy children had total cholesterol levels over 200 mg/dL. Using the National Health and Nutrition Examination Survey data from 1988-1994, 10% of adolescents were identified as having an elevated total cholesterol. More recent data from 1999-2006 has identified over 20% of adolescents with not only an elevated total cholesterol, but also more than one lipid abnormality.



In 1992, screening guidelines were published by the American Academy of Pediatrics based on a targeted screening approach. High-risk individuals were identified based on family history of hypercholesterolemia, hypertension, diabetes, or early cardiovascular events. Individuals also were classified as high-risk if there were cardiovascular risk factors present such as overweight or obese weight status, hypertension, or diabetes. In an effort to evaluate these guidelines, the

Coronary Artery Risk Detection in Appalachian Communities project was conducted. This study evaluated more than 20,000 fifth-grade children in West Virginia. Of the 29% who did not have a positive family history, 9.5% had a dyslipidemia. Of these children, more than 100 warranted pharmacologic therapy. The obesity epidemic also has led to a much larger population of children with dyslipidemia, changing the clinical picture drastically. In addition, the knowledge base regarding dyslipidemias in childhood has changed. It is becoming clearer that cumulative exposure to elevated cholesterol levels appears to be associated with cardiovascular risk later in life. In order to address these concerns, newer guidelines needed to be established.

In 2011, screening guidelines were published which included a universal screening component. Criticism of universal screening included the unintentional labeling of children with a "disease," leading to anxiety for them and their families, as well as estimates of increased cholesterol-lowering medication use when long-term safety and efficacy studies have not performed. Although these controversies

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INSTRUCTIONS FOR USE

Center for Epidemiological Studies Depression Scale for Children (CES-DC)

The Center for Epidemiological Studies Depression Scale for Children (CES-DC) is a 20-item self-report depression inventory with possible scores ranging from 0 to 60. Each response to an item is scored as follows:

- 0 = "Not At All"
- 1 = "A Little"
- 2 = "Some"
- 3 = "A Lot"

However, items 4, 8, 12, and 16 are phrased positively, and thus are scored in the opposite order:

- 3 = "Not At All"
- 2 = "A Little"
- 1 = "Some"
- 0 = "A Lot"

Higher CES-DC scores indicate increasing levels of depression. Weissman et al. (1980), the developers of the CES-DC, have used the cutoff score of 15 as being suggestive of depressive symptoms in children and adolescents. That is, scores over 15 can be indicative of significant levels of depressive symptoms.

Remember that screening for depression can be complex and is only an initial step. Further evaluation is required for children and adolescents identified through a screening process. Further evaluation is also warranted for children or adolescents who exhibit depressive symptoms but who do not screen positive.

This inventory is from Bright Futures, where more resources for families can be found (www.brightfutures.org).

REFERENCES

Weissman MM, Orvaschel H, Padian N. 1980. Children's symptom and social functioning self-report scales: Comparison of mothers' and children's reports. *Journal of Nervous Mental Disorders* 168(12):736-740.

Faulstich ME, Carey MP, Ruggiero L, et al. 1986. Assessment of depression in childhood and adolescence: An evaluation of the Center for Epidemiological Studies Depression Scale for Children (CES-DC). *American Journal of Psychiatry* 143(8):1024-1027.

Number _____ Score _____

INSTRUCTIONS

Below is a list of the ways you might have felt or acted. Please check how *much* you have felt this way during the *past week*.

DURING THE PAST WEEK	Not At All	A Little	Some	A Lot
1. I was bothered by things that usually don't bother me.	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
2. I did not feel like eating, I wasn't very hungry.....	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
3. I wasn't able to feel happy, even when my family or friends tried to help me feel better.	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
4. I felt like I was just as good as other kids.	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
5. I felt like I couldn't pay attention to what I was doing.	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
DURING THE PAST WEEK	Not At All	A Little	Some	A Lot
6. I felt down and unhappy.....	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
7. I felt like I was too tired to do things.	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
8. I felt like something good was going to happen.....	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
9. I felt like things I did before didn't work out right.	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
10. I felt scared.	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
DURING THE PAST WEEK	Not At All	A Little	Some	A Lot
11. I didn't sleep as well as I usually sleep.	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
12. I was happy.	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
13. I was more quiet than usual.....	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
14. I felt lonely, like I didn't have any friends.	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
15. I felt like kids I know were not friendly or that they didn't want to be with me..	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
DURING THE PAST WEEK	Not At All	A Little	Some	A Lot
16. I had a good time.	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
17. I felt like crying.	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
18. I felt sad.....	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
19. I felt people didn't like me..	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
20. It was hard to get started doing things..	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>

www.brightfutures.org

Evidence-Based Recommendations for Lipid Assessment



Excerpted from A Supplement to *Pediatrics*: Expert Panel on Integrated Guidelines for Cardiovascular Health and Risk Reduction in Children and Adolescents: Summary Report, Dec. 2011, Vol. 128, Supplement 5

Birth to 2 y	No lipid screening	Grade C Recommend
2 to 8 y	No routine lipid screening	Grade B Recommend
	Measure fasting lipid profile twice, ^a average results if: Parent, grandparent, aunt/uncle, or sibling with MI, angina, stroke, CABG/stent/angioplasty at <55 y in males, <65 y in females Parent with TC \geq 240 mg/dL or known dyslipidemia Parent with TC \geq 240 mg/dL or known dyslipidemia Child has diabetes, hypertension, BMI \geq 95th percentile or smokes cigarettes	Grade B Strongly recommend Grade B Strongly recommend Grade B Strongly recommend
	Child has a moderate- or high-risk medical condition (Table 5-2)	Grade B Strongly recommend
	<i>Use Table 9-1 for interpretation of results, algorithms in Figs 9-1 and 9-2 for management.</i>	
9 to 11 y	Universal screening	Grade B Strongly recommend
	Non-FLP: Calculate non-HDL cholesterol: Non-HDL cholesterol = TC – HDL cholesterol If non-HDL \geq 145 mg/dL \pm HDL < 40 mg/dL ^b : Obtain FLP twice, ^a average results <u>OR</u> FLP: If LDL cholesterol \geq 130 mg/dL \pm non-HDL cholesterol \geq 145 mg/dL \pm HDL cholesterol < 40 mg/dL \pm triglycerides \geq 100 mg/dL if <10 y, \geq 130 mg/dL if \geq 10 y: Repeat FLP, average results <i>Use Table 9-1 for interpretation of results, algorithms in Figs 9-1 and 9-2 for management.</i>	
12 to 16 y	No routine screening ^c	Grade B Recommend
	Measure FLP twice, ^a average results, if new knowledge of: Parent, grandparent with MI, angina, stroke, CABG/stent/angioplasty, sudden death at <55 y in male, <65 y in female Parent with TC \geq 240 mg/dL or known dyslipidemia Patient has diabetes, hypertension, BMI \geq 85th percentile or smokes cigarettes Patient has a moderate- or high-risk medical condition (Table 5-2) <i>Use Table 9-1 for interpretation of results, algorithms in Figs 9-1 and 9-2 for management.</i>	Grade B Strongly recommend Grade B Strongly recommend Grade B Strongly recommend Grade B Strongly recommend
17 to 21 y	Universal screening once in this time period:	Grade B Recommend
	Non-FLP: Calculate non-HDL cholesterol: Non-HDL cholesterol = TC – HDL cholesterol* 17–19 y: If non-HDL cholesterol \geq 145 mg/dL \pm HDL cholesterol < 40 mg/dL ^b Measure FLP twice, ^a average results <u>OR</u> FLP: If LDL cholesterol \geq 130 mg/dL \pm non-HDL cholesterol \geq 145 mg/dL \pm HDL cholesterol < 40 mg/dL \pm triglycerides \geq 130 mg/dL Repeat FLP, average results <i>Use Table 9-1 for interpretation of results, algorithms in Figs 9-1 and 9-2 for management.</i>	
	20–21 y: Non-HDL cholesterol \geq 190 mg/dL \pm HDL cholesterol < 40 mg/dL Measure FLP twice, average results <u>OR</u> FLP: If LDL cholesterol \geq 160 mg/dL \pm non-HDL cholesterol \geq 190 mg/dL \pm HDL cholesterol < 40 mg/dL \pm triglycerides \geq 150 mg/dL Repeat FLP, average results	
	<i>Use Table 9-2 for interpretation of results, Adult Treatment Panel (ATP III) algorithm for management.</i>	

Grades reflect the findings of the evidence review, recommendation levels reflect the consensus opinion of the expert panel. Note that the values given are in mg/dL. To convert to SI units, divide the results for TC, LDL cholesterol, HDL cholesterol, and non-HDL cholesterol by 38.6; for triglycerides, divide by 88.6. MI indicates myocardial infarction; CABG, coronary artery bypass graft; ATP III, Adult Treatment Panel III.

^a Interval between FLP measurements: after 2 weeks but within 3 months.

^b Use Table 9-1 for interpretation of results; use lipid algorithms in Figs 9-1 and 9.2 for management of results.

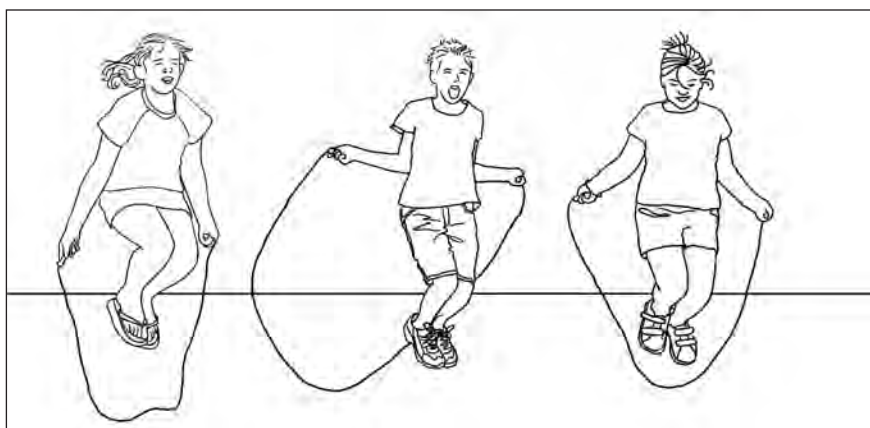
^c Disregard triglyceride and LDL cholesterol levels in nonfasting sample.

^d Lipid screening is not recommended for those aged 12 to 16 years because of significantly decreased sensitivity and specificity for predicting adult LDL cholesterol levels and significantly increased false-negative results in this age group. Selective screening is recommended for those with the clinical indications outlined.

Pediatric Lipid Screening Guidelines
(continued from page 4)

have been heavily discussed, it appears that universal screening will capture numerous cases of dyslipidemias that may have been missed with targeted screening approaches alone.

Current guidelines call for universal screening between ages 9 to 11 and again between ages 18 to 21, prior to the transition to adult care. Outside of these times, targeted screening recommendations remain in place. Ideally, a fasting lipid profile would be obtained. However, there are numerous instances when a patient is present in clinic and likely will not return in a fasting state. Non-fasting lipid profiles can be used in this case. With the non-fasting lipid profile, the marker of interest is the non-HDL cholesterol level. Adult studies have demonstrated that this is an effective screening tool for lipid abnormalities. When a non-fasting profile is obtained, triglycerides and



LDL cholesterol levels are not reliable, as they have not been cleared by fasting.

Cut-offs for abnormalities are based on normal values derived from the Lipid Research Clinical Prevalence Study. Acceptable values are levels below the 75th percentile, borderline are those between the 75th and 95th percentiles, and elevated are those levels above the 95th percentile. Specific values are listed in the table below.

The main question after obtaining levels is how to respond to abnormal levels. Diet and exercise remain the mainstay of therapy. Diet

modification includes a reduction of consumption of total cholesterol to 200 mg/day and saturated fat comprised 7% of calories. This is in comparison to a healthy diet of 300 mg/day of cholesterol and 10% of calories derived from saturated fat. Physical activity primarily affected HDL cholesterol and triglyceride levels. Both the American Academy of Pediatric and the American Heart Association recommend 60 minutes per day of *moderate to vigorous* physical activity. However, if after a six-month trial of lifestyle modification the levels remain elevated, a referral to a cardiologist or other lipid specialist may be warranted for medication management.

Table 1:

	PERCENTILE	TC	LDL	TG † ‡	HDL †	NON-HDL
Acceptable	< 75th	<170	<110	<75 (<90)	≥45	<120
Borderline	75 th –95th	170–199	110–129	75–99 (129)	40–44	120–144
Elevated	> 95th	≥200	≥130	≥100 (≥130)	<40	≥145

TC = total cholesterol; TG = triglycerides

† Not established by NCEP, these values are taken from NHANES study values

‡ Values are for children <10 years and children ≥10 years



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