

The Suicidal Adolescent

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Abstract: Suicide attempts are more common during adolescence than at any other time of life, and suicidality in adolescents most commonly comes to the attention of the clinician in the form of a failed suicide attempt. Although a variety of factors contribute to the high rates of suicidality in this age group, as in other age groups, attempters are more alike than they are different. Attempts to classify this frequently benign form of behavior as a distinct entity such as “parasuicide” or “deliberate self-harm” solely on the basis of demographic (predominantly female) and method (ingestion) variables rely on statistical probability but are insensitive to the subgroup of attempters who have significant underlying psychiatric disorders and those who will eventually complete suicide. The clinician should not assume that an adolescent suicide attempt is attention seeking or a “cry for help” but rather should evaluate each case systematically, paying close attention to the events, cognitions, and emotions that led to the behavior. These will provide the best guide to selection from among treatment options, including hospitalization, psychotherapy, and treatment with medication.

Our understanding of how youth suicide occurs, whom it affects, and, by extension, how it can be prevented has grown considerably during the 35 years in which it has been a focus of my own research. When I began, a popular view—within and outside the profession—was that suicide was a reasoned choice for those facing harsh circumstances and that it was rare and unpredictable and therefore defied prediction and prevention. In the intervening period, descriptive epidemiological studies, along with research by neurobiologists and social and cognitive psychologists, have revealed that persons who exhibit suicidal behavior have a rather narrow range of clinical characteristics and that such behavior is accompanied by significantly distorted attributional styles, impulsive and sometimes aggressive behavioral patterns, and a characteristic neurobiology that cuts across the psychiatric disorders with which it is invariably associated. Once the province of the author, poet, and philosopher, suicide is now squarely in clinical territory. Despite the protestations of proponents of assisted suicide, there is now ample evidence that suicidal behavior is not an understandable response to adversity but is rather a fatal complication of an underlying mental illness

that has gone untreated, has been inadequately treated, or, in some instances, is untreatable.

THE CLINICAL CONTEXT

Clinicians most commonly encounter the suicidal adolescent in the emergency department or at an emergency consultation shortly after the youth has made a suicide attempt or made a threat of suicide to a parent, sibling, teacher, or friend. The clinician's task is to evaluate the risk of death, determine the nature of the underlying mental condition, and put in place a safe and effective treatment plan. Less often, a clinician will be asked to provide advice to a parent or to a school whose child or student has recently committed suicide.

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THE CLINICIAN AND THE TEENAGER WHO HAS RECENTLY ATTEMPTED SUICIDE

Although completed suicide is relatively rare in adolescence (among teens aged 15–19, the rate is 8 per 100,000 teens per year), suicidal ideation and suicide attempts are more common during these years than at any other time in life. In a 12-month period, approximately 5% of male and 12% of female high school students will make a suicide attempt, and upwards of 20% of high school students will think about suicide (1). Suicide attempts are often repeated, and about half of all teen attempters will attempt to commit suicide more than once (2).

All forms of suicidality—completed suicides, suicide attempts, and suicidal ideation—are less common before puberty, perhaps reflecting a similar infrequency of depression and substance abuse. The incidence of completed suicide increases steadily through the adolescent years, peaking in the early to mid-20s. Suicide attempts, by contrast, reach a peak incidence at age 16 and then decline. Thus, while suicide is a characteristically adult behavior with beginnings that are apparent in adolescence, there is something truly “adolescent” about many suicide attempts, and this fact has considerable clinical relevance.

The adolescent nature of many suicide attempts can be discerned in the most common precipitants at this age. Stressful interpersonal interactions trigger the majority of youth suicides and attempts, often within minutes or hours of some form of dispute or disciplinary crisis (3, 4), typically a dispute with parents over limit setting, such as the timing of a curfew, or a disciplinary problem at school or with the law. As adolescence proceeds, and as parents adapt to the increasing competence of their children, these limits change, and this very flexibility could invite misunderstandings and friction. In addition, the suicide-prone teen—who is, like his or her adult counterpart, often irritable, prone to aggressive outbursts, and unduly sensitive to slights and losses (5)—lacks experience in dealing with and managing interpersonal problems with parents and friends. A disagreement that an older person might navigate with a minimum of fuss can seem unmanageable to the younger teen.

These factors lead to the striking differences in incidence between attempts and completions in the adolescent age group. Attempts are about 4,000 times more common than suicides in teen girls and about 400 times more common in teenage boys. These discrepancies, coupled with the familiar nature of many of the precipitants, present a challenge for the clinician. A tradition has developed in

Europe to distance suicide attempts in the young, especially those made by females with an ineffective ingestion, from suicide, using terms such as “parasuicide” and “deliberate self-harm” in its place. The differentiation assumes that there are differences in psychopathology and natural history between young suicide completers or attempters and their older counterparts. Until these euphemisms are better defined, they may only hinder the clinician. Almost all suicide attempters, of both genders and of all ages, will say that at the time of their attempt they intended to die. Methods seem to be determined more by culture and gender than by intent. One-fifth of girls who commit suicide do so by ingestion, and in some countries, where the fatal effects of the habitual ingestants are not easily reversed by treatment, the suicide rate among females is higher than among males and is predominantly from ingestions. The clinician, aware that most attempts will not lead to death but that a small number will, walks a tightrope.

In practice, the encounter with the suicidal teen is resolved by choosing between admitting the patient to an inpatient unit, retaining the patient under observation in a day unit or emergency ward, or making arrangements for further evaluation and the initiation or continuation of regular outpatient treatment. Choosing from among these options can be made easier by a systematic appraisal of the youth's recent suicidal and other behavior and current mental state.

DECIDING TO HOSPITALIZE

The most common reason for admitting a suicidal teenager to the hospital is to ensure safe care while obtaining a more thorough evaluation or while waiting for the effects of treatment to take hold. However, hospitalization is not without costs. The teen's friends, parents, and teachers are likely to hear of it, and negative labeling can follow. An admission can lead to a significant financial burden for the family or cause them to lose an important fraction of lifetime medical benefits. Furthermore, a hospital environment can promote contagious behaviors, such as “cutting,” and hospitalization is often recalled by young people as a traumatic experience. The task of choosing between admitting, holding, or discharging the patient is therefore one that cannot be taken lightly.

The clinician can reasonably consider the following to help in making this difficult decision:

1. Do any features of the suicide attempt itself indicate serious intent? The medical serious-

ness of an ingestion is not easy to judge. Adolescents tend to overestimate the potential lethality of medications. Swallowing eight over-the-counter analgesic tablets might be regarded as trivial by the clinician, but the youth might have expected it to be fatal. Self-cutting is not normally regarded as a suicidal behavior, although relatively rare attempts to stab oneself might be. This uncertainty can sometimes be resolved by asking these teen patients whether, when they cut themselves, they wanted to die. Attempts at hanging are usually considered serious, but it is not uncommon for a teenager to place a necktie or a belt around his or her neck, pull on it for a short time, and then abandon thoughts of suicide when this approach doesn't work; sometimes tell-tale marks around the neck can be seen in such patients. Other features of the suicide attempt that can indicate serious intent are the degree of effort made to obtain the means used; whether there were any preparatory activities, such as writing and leaving a suicide note, preparing a will, or giving away possessions; and whether any active steps were taken to avoid discovery, as indicated by where and when the attempt was made.

2. Intent can also be inferred from *the patient's mental state*. Some patients make no secret of the fact that they still wish to die, and in these cases admission is always needed. Admission is also needed for patients who are psychotic, who have bipolar disorder, or who are clinically depressed. Establishing the diagnosis will nearly always require that the clinician obtain a history from a third party, usually a family member; this should always be done before the patient is discharged from the emergency department. In prospective studies of patients who went on to commit suicide shortly after a mental health evaluation, the features most likely to be present at the time of the evaluation were restlessness, agitation, and activation (6).

DECIDING TO KEEP THE TEEN UNDER OBSERVATION

Continued observation is sometimes indicated until it becomes possible to obtain a detailed history from a third party, usually the teen's parent or guardian; to arrange for an experienced mental health professional to assess mental state; and to make some assessment of problematic aspects of the home environment—for example, inadequately

secured firearms or potentially lethal medications; the imminent arrival of a feared person, such as a previously abusive parent or sibling; an absence of any responsible person to meet the teen in the emergency room or to commit to bringing the teen back for a scheduled appointment; or a prevailing atmosphere of intense parent-child hostility.

If there are firearms or dangerous medications at home, the parents should be told to remove or secure them. In some instances, this may be made a condition of discharge from the emergency department, and in all instances the instruction should be carefully noted in the patient's chart. Such warnings can significantly influence parental behavior (7).

DECIDING TO DISCHARGE TO OUTPATIENT CARE

A majority of adolescent suicide attempters lose contact with the clinic where they were first seen after one to three outpatient visits (8, 9). This attrition rate is somewhat higher than is usually seen with teen patients, and it might reflect the self-regulating effect of many suicide attempts, whereby the patient feels better after the attempt. It might also reflect the perceived relevance and helpfulness of the treatment offered or poor administrative procedures that allow referrals to fall through the cracks. Given that many of the attempters will go on to attempt suicide again, there is no room for complacency in this aspect of management.

Antidepressants should not be prescribed until the clinician has had an opportunity to reevaluate the patient's mood state after the current crisis is over. If the patient is clearly depressed at the time of the attempt, hospital admission would be preferable to arranging outpatient treatment.

Clinicians often propose to "contract for safety" with a suicidal teen before discharging the youth. While this approach might convey to the patient that he or she is being taken seriously, the clinician should not be overconfident about its value. Follow-up studies of repeat attempters indicate that as many as a third had previously signed such a contract (10). That said, preparing a contract can provide an opportunity for the clinician to assess and rehearse how the patient would respond if he or she again encountered the stressor that led to the recent behavior.

Other forms of intervention in the emergency department have been tried, notably convening a family meeting to examine the recent crisis and aspects of family dysfunction (11), but this approach has a limited effect in securing attendance at later appointments.

The patient should ideally be discharged from the emergency department only after an appointment has been scheduled. If this is not possible, the clinician should assume responsibility for asking an assistant or a colleague to contact the patient's home with an appointment as soon as possible after discharge or else retain the patient in the emergency department until a precise disposition plan can be arranged. A failure to do this and a failure to note it in the chart could render the clinician liable in the event of a later attempt or death.

HOSPITALIZATION

The goal of hospitalization after a suicide attempt is to secure the patient until treatment has reduced the risk of suicide. A small number of inpatient units provide specialized therapeutic care for the suicidal teenager, but inpatient stays are usually brief, and there are no intervention models known to be effective that *require* inpatient care.

Secure hospitalization depends on effective evaluation of suicidality, clear criteria and procedures for close observation, and the nature of the physical environment. All are important, but the aspect that falls most heavily on the clinician is the evaluation of persistent suicidality. Evidence of persistent suicidality might come from comments heard by nursing staff or other patients, so nurses' notes should always be checked. Suicidality is especially likely after disturbing visits or telephone calls with friends or family, and such events can be a useful focus in the regular interviews with the patient. The routine use of self-completed rating scales, such as the Beck Suicide Intent Scale (12) and the Beck Depression Inventory, to track daily changes in mental state is not widespread. However, there is evidence that suicidality is more likely to be disclosed in a self-report instrument than in interviews, so the use of such scales could prove helpful. Most inpatient suicides occur shortly after discharge (13), and thus a decision to discharge a patient within a short time of reported suicidal utterances should be taken only after obtaining a second opinion.

Although procedures for close observation vary from unit to unit, the mental state that is potentially the most dangerous, namely, one of disorganization and agitation, should be dealt with by one-on-one arm's-length supervision. The structural features of a "safe" ward should include low-weight-breakage hooks and bars in showers and closets; untiled, single-surface ceilings; concealed hinges; recessed showerheads, toilet paper holders, and fire extinguishers; and low-set grab bars and door handles.

A small number of suicidal adolescents maintain their intent to commit suicide for a long time (14). Despite ample precautions, they may continue to attempt suicide, even in a ward setting, by, for example, eating powdered glass, trying to stab themselves with pens, and so on. These teenagers are not well described in the literature, and their management poses a challenge. They will often remain hospitalized for considerable periods. No patient should be discharged until an early follow-up appointment has been made.

OUTPATIENT CARE

A small number of suicidal teens will have a diagnosis of bipolar disorder or schizophrenia. There is now an abundance of evidence, drawn predominantly from adult studies, that treatment with lithium for those with bipolar disorder (15) and with clozapine for schizophrenia (16) reduces the risk of later suicide and suicide attempts.

In most instances, the suicide attempter is volatile, oversensitive, and irritable. Perceived or actual humiliation or rebuffs generate thoughts of hopelessness and futility or, at times, anxiety or anger, and the suicidal response follows. Treatments need to address this model. One can postulate that antipsychotics would reduce sensitivity, irritability, and impulsive behaviors. An early random-assignment study of the antipsychotic drug flupenthixol significantly reduced the number of attempts in a group of frequent attempters (17).

It is common practice in treating teen attempters to prescribe a selective serotonin reuptake inhibitor (SSRI) or another antidepressant after an attempt. However, there is a paucity of research on the efficacy of these agents in suicidal adolescents. Even among adults, few studies have targeted suicidal behavior, although in small open-label trials, SSRIs have been shown to decrease suicidal ideation in young adults with borderline personality disorder (18).

Reports of emergent suicidality during the course of SSRI treatment of mood disorders has led to a reevaluation of the treatment. Reviews of data sets from large randomized controlled trials with patients with major depressive disorder, anxiety disorders, or obsessive-compulsive disorder (19, 20) found either no effect or a decrease in suicidality during active treatment. By contrast, data derived from 11 published and unpublished SSRI trials for depressed children show an excess of suicide-related adverse events when on active treatment, but no suicides (21). It is not clear why treatment-related suicidality shows up only in unstandardized event reports and is not reflected in reliable standard measures that address the same symptoms. Clearly,

however, with a recently suicidal patient, starting treatment with an antidepressant should be undertaken with care. The effect does not appear to be specific to SSRIs, and there is evidence that suicidal events increase during treatment with tricyclic antidepressants as well as in patients with Parkinson's disease after subthalamic stimulation. The mechanisms of these phenomena, if they are confirmed, are not known. Explanations include adverse psychological consequences of medically induced psychomotor activation outpacing recovery from the cognitive distortions of depression.

When using an SSRI, it is advisable to start with a lower than usual dose—say, 10 mg of fluoxetine—and caution the parents and the patient about the onset of feelings of agitation, hopelessness, and suicidality. In the event that such feelings occur, the dose should be reduced before starting a gradual upward titration. It may also be useful to supply the parents with a small quantity of an atypical antipsychotic to be used in the event of agitation.

PSYCHOTHERAPY FOR THE SUICIDAL BEHAVIOR

For the most part, treatment is directed to comorbid conditions, and few patients will be directed to a program designed specifically to address suicidal responses themselves. A number of studies have been conducted in which ready access to a clinician or other clinical services was offered in the event of a further suicidal crisis, but such access does not seem to reduce the chances of repetition (22).

In developing a more specific therapy, the patient and the clinician should first attempt to undertake a chain analysis of the events during the 24 hours preceding the attempt. It might then become clear that the attempt lay at the end of a cascade of events, thoughts, and feelings. Cognitive distortions and misrepresentations can become obvious during this treatment, and they can form the focus of a later psychotherapeutic approach. Paying attention at this level of detail can also help the teenager discover the patterns that provoke suicidality and might itself be therapeutic.

Dialectical behavior therapy, an adaptation of cognitive behavior therapy developed by Marsha Linehan (23), is a psychotherapeutic approach that addresses this chain of behavior. In Linehan's adapted model, interpersonal stressors lead to mood and thought changes that might be relieved by attempting suicide or by self-cutting. The behavior is reinforced because of the relief of negative mood that it offers and, to some extent, by enhanced attention following the behavior.

Dialectical behavior therapy has been shown in adults to be effective in reducing suicidal behavior.

However, it requires intense involvement over a 12-month period, and relatively few trained therapists are available to administer it. Nevertheless, some elements within the treatment package can be usefully adopted by the practicing clinician, although their value in isolation remains to be demonstrated.

The conventional dialectical behavior therapy treatment package aims to do the following:

- Induce a state of serenity and calm through the Zen process of mindfulness
- Identify, through monitoring, the stressful situations that precede or provoke the feelings of hopelessness, a wish to die, and, ultimately, the suicide attempt, and then avoid them with a variety of problem-solving or -avoiding strategies
- Develop tolerance for the mood changes experienced after exposure to stress through training in distraction, relaxation, problem solving, and so on
- Reduce the social reinforcements that follow suicidal behavior, for example, by extracting a commitment to report suicidal thoughts only to the therapist and by working with families to minimize the reinforcement responses

Until dialectical behavior therapy is more widely available or affordable, the sensible clinician will keep these different goals in mind and employ them as their skills permit. To use them, however, the clinician will need a good sense of the contingencies of the pattern of suicidal thoughts and behaviors, which can be gained through the chain analysis outlined above.

The process of monitoring and noting the contingencies of suicidal thoughts will not always point to a stressful interpersonal interaction. The clinician will sometimes discover that the behavior is triggered by episodes of free-floating anxiety or by fear-inducing feelings—for example, at night before sleep—and, at other times, they will reveal a state of ongoing depression.

ASSISTANCE TO SURVIVORS

The suicidal death of a teenager leaves survivors who may be grief stricken, traumatized, and filled with a sense of responsibility and culpability. They will sometimes seek a consultation for themselves or will ask for advice on how best to deal with the reactions being shown by their other children. Survivors of all ages ask whether something they did or said could have provoked the death or whether the tragedy might have been averted if they had reacted differently to some subtle or

ambiguous cue. Whether with families who have sought to better understand a suicide or with families that are sought out in the course of research, the psychological-autopsy process, which provides insight into the great similarities among suicide victims, tends to be met with relief.

COMMUNITY ASSISTANCE AFTER A STUDENT COMMITS SUICIDE

A psychiatrist or other clinician might be called in to advise the school after a student has committed suicide. After a student's suicide, certain consequences are quite common:

- Friends and teachers, like family members, experience feelings of guilt and responsibility. This can lead in turn to scapegoating a particular teacher, pupil, or family member, which can be traumatizing. When the full facts of the case emerge during the process of the psychological autopsy, the scapegoating is nearly always seen to be unjustified.
- Feelings of loss and grief are felt by pupils and teachers who were close to the suicide victim.
- A posttraumatic reaction can be experienced by anyone who witnessed the suicide or by those who discovered the body.
- Other students might copy the behavior with suicide threats, attempts, or completions.

The clinician advising a school first needs to understand the nature of the suicide victim and the circumstances of the suicide. A good starting point is to interview and work with the victim's family. The information obtained will allow the clinician to put the suicide into a more or less accurate context. While it will not usually be appropriate or possible to disclose the individual factors that made the youngster vulnerable to suicide, this knowledge will allow the clinician to speak with authority about how completed suicides nearly always occur in the context of a pre-existing psychiatric condition and how important it is that such conditions be recognized and appropriately treated. The impact of such a message will be to reduce blame and guilt.

The complication that causes most concern to schools and communities is the risk of contagion. Contagion accounts for 5%–10% of all youth suicides; it is especially common after a suicide that has been widely publicized in the press, such as occurs with a suicide committed in front of other people. Such events are, of course, newsworthy, and discouraging coverage would be difficult. The Centers for Disease Control and Prevention in col-

laboration with the American Foundation for Suicide Prevention (24) and the University of Southern California's Annenberg School of Journalism have published guidelines about responsible reporting of youth suicide that discourage the inclusion of photographs or graphic descriptions of the method used, discourage any romanticizing of the reasons for suicide, encourage an emphasis on the relationship of the suicide to an associated psychiatric disorder, and encourage the inclusion of information about resources for treatment of depression and suicidality.

The teenager whose suicide is part of a cluster will usually have known about, but not personally known, the first victim of the cluster. He or she will usually have a history of previous suicidal behavior or other mood or behavior disturbance. In some cases, a school screening program has been instituted to identify students who have made previous suicide attempts or who are depressed and to single them out for evaluation and, if necessary, treatment.

School officials often ask whether holding a special ceremony to mark the death of the child will promote imitation. A failure to mark the student's death can instill feelings of anger toward the school, which would not be helpful. A memorial ceremony that is informed by the nature of suicide as a complication of an underlying mental illness and that avoids romanticizing and misrepresenting the event would be respectful and might be helpful. The informed clinician is in an ideal position to counsel on the preparation of such a ceremony.

CONCLUSION

The clinical management of the suicidal teenager requires well-developed clinical skills. In addition to the basic qualities of warmth, curiosity, and humor, a good knowledge of the mechanisms through which the decision to attempt suicide is made—and how that often recurring pattern can be interrupted, whether with the use of behavioral skills, by improving insight, or with appropriate medication—can often bring a degree of life-saving relief to this common condition.

DISCLOSURE OF UNAPPROVED, OFF-LABEL, OR INVESTIGATIONAL USE OF A PRODUCT

APA policy requires disclosure by CME authors of unapproved or investigational use of products discussed in CME programs. Off-label use of medications by individual physicians is permitted and common. Decisions about off-label use can be guided by the scientific literature and clinical experience. This article contains discussion of off-label use of small doses of an antipsychotic agent in the event of agitation.

Quick Reference

FOR CHILD AND ADOLESCENT PSYCHIATRY

The tables in this section are drawn with permission from American Psychiatric Association: Diagnostic and Statistical Manual of Mental Disorders, Fourth Edition, Text Revision, Washington, DC, 2000; and Dulcan M, Martini R, Lake MB: Concise Guide to Child and Adolescent Psychiatry, 3rd ed. Washington, DC, American Psychiatric Press, 2000.

Table 1. Risk Factors for Repeat Suicide Attempt

Patient history

Verbalization or threats regarding suicide

Substance abuse

Poor impulse control

A recent loss or other severe stressor

Previous suicide attempt(s)

A friend or family member who has committed suicide

Exposure to recent news stories or movies about suicide

Poor social supports

Victim of physical or sexual abuse

Nature of the attempt

Accidental discovery (versus attempt in view of others or telling others immediately)

Careful plans to avoid discovery

Hanging or gunshot

Family

Wishes to be rid of child or adolescent

Does not take child's problems seriously

Overly angry and punitive

Depression or suicidality in family member

Unwilling or unable to provide support and supervision

Mental status examination

Depression

Hopelessness

Regret at being rescued

Belief that things would be better for self or others if dead

Wish to rejoin a dead loved one

Belief that death is temporary and pleasant

Unwillingness to promise to call before attempting suicide

Psychosis

Intoxication

Table 2. Development Differences in DSM-IV-TR Criteria for Mood Disorders

Disorder	Adults	Children
Major depression	Depressed mood	Can be irritable mood
	Change in weight or appetite	Can be failure to make expected weight gains
Dysthymia	Depressed mood	Can be irritable mood
	2-year duration	1-year duration
Cyclothymia	2-year duration	1-year duration

Table 3. Common Psychological Characteristics of Children and Adolescents With Conduct Disorder

Attention deficits, low frustration tolerance
Impulsivity, recklessness
Learning disorders, especially in reading
Negative mood
Sullenness
Irritability
Volatile anger
Low self-esteem
Impaired cognitions
Distortions of size and time awareness
Lack of or distorted connection between prior events and consequences
Limited ability to generate, evaluate, and implement alternative problem-solving strategies
Use of less adaptive intrapsychic defense mechanisms
Minimization
Avoidance
Externalization
Denial
Identification with the aggressor
Emotional deficits
Minimization of fear and sadness, exaggeration of anger
Lack of empathy
Lack of guilt
Impaired interpersonal relations
Suspiciousness or paranoia, with cognitive distortions
Attributional bias: misperception of others' actions as hostile
Preference for nonverbal, action-oriented, aggressive solutions to problems

Table 4. DSM-IV-TR Diagnostic Criteria for Attention-Deficit/Hyperactivity Disorder

A. Either (1) or (2):

- (1) six (or more) of the following symptoms of inattention have persisted for at least 6 months to a degree that is maladaptive and inconsistent with developmental level:

Inattention

- (a) often fails to give close attention to details or makes careless mistakes in schoolwork, work, or other activities
- (b) often has difficulty sustaining attention in tasks or play activities
- (c) often does not seem to listen when spoken to directly
- (d) often does not follow through on instructions and fails to finish schoolwork, chores, or duties in the workplace (not due to oppositional behavior or failure to understand instructions)
- (e) often has difficulty organizing tasks and activities
- (f) often avoids, dislikes, or is reluctant to engage in tasks that require sustained mental effort (such as schoolwork or homework)
- (g) often loses things necessary for tasks or activities (e.g., toys, school assignments, pencils, books, or tools)
- (h) is often easily distracted by extraneous stimuli
- (i) is often forgetful in daily activities

- (2) six (or more) of the following symptoms of hyperactivity-impulsivity have persisted for at least 6 months to a degree that is maladaptive and inconsistent with developmental level:

Hyperactivity

- (a) often fidgets with hands or feet or squirms in seat
- (b) often leaves seat in classroom or in other situations in which remaining seated is expected
- (c) often runs about or climbs excessively in situations in which it is inappropriate (in adolescents or adults, may be limited to subjective feelings of restlessness)
- (d) often has difficulty playing or engaging in leisure activities quietly
- (e) is often "on the go" or often acts as if "driven by a motor"
- (f) often talks excessively

Impulsivity

- (g) often blurts out answers before questions have been completed
- (h) often has difficulty awaiting turn
- (i) often interrupts or intrudes on others (e.g., butts into conversations or games)

B. Some hyperactive-impulsive or inattentive symptoms that caused impairment were present before age 7 years.

C. Some impairment from the symptoms is present in two or more settings (e.g., at school [or work] and at home).

D. There must be clear evidence of clinically significant impairment in social, academic, or occupational functioning.

E. The symptoms do not occur exclusively during the course of a pervasive developmental disorder, schizophrenia, or other psychotic disorder and are not better accounted for by another mental disorder (e.g., mood disorder, anxiety disorder, dissociative disorder, or a personality disorder).

Table 5. Medical Contribution to Attention-Deficit/Hyperactivity Disorder

Prenatal	Young mother Poor maternal health Maternal use of cigarettes, alcohol, or drugs
Birth complications	Bleeding Hypoxia Toxemia Prolonged labor
Perinatal	Low birth weight Postmaturity
Infancy	Malnutrition
Toxicity	Lead poisoning
Genetic disorders	Fragile X syndrome Glucose-6-phosphate dehydrogenase deficiency Generalized resistance to thyroid hormone Phenylketonuria
Brain injury	Trauma Infection

Table 6. DSM-IV-TR Diagnostic Criteria for Conduct Disorder

A. A repetitive and persistent pattern of behavior in which the basic rights of others or major age-appropriate society norms or rules are violated, as manifested by the presence of three (or more) of the following criteria in the past 12 months, with at least one criterion present in the past 6 months:

Aggression to people and animals

- (1) often bullies, threatens, or intimidates others
- (2) often initiates physical fights
- (3) has used a weapon that can cause serious physical harm to others (e.g., a bat, brick, broken bottle, knife, gun)
- (4) has been physically cruel to people
- (5) has been physically cruel to animals
- (6) has stolen while confronting a victim (e.g., mugging, purse snatching, extortion, armed robbery)
- (7) has forced someone into sexual activity

Destruction of property

- (8) has deliberately engaged in fire setting with the intention of causing serious damage
- (9) has deliberately destroyed others' property (other than by fire setting)

Deceitfulness or theft

- (10) has broken into someone else's house, building, or car
- (11) often lies to obtain goods or favors or to avoid obligations (i.e., "cons" others)
- (12) has stolen items of nontrivial value without confronting a victim (e.g., shoplifting, but without breaking and entering; forgery)

Serious violations of rules

- (13) often stays out at night despite parental prohibitions, beginning before age 13 years
- (14) has run away from home overnight at least twice while living in parental or parental surrogate home (or once without returning for a lengthy period)
- (15) is often truant from school, beginning before age 13 years

B. The disturbance in behavior causes clinically significant impairment in social, academic, or occupational functioning.

C. If the individual is age 18 or older, criteria are not met for antisocial personality disorder.

Table 7. Risk Factors Associated With Serious Substance Abuse in Adolescence

Rebelliousness

Aggression

Impulsivity

Low self-esteem

Elementary school underachievement

Failure to value education

Absence of strong religious convictions

Experimentation with drugs before age 15 years

Relationships with peers who have behavior problems and use drugs

Alienation from parents

History of physical or sexual abuse

Family lacking in clear discipline, praise, and positive relationships

Family history of substance abuse

Table 8. Differential Diagnosis of Anorexia Nervosa

Normal thinness	
Physical disorders causing weight loss	<ul style="list-style-type: none"> Hyperthyroidism Other endocrine disorders Gastrointestinal disorders resulting in vomiting, loss of appetite, and/or malabsorption Malignancy Chronic infection
Psychiatric disorders causing loss of appetite and weight loss	<ul style="list-style-type: none"> Depression Peculiar eating behavior secondary to obsessive-compulsive disorder or to delusions in schizophrenia or psychotic depression Avoidance of eating caused by phobia of choking, with or without psychosis Vomiting secondary to conversion disorder
Hypothyroidism producing hypothermia and amenorrhea	

Table 9. Physical Signs and Symptoms and Complications Associated With Anorexia Nervosa and Bulimia Nervosa

Cardiovascular	<ul style="list-style-type: none"> Hypotension (especially postural) Bradycardia (rates between 40 and 50 beats per minute) Arrhythmias (prolonged QT interval may be a marker for risk of sudden death) Mitral valve prolapse Cardiac arrest Edema and congestive heart failure during refeeding Cardiac failure secondary to cardiomyopathy from Ipecac (emetine) poisoning
Neuroendocrine	<ul style="list-style-type: none"> Amenorrhea or irregular menses (low levels of FSH and LH despite low estrogen levels) Low basal metabolism rate Abnormal glucose tolerance test with insulin resistance Hypothermia Elevated levels of growth hormone and cortisol Sleep disturbances
Bone	Osteopenia
Fluid disturbance	<ul style="list-style-type: none"> Dehydration Electrolyte imbalance Abnormal urinalysis
Gastrointestinal	<ul style="list-style-type: none"> Constipation Diarrhea
Hematological	<ul style="list-style-type: none"> Leukopenia Anemia Thrombocytopenia Low sedimentation rate
Dermatological	<ul style="list-style-type: none"> Dry skin Lanugo (baby-fine body hair)
Oral, esophageal, and gastric damage from vomiting and/or binge eating	<ul style="list-style-type: none"> Loss of dental enamel Enlarged salivary glands Gastritis Esophagitis Increased rates of pancreatitis

FSH=follicle-stimulating hormone; LH=luteinizing hormone

Source: Adapted from Palla B, Litt IF: Medical complications of eating disorders in adolescents. *Pediatrics* 1988; 81:613-623