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# Accidental scratch—or a sign of self-cutting?

Having a high index of suspicion is key to identifying adolescents who cut themselves. The approach described here can help you properly evaluate these patients and get them the help they need.

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## PRACTICE RECOMMENDATIONS

› *Examine the forearms and legs of all patients ages 11 to 19 years as part of the routine health assessment, looking specifically for injuries that may be self-inflicted.* (C)

› *Make an immediate referral for outpatient psychotherapy for any patient with self-cutting behavior who admits to recent or current suicidal ideation or a plan.* (C)

› *Facilitate a direct transfer to the local emergency department for psychiatric evaluation for any patient with self-cutting behavior who admits to current suicidal intent.* (B)

**Strength of recommendation (SOR)**

(A) Good-quality patient-oriented evidence

(B) Inconsistent or limited-quality patient-oriented evidence

(C) Consensus, usual practice, opinion, disease-oriented evidence, case series

**CASE ▶** Alice R, a 14-year-old student, comes to your office for a preparticipation exam in advance of volleyball season. During the exam, you note several scratches on her left forearm. When you ask about them, Alice tells you she scratched herself when she accidentally brushed up against some bushes while walking home from school. Her explanation strikes you as odd, given that it's been rather cold out, and it seems likely that she would have been wearing a jacket.

If Alice were your patient, how would you proceed?

Few health disorders are as clouded in mystery as self-cutting behavior in adolescents. Self-cutting is often overlooked or undetected by the medical community.[1] When examining an adolescent, a family physician (FP) may pay minimal attention to the patient's forearms and legs, but such attention can provide clues to critical health information. Relatively minor injuries in a physically active adolescent might be easy to dismiss as "normal," but knowing the types of injuries to look for—and what to ask your young patients—can help you identify injuries that are self-inflicted and intervene accordingly.

Being aware of self-cutting, understanding its potential sequelae, and having the skills necessary to develop an individualized treatment plan are essential tools for appropriately managing this behavior.[2] Failure to recognize and address self-cutting in an adolescent has immediate consequences, such as the exacerbation of other psychiatric disorders or an increased risk of suicide. Potential longer-term consequences include an increased risk of premature death for adults who engaged in self-cutting as adolescents.[3,4]

For many young people, self-injury occurs only a few times, but the behavior may increase in frequency and severity when combined with other psychosocial factors.[5] FPs can play a crucial role by identifying cutting behavior, providing medi-

cal treatment, educating patients and families about self-cutting, making an appropriate mental health referral, coordinating multidisciplinary collaboration, and, ultimately, supporting the patient and his or her family.

## Cutting is a common form of self-harm

Some adolescents use sharp or rough objects to inflict injuries on their arms, legs, or other parts of their body. Individuals may cut, scratch, burn, abrade, or prick the skin repeatedly, often leaving scars. They may then attempt to hide the resulting injuries with clothing.[6] Most self-cutting injuries are superficial, but can result in scarring. Severe injuries, such as lacerated tendons, penetrated major blood vessels, or disfiguring scars, are uncommon.

Because self-cutting behavior often remains private or intentionally hidden, its true incidence is unclear.[6] However, self-cutting is not rare. In published literature, statistics for self-cutting often are grouped with those for other forms of non-suicidal self-injury (NSSI), including burning, hair-pulling, self-hitting, and self-poisoning. These self-harm behaviors have been reported in more than 10% of ninth graders[7] and college students,[8] and in up to 4% of adults.[9] The lifetime prevalence of self-cutting is estimated to be 11.5%,[10] and research suggests that the frequency of adolescent self-cutting may be increasing.[5,11,12]

Adolescent girls are 2 to 4 times more likely than adolescent boys to engage in NSSI.[7,12] Girls primarily cut, scratch, or otherwise injure their skin, whereas boys more commonly hit or burn themselves, and inflict more injuries to the face, chest, and genitals.[7,13] Most adolescents who self-cut do so only on their arms (67%).[10]

## Not every patient who self-cuts has a psychiatric illness

Adolescents who cut themselves do not fit neatly within a typical profile.[7,14,15] Self-harm in adolescents appears to be associated with a range of psychological factors, including internalizing disorders (eg, depression, anxiety, eating disorders), mood regulation difficulties (eg, impulsivity and related impulse control disorders, borderline personality traits/disorder), negative affect (eg, sadness, anxiousness, anger, stress, low self-esteem), and poor coping strategies (eg, avoidance, internalizing, substance use).[14]

The strong empirical relationship between psychological factors and self-harm has led many researchers and clinicians to view self-harm as a symptom of a psychiatric disorder.[16] A study of psychiatric disorders among 44 adolescents (41 girls) with self-cutting behavior found a strong association with certain internalizing disorders: 63% had major depressive disorder, 37% suffered from anxiety, and 15% had an eating disorder.[15] However, viewing self-cutting primarily as a manifestation of a psychiatric disorder doesn't fully explain the behavior.

Self-harm behaviors occur across many disorders and are not unique to any single diagnosis.[16] Moreover, evidence suggests that many (if not most) adolescents who self-harm do not fit the profile of psychiatric and social distress that has been well described in the literature.[14,15] That is, many adolescents who self-harm may be categorized as psychologically "normal," meaning they don't meet the criteria for a diagnosis of depression, anxiety, or impulsivity.[14,15]

**Being female is a strong predisposing factor** for self-cutting.[11] This may be because females have higher rates of depression and tend to internalize, whereas males tend to externalize and may underreport self-harm. Research suggests that modeling of self-cutting behavior by, for example, posting videos online may encourage other females to self-cut, and that contagion (ie, group cutting) is a factor.[17] Self-injury is especially common in adolescent girls who have a history of physical abuse.[18] In a study of patients with a history of cutting and suicidality, exposure to physical or sexual abuse, physical or emotional neglect, and chaotic family life during childhood and adolescence was associated with more frequent and more severe cutting.[5,19]

## Cutting may help patients cope with emotional distress

Although adolescents may cut for many

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reasons, in general, the behavior is a coping strategy for affect regulation; cutting appears to displace emotional pain or relieve emotional blunting.[2,16] Cutting provides an immediate—albeit unhealthy and temporary—method of coping. However, this is often followed by shame and low self-esteem, and the underlying emotional distress returns. Others may use self-cutting as a means of obtaining cathartic release, responding to peer pressure, or inflicting self-punishment.[9] Adolescents with limited interpersonal skills may use cutting to affect relationships by, for example, communicating their distress to others and, in turn, eliciting sympathy, status, or camaraderie. If the adolescent who self-cuts interprets the resulting responses as positive, the cutting behavior is reinforced.[20]

The importance of the pain associated with self-injury is unclear. In an Internet survey of 128 adolescents who injured themselves, 43% reported the injuries often or always caused pain, whereas 25% said such injuries never caused pain.[21] Some research suggests that self-inflicted trauma (including pain) may provide emotional relief by increasing serotonin levels, or may deliver desired euphoria by releasing endorphins.[22]

**Self-cutting, suicide, and mortality risk.** Suicide does not appear to be the intent or motivation of most adolescents who self-cut.[11,12] Adolescents tend to cut themselves to "make life feel better," not to end their life. However, the intent of self-cutting may change over time, and may lead adolescents to adopt more lethal forms of injury. In a study of adolescents receiving treatment for major depressive disorder, NSSI was found to be a strong predictor of suicidal behavior.[23]

Although self-harm and self-cutting occur more frequently in females, suicide is observed significantly more often in males and individuals with multiple self-harm episodes.[3,24] Further, males who use analgesics to relieve the pain of cutting are at especially high risk for suicide.[25]

In general, individuals who self-harm have an increased risk of premature death.[3,4] In a cohort study, more than 30,000 individuals with self-harm who presented to emergency departments in England had a mean loss of 31.4 years of life compared to the general population.[4] Also, adolescent self-cutting is associated with adverse childhood experiences (eg, maltreatment), and these experiences are associated with early death in adults.[26]

## A structured approach to assessment and care

If during the course of a physical examination you notice injuries such as cuts, scratches, burns, or rub marks, be especially suspicious of self-injury if they are located in areas of the body that the patient could easily reach. Also consider the possibility that the injuries may be a direct result of child abuse trauma. If you suspect physical or sexual abuse or neglect, federal law mandates you report such concerns to the appropriate state child protective services agency.

As you might expect, it's important to use a nonjudgmental, empathic, and supportive approach when speaking to the patient about his or her motivation for cutting.[5] A review of 74 studies found that attitudes of hospital staff, especially physicians, largely were negative toward patients who engaged in self-harm.[27] One approach to talking to patients about self-cutting involves asking questions based on motivational interviewing techniques. (See "Talking to patients about self-harm: 5 questions to ask" on page 280.[5])

Be sure to document the location(s) and extent of the injury, and estimate the timeframe of the cutting based on the age of any scars. You'll also need to treat the wounds and administer tetanus immunization, as appropriate.

**Assess for additional risks, especially suicide.** Such risks may include other behavioral issues (eg, alcohol or substance use, promiscuity, antisocial behavior), academic problems, or eating disorders. In addition, evaluate for prior and/or current mental health concerns, family dysfunction and conflict, and acute or chronic patient or family psychosocial stressors.

Assessment of suicidality should include direct queries about past, recent, and cur-



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## Talking to patients about self-harm: 5 questions to ask

When evaluating a patient whose injuries might be self-inflicted, family physicians can use a subset of motivational interviewing (MI) techniques to promote a positive and supportive atmosphere for the patient, with the goal of making it easier for the patient to discuss self-injury.

Kerr et al[5] suggests that family physicians can use a set of questions based on MI techniques to facilitate discussion of self-injury and prompt a patient to consider seeking help for his or her self-injury. Such questions might include:

1. What effect is self-cutting having on your life?
2. While it seems like self-cutting serves a function for you, what disadvantages are there if you continue to cut yourself?
3. What factors may motivate you to stop self-injuring right now?
4. How would your life be different right now if you were not self-cutting?
5. What do you think you would need in the way of help in order to stop self-cutting?

rent suicidal ideation, intent, and plan. Further details on how to evaluate suicidality, including red flags to watch for, are available from the American Academy of Pediatrics at http://pediatrics.aappublications.org/content/105/4/871.full.pdf.

A patient who self-cuts and expresses the intent to commit suicide should be directly transferred to the emergency department for a psychiatric evaluation. A patient who admits he has been thinking about suicide or a suicide plan but does not state an intent to commit suicide should receive an immediate mental health referral to a psychotherapist or psychiatrist. Patients who have engaged in longstanding self-cutting should be referred to a therapist with experience in treating childhood trauma, especially if the patient has a history of behavioral or mental health disorders.[12,28]

### The role of the family

Family members often will not have known about the cutting behavior. Family and caregivers should be educated about self-cutting (eg, its use as a coping strategy, the complexity of contributing factors), ways to provide a safe environment (eg, increased adult supervision, safeguarding of sharp objects), and the importance of mental health treatment. Positive family support is critical in addressing the patient's self-cutting and underlying factors.

**Determine if family intervention is needed.** If family stressors, conflict, or dysfunction is identified as a contributing factor, recommend family counseling.

### Several treatment options, but few specifically for cutting

Many adolescents who self-cut *want* to stop cutting. In a survey of self-injured adolescents, 37% wanted to stop the behavior.[14] However, even with treatment, cutting behavior often continues because cutting as a coping strategy may feel highly effective in the moment and can become addictive.[29] Also, videos with explicit imagery of self-cutting are readily available on various Web sites and could normalize and reinforce the behavior.[30]

There are few evidence-based treatments for self-harm in general, let alone specifically for adolescent self-cutting.[12,31] For adolescents with self-harm behaviors, individual cognitive behavioral therapy, dialectical behavioral therapy, group developmental therapy, multisystemic therapy, family intervention, psychotropic medication, and inpatient psychiatric treatment may help reduce risks and improve psychosocial functioning.[12,31] Psychotropic medication has been shown to relieve psychiatric symptoms in patients who self-harm, but its effectiveness in reducing self-cutting behavior is unclear.[12]

**CASE ▶** After you speak to Alice with her parents out of the room, she admits that she had scratched her arms several times in the past few weeks because she felt stressed about her grades in certain classes. She says she'd done this scratching before as a coping mechanism, but never thought about suicide. With Alice's permission, you discuss these incidents with her parents. You refer her to a psychothera-

pist to begin counseling, and ask that she return in 3 months so that you can monitor her progress. JFP

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