Children Who Society Has Lost or Abandoned

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A PARENT AND FAMILY GUIDE FOR NEUROPSYCHIATRIC HEALTH ISSUES FACED BY CHILDREN AND ADOLESCENTS

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Preface

The death of a child is a horrible tragic event no matter its cause. It is infinitely worse when it is by their own hand.

Children and adolescents like adults may be in a dark place and see no hope of rescue. They do not have the maturity or resources to deal with these problems and often their cry for help gets unnoticed or ignored.

This book addresses the dark side of pediatrics, the neuropsychiatric health issues faced by children and adolescents. It provides parents and family with key and critical information to recognize a child and adolescent in distress and ways to rescue them before it is too late. Topics that are addressed are of key importance and timely for the struggles our children are facing today.

This is the side of pediatric development, the side that may be ignored, discounted or denied by adults in a position to help. If this book makes a difference and saves even only one child, the effort by the publisher and author getting it to into the hands of people who can make a difference has been a worthwhile endeavor.

Michael W. Simon, MD, PhD
July, 2022

Behavioral Health/Mental Health and Mental Illness

Childhood and adolescence is a critical time for the establishment of healthy mental health. Unfortunately children routinely experience mental stress and distress as they pass-through childhood and adolescence. Each child progresses at their own rate of maturation. This mental distress may lead to mental disorders. It has been intensified and accelerated with the COVID 19 pandemic.

Estimates are that nearly 5 million children in the US have some type of mental illness. In any given year 25% of all children and adolescents 12 to 18 years old will experience some type of mental illness and it is a significant problem. Unfortunately as many as 40% of kids may have more than one type of mental illness. As much as half of all chronic mental illnesses will start before 14 years of age. Adult mental illness often starts in childhood and adolescence. In families where a parent has mental illness, the children are four times more likely to have the same type of mental disorder.

Mental illness in children impairs their ability to function in day-to-day activities at home, school or social settings. Unfortunately the majority are not identified, seek help or receive any care. Parents may delay care because they are in denial about their child having a mental health disorder. As a result they may have impaired social skills, poor behavior regulation and control, and immature or delayed thinking for their age. They are more likely to have difficulty with the criminal justice system and have a lower educational achievement because they drop out of school. They may spend a longer time in the child welfare system and have fewer stable foster care placements.

Conversely children and adolescents who are mentally healthy have age appropriate abilities to adapt to changing daily experiences and necessary skills to manage and regulate their emotions and behavior. This is the time they start to think abstractly, introspectively and develop their moral compass.

Good mental and overall health may protect against mental illness. The keys are maintaining physical health, eat well, sleep well, strong supportive loving relationships with family and friends and avoiding drugs and alcohol. At home and school, promote activities for both mental, physical and social health. At school, programs may be presented during recess, lunch break, after school or during the regular classroom time. Sessions may be tailored in time for the entire school population, class or directed towards a specific student. Classroom interaction promotes the teacher-student relationship which is important to produce a positive learning environment.

Whether at home or school, to keep kids of all ages healthy, adults need to remain positive and promote and instill empathy, respect and responsible behavior. Without guidance children are not equipped for any aspect of day-to-day living skills. Discussion and role-playing helps kids to model effective ways and behavior to respond to an ever changing world. They should practice paying attention and focus on what is happening in the present time and setting. They should be taught and learn to avoid distractions by things that are not important or out of their control. Adults should reinforce good outcomes and results. Being involved in hobbies, after school activities and face-to-face interactions promote overall good mental health.

The three most common types of mental illness experienced by children and adolescents are anxiety, depression and attention deficit hyperactive disorder (ADHD). Of these, anxiety is the most common with one in eight adolescents meeting the criteria for diagnosis of an anxiety disorder. The most severe mental disorder for children and adolescents is depression. Other disorders of disturbed mental function are schizophrenia, posttraumatic stress disorder, bipolar disorder, autism spectrum disorder and eating disorders. Girls are more likely to have anxiety and depression and boys ADHD and autism spectrum disorder. There are behavioral disorders like disruptive behavior disorder, conduct disorder and oppositional defiant disorder.

Signs of mental illness:

1. Sadness for more than two weeks.
2. Excessive physical complaints, frequent headaches or stomach ache.
3. Extreme change in behavior or mood. Wild out of control behavior.
4. Loss of interest in friends and activities, withdrawn or avoiding social situations.
5. Poor academic performance, unhappy at school, not going to school. Difficulty concentrating, suspended or expelled from school.

6. Actual or threatening to hurting self.
7. Eating changes, eating all the time, eating more, eating less, loss of appetite.
8. Loss of weight.
9. Emotional lability, outburst of anger. Throwing tantrums, clingy.
10. Difficulty sleeping, difficulty going to sleep or sleeping too much or too little.
11. New onset nightmares or night terrors.
12. New onset sleepwalking.
13. Excessive worrying.
14. Stealing, damaging property.
15. Defy authority, disobedient, aggressive behavior towards others.
16. Risk-taking, not concerned about their own safety or consequences.
17. Talking about fears, suicide or death.
18. Fear that something bad is going to happen.

Mental illness may be the result of the interaction of different factors. There may be a genetic predisposition that increases the vulnerability to certain types of mental illness that may occur in a family. The brain may have altered or dysfunction in areas that control emotion, regulate behavior and process thinking and perceptions. Life occurring traumatic events are environmental stressors that may lead to certain types of mental illness. A child and adolescent may experience psychological trauma with loss of a parent at an early age, emotional, physical or sexual abuse. Maternal alcohol use may contribute to child behavior and emotional problems.

Adolescents who develop mental illness are more likely to have low birth weight, trouble getting to sleep or staying asleep and have a birth mother younger than 18 years of age at the time of their birth. Children and adolescents are more likely to have a mental illness disorder if they have a poor body image, low self-esteem, are highly self-critical or have been a victim of verbal, physical or sexual abuse. They may experience bullying as well as suffered death or separation from a loved one, peer pressure, poverty or exposed to violence. They may have been rejected by a family member, subjected to parental conflict and divorce, have loss of a significant relationship and have low physical activity.

Social media has become a significant part of daily activities. Adolescents may start as early as the elementary school owning a smart phone. Through the use of smart phones, social media now has increased the occurrence of

mental distress. There is a definite correlation, the longer children are on electronic devices and media, the more unhappy they are in life. They have a greater risk of self-harm and suicide. They are at a greater risk of cyber bullying especially females.

Those on social media have less total sleep, less restful sleep, a shorter duration and poorer quality of sleep. They take a longer time to fall asleep. There is a disruption of their circadian, body and sleep, rhythms. This may contribute and produce a depressed mood. These changes are especially true if electronic devices are kept in the bedroom. Electronic games should be in a room other than a bedroom. For good mental health, limit electronic devices and smart phones to 1 to 2 hours of social use a day.

Evaluation should start with a complete physical examination. If the examination is normal then bloodwork may need to be checked. The patient would be screened for underlying infection like mononucleosis, low thyroid function, vitamin D deficiency, iron status, anemia, underlying metabolic conditions, blood sugar regulation and lead exposure. If these are normal then intervention or therapy would be recommended.

If intervention or therapy is needed for a mental illness, there are several different avenues to regenerate a healthier, better sense of well-being. These approaches may be helpful either singly or in combination. Each is taylored for the specific mental disorder identified. Cognitive behavior therapy (CBT) works with an impartial third party therapist who changes negative thoughts and behaviors and looks at events in a positive way. Children and adolescents are taught to replace negative thoughts with positive actions and feelings and deal with problems as they occur.

Self-help therapy is more confidential, cost-effective and requires less therapeutic time and therapist expertise. It may require a limited number of therapist sessions to direct the person for computerized and program techniques they may work on individually. This is not as effective as face-to-face sessions but is better than no treatment. Younger children may benefit from play and art therapy. They may talk about their thoughts and feelings. During play or having the child describe what is represented in their drawings and artwork, the therapist assists them in developing new coping skills and behaviors.

Yoga is beneficial by helping teach self-regulation of the body and mind. It will incorporate relaxation, breathing techniques and stretching. Tai chi also teaches similar self-regulation techniques. Karate and martial arts are effective through which participants learn to control their body, then control

their environment. They are less likely to worry about social interactions and are more confident in life.

After initiation of therapy, individuals will show improvement after 2 to 3 weeks up to 2 to 3 months of treatment. The therapy may be needed long-term or intermittent. For those treated early and effectively, they may have a full recovery or maintain their symptoms under control. Without treatment they tend to progressively worsen, have their illness last longer and it may become more difficult to manage or treat when they start therapy. Sadly some just never get better. Some to make themselves feel better will self stimulate and turn to alcohol or drug abuse, engage in risky behavior without considering the consequences or turn to suicide as their only recourse.

In addition to therapy, the specific mental illness may have specific medications recommended for their treatment. The medicine would work in combination with their other therapies. It is also important to assure the individual gets proper sleep, a nutritional dietary intake and exercise. They should be encouraged to maintain a healthy relationship with peers and family especially the adults.

Emergency contacts:
National Alliance on Mental Illness (NAMI) 1-800-950-6264
Crisis Text Line: 741741

Anxiety

Anxiety is a common condition that affects approximately 7% of all children 3 to 17 years of age. There has been an 11% increase in the occurrence of anxiety due to the COVID 19 pandemic. It is the result of the combination of genetics and environmental influences. Heredity is estimated to contribute 30–50% to anxiety with an important contribution from epigenetics altering gene activity by affecting DNA function modifications through methylation and histones. Several genes, the RBFOX1, CAMKMT and NPRS1 have been found in families that have anxiety and may signal that anxiety is a neurobehavioral condition with certain genes playing a role for anxiety to develop.

Environmental triggers occur if a child has exposure to a frightening or traumatic event and has as a result a feeling of helplessness without a positive way to handle it. They see no happy ending. Stress produces fear and dread leading to symptoms of anxiety. Children are more likely to develop anxiety if they have experienced a specific event like moving, abuse, death of a family member, friend or pet or accident. Their anxiety may be generalized, worrying about daily and future activities, worrying about things before they happen, schoolwork, friends, relationships and extracurricular activities.

A certain amount of anxiety is necessary and appropriate to prepare for and complete upcoming events and activities. However in this situation when anxiety is exaggerated it will negatively affect a child's confidence and self-esteem. These children may have a genetic neurobehavioral vulnerability. The same triggers that cause anxiety may contribute to and produce depression. These conditions may occur at the same time or anxiety may precede depression. Estimates are 10 to 15% of children with anxiety are depressed and as many as 42% of children with anxiety will at some time develop depression.

Anxiety may cause any child to become defiant, have bad behavior, be socially withdrawn, have behavioral inhibition, changes in eating patterns or

associate with a different group of kids. Signs of anxiety in young children may be tearfulness, clingy, irritable, difficulty going to sleep or waking up during the night. They may have bad dreams or start to wet the bed when they had been previously dry for a long period of time.

Older children are more likely to have angry outbursts and be moody or temperamental. They may have a dramatic change in their behavior or performance at school. They may have difficulty concentrating, not wanted to try new things, avoid friends and not go out. They dwell about negative or bad things. If their fear is intensified, a panic attack may occur with a rush of physical symptoms like trembling voice, rapid heartbeat, dry mouth, hard to swallow, chest pain, weak legs, shaky hands and stomach discomfort. Anxious children are also more likely to attempt suicide.

Anxious children cannot enjoy social situations without fear. Fear may be beneficial in helping a child interpret and learn hazardous versus nonhazardous daily life exposures. However fear in response to non-hazardous situations may be deleterious producing anxiety and interfere with day-to-day living. Anxious children may be too fearful to attend parties, participate in activities with their peers and activities away from their home.

With anxiety, children do not respond correctly to positive interactions or events. They have an alteration in their brain's processing of both reward and threat which may be exaggerated. Threat processing blocks reward processing by the brain. As a result they over interpret and over react negatively, misinterpreting the threat level. They dwell about negative or bad things and expect bad things and bad outcomes always to occur. They have a fear of having fun and cannot enjoy social situations without fear. They are overly cautious about making mistakes and experiencing rejection. They tend to think and interpret in concrete terms, black and white, definite yes or no's with no in between. They are inflexible and do not consider other alternative outcomes. They have a hard time interpreting ambiguous situations and as a result these situations are perceived as more threatening than they really are.

Stress triggers the release of stress products. The adolescent brain undergoes developmental changes "remodeling" in response to the body's naturally produced steroid hormones. The body's response to a stressful encounter is to increase levels of stress hormones and cortisol. This is an acute response and the effects of these products will diminish and pass in 20 to 45 minutes relieving the anxiety.

Children with anxiety have specific measurable functional and anatomical brain changes. Anxious children have increased amygdala activity in

response to anger or fear. With anxiety there is activation of the behavioral inhibition system in the right frontal cortex of the brain. This results in a heightened response to new or unfamiliar experiences. The amygdala activity response is increased during anxiety. The way their brain processes information makes them more sensitive to "what if" social situations and experiences. Situations that cause fear, avoidance and stress over activities may lead to a high risk of rejection or ridicule.

These stressful situations may be from social activities, parties, lunch, recess, or academic activities like presentations, public speaking and answering questions in class. These brain regions that respond to emotions and social information are more sensitive and active during puberty. This is especially intensified for girls. Girls historically have a higher rate of anxiety with more shyness and fears.

As a child matures there will be different specific things that make them fearful. Infants are afraid of strangers and being left alone. Preschool children may fear the sight of blood, storms, the dark, bugs, animals, heights and water. School-age children may have a fear of attending a new school or performing well on a test. Adolescents have a fear of rejection by peer groups. Younger children tend to outgrow fears as they mature and learn that they are not harmful. Address the specific triggers for their anxiety. For example, If a child is concerned and fearful about natural events and disasters like storms, help them to prepare for those situations with a disaster plan so they feel more empowered and less helpless.

Children may be anxious if they cannot see the board at school and need glasses, are being bullied, the classroom is disruptive or there are distractions, or if their seating position is changed. There is a natural fear of what we cannot see in the dark. Allow the child to have a flashlight to shine whenever needed in the dark and make a "trap box" to trap scary things that lurk in the night. Children may fear failure at sports when the focus becomes more about success and less about having fun. There may be conflict with a parent. A parent may be dysfunctional and be depressed or have substance abuse causing a child to have anxiety.

To reduce the chances of a child developing anxiety, make sure the child is overall healthy. Certain health conditions and medications may produce symptoms of anxiety. A child may be anxious about an acute illness or injury they have developed or sustained (mononucleosis, fractured bone), needed surgery or chronic condition that causes restrictions in their activities (asthma, diabetes, cancer). Medications that may produce anxiety as a side

adverse effect would to be bronchodilators like albuterol, decongestants like Sudafed, antihistamines of all types, stimulant medications for ADHD, steroids for chronic inflammatory conditions, antipsychotic and antidepressant medication.

For all children, make sure they are getting sufficient sleep, have time to relax and free playtime. Stick to a regular, consistent, predictable, relaxed routine for bedtime and meals. To keep them healthy promote daily exercise, healthy nutritious meals and unstructured outdoors time. Exercise will improve a child's mood. Avoid over scheduling. Unstructured outdoor time is not an organized sport but may be walking, jogging, riding a bicycle or simply sitting outside and reading a book.

Every child will have times when they are anxious. If their anxiety lasts longer than several weeks or interferes with routine daily activity, they need help. As a protective mechanism, a child may develop a routine or ritualistic behavior to ward off negative things. The goal is for children to learn how to positively deal with anxiety and manage it through behavioral learning sessions. Ask a child who seems nervous or anxious "What is up?" or "What is going on?". Through cognitive behavioral therapy parents or a therapist may practice situational and role playing to help an anxious child develop positive ways to react to stressful situations or problems. This individual therapy is more effective than family therapy unless there is sufficient family dysfunction (poor parenting skills, alcohol or substance abuse by a parent). Family therapy has a role and would teach the family about their child's anxiety and develop positive ways to help.

Parents may practice with their children different behaviors and responses. Parental assistance is directed towards developing strategies that are more effective before problems occur. Simply avoiding these situations makes the problem more chronic and socially debilitating leading to anxiety. There is a difference between different events and activities creating stress and anxiety or those that a child simply does not want to to do for lack of interest. If it is truly creating stress and anxiety, removing a child from this fearful situation teaches them to just avoid encounters or situations that cause fear and anxiety rather than the opportunity to develop coping mechanisms.

By practicing how to handle different situations, children develop different strategies and learn how to handle these fearful situations becoming more confident and less anxious. To reduce stress and anxiety, a child may learn relaxation techniques like yoga, deep abdominal breathing, taking a deep breath, muscle relaxation and meditation. They may benefit from wearing a

pressure vest that applies deep pressure to the skin producing relaxation and improves anxiety. Artwork helps kids to relax and express in a way that they are either unable or unwilling to communicate.

Medications that increase serotonin levels, SSRIs (selective serotonin reuptake inhibitors) or a natural product like 5-hydroxytrytophan (5-HT, 5-HTP) may be helpful in reducing anxiety even if given for a short time. SSRIs are fluoxetine (Prozac), citalopram (Celexa), Escitrlopram (Lexapro), Sertraline (Zoloft) and Paroxetine (Paxil). SSRIs may take 3 to 4 weeks of continuous use before any benefit is seen. Keep in mind with stress, serotonin levels in the brain are reduced. SSRIs do not make serotonin. For this reason it may be beneficial to give 5-HTP with the SSRIs. The brain will convert the tryptophan in 5-HTP into serotonin and promote SSRI benefit.

Encourage a child to talk about their concerns. Ask them how they "feel" about an event or activity that is causing them to worry. Children are most anxious in the immediate period before the event. Do not convey the idea that the event or activity is something that should make them afraid. Do not ask them are they "worried", "scared" or "nervous" about the event. Do not ask about the event weeks before it occurs. This only keeps the child anxious about the upcoming activity and prolongs and intensifies their anxiety. Focus on the immediate time before the activity, allowing time to practice and work at effective coping strategies and master all information related to the event.

Children especially those young may be fearful about being abandoned, not picked up after school or a practice or activity. Have a discussion and a plan in place even written instructions that they may keep in their backpack identifying whom to contact if that situation should occur. Remind the child before being dropped off at school or an activity that you or someone else you have asked will pick them up. Tell them who the person will be so they know what to expect.

Signs of Anxiety in a Child:

1. Physical symptoms: recurrent/persistent abdominal pain, nausea, or headache that happens during waking hours but not during sleep.
2. A change where a child refuses to go to bed, doesn't want to go to sleep or sleep in their room.
3. A child avoids activities or situations they previously enjoyed.
4. A child does not want to be alone, requests an adult stay with them or go to the bathroom with them.

5. A child does not want to go to school: Will have illness, feels bad, stomach ache before time to go to school. If stays home will feel better once they are sure they are staying at home. Seems to be fine on weekends or breaks from school.
6. Exaggerated routine/ritualistic behavior: children thrive from routine, knowing what is to be expected and being given time to transition between activities. If in the routine, certain behaviors must be done in a specific way or must be repeated until done correctly, this is ritualistic behavior and is a sign of anxiety. Examples would be all the animals and toys need to be lined up in a specific way or order or there is a specific way of saying "good night" or "bye".
7. A child becomes overly frustrated, angry, crying or having tantrums in response to denial by adults of requests or different or new situations.
8. A child has crying or meltdowns about personal appearance, clothing, hair, socks or shoes.

Resources:
YoungMinds Parents Helpline: 808-802-5544
Anxiety/Crisis Text Line: 741741

Depression

As the same for the rest of us, it is normal for kids to have good days and bad days. For kids, bad days and sadness are usually short-lived and harmless. Just because you are sad does not mean you are depressed. Through maturation, children learn to balance happy and unhappy experiences. However some children may not have developed this skill and their sadness interferes or impairs daily activities. If symptoms persist for at least two weeks or longer, then they may be depressed.

Estimates are that 3.2% of children and adolescents in the US have depression. Due to their specific stress, about one in seven adolescents will experience an episode of depression. Since the beginning of the COVID 19 pandemic the rate for depression has tripled. The prevalence of depression is the same for males and females until puberty. Children that began puberty early are more likely to have mental health problems. They are less mature to deal with physical and psychological changes that occur.

Depression may been seen in children as early as 2 years of age. The average age for onset of depression is however 13 years. Depression increases during adolescence especial for girls and peaks during mid puberty. The occurrence of depression for girls during early adolescence is 2 to 3 times more common than in boys. Girls have an increased sensitivity to social and interpersonal threats. They are more concerned about peer acceptance. 13% of those 12 to 17 years of age have had at least 1 episode of depression. Another report found that by 18 years of age 9 to 11% of all adolescents have had at least one episode of depression. Of these 30% will be severe and 60% will have recurrences.

Depression unlike anxiety may be due to “worry” and not “fear”. The difference between worry and anxiety may be the severity or intensity. Depression for children and adolescents is different from adults. It is the result of the interaction of biological, environmental and psychological factors.

Specifically social and environmental experiences (school, familial, peer victimization and rejection), neurobiological factors (hormones, genetic, worse during puberty) and behavioral (avoidance) factors play a role in the occurrence of depression. There may be a genetic vulnerability for depression during puberty. Depression may occur in family members and twins.

Stressful life events, illness, trauma, medication, physical, sexual or emotional abuse, parental rejection, family history of depression, maladaptive parenting and lack of warmth may lead to depression. Children exposed to violence, parental conflict, social isolation, divorce, live in poverty or any disruption in their family life are at risk to have depression. Lower levels of depression are seen in those who have a greater level of family support. High usage of social media and television over several years increases the occurrence of depression. Depression may occur if a child is being bullied at school, there is a disruptive or distracted classroom or the child can't see the board and needs glasses. The earlier that depression triggers occur will result in depression having an earlier onset, having a more chronic course and increased occurrence of suicidal behavior.

If a parent especially mother is depressed, their children have a 3 to 4 times greater occurrence of depression and 30 fold increase in the risk of suicide. Depressed parents are more rigid, controlling, have closer monitoring, more critical and have less warmth and nurturing for their children. Alternatively parents may help by teaching children how to respond positively to negative situations, the silver lining or glass is half-full. Parents may teach children how to properly process and interpret situations and develop effective strategies to handle the events.

Environmental triggers that produce any kind of stress may cause alterations in gene (epigenetics) function resulting in an increase or decrease in their function. The environment may affect and alter gene function by producing chemical changes. These changes are the result of methylation of DNA or the action of histones through the immune system or neurological signaling. The SLC6A4, BDNF and NR3C1 genes if mutated or modified result in altered cortisol levels in response to stress. This causes memory impairment and depression. During the second decade of life when the brain is undergoing rapid development, these genetic effects may be more significant. There is a report that diets high in sodium and low in potassium produce effects that buildup over time and increase the risk of adolescent depression. It is recommended that fast foods and highly processed foods be avoided or limited if not eliminated.

"Worry" of rejection or ridicule result in avoidance of activities leading to poor or few relationships and fun activities. Depression may be followed by a lack of social skills, poor social interactions, avoiding expressing emotions and having fun. Depressed youths have less motivation, are more distractible, do not think clearly and have difficulty problem-solving. When depressed, the brain interprets and processes events as negative and expects negative consequences and outcomes.

Depressed children will physically act out (externalize) with yelling and throwing things. They have a sense of loneliness. Depressed children may have sleep problems and nonspecific aches and pains. They have an increased risk of suicide. Girls are more likely to have rumination. They repetitively go over their own thoughts and problems and their consequences without solving or resolving the problem. This increases their risk of depression.

There will be a normal pruning of nerve connections in the brain duing early adolescence that may be accelerated by mental illness. Pubertal hormones play a role in the remodeling of brain structures. Adolescents due to ongoing brain development have an increased vulnerability for mental illness. Over time there is an increase in brain gray and white matter. White and gray matter in the frontal cortex reaches a peak around 12 years of age, 16 years of age in the temporal area and 20 years of age in the occipital areas. The prefrontal cortex matures by the third decade at which time adolescents and young adults will then make good choices. The dopamine (reward) areas mature before the inhibition pathways of the prefrontal cortex. The serotonin pathway in the prefrontal cortex will regulate the dopamine pathway in the temporal area.

The overall size of the brain appears to be smaller in depressed adolescents. Specifically depressed individuals have a smaller hippocampus but enlarged pituitary gland compared to those not depressed. However for depressed adolescents, the amygdala has increased growth in females and decreased growth in males. Activation of the hypothalamus from stress also activates the amygdala. The amygdala has increased, hyperactive activation in depressed adolescents. The amygdala processes reward and threatening stimuli. In depressed individuals it interprets all stimuli and interactions as negative. It interacts with the hypothalamus and the prefrontal cortex. In depression, the communication between the prefrontal cortex and hippocampus is increased.

The smaller hippocampus and enlarged pituitary gland in depressed individuals occurs in response to processing stress. There is excessive brain

activation in the frontal, temporal and limbic areas in response to fearful situations. SSRIs used to treat depression may have a direct effect on the hippocampus and increase maturational changes "neurogenesis". Stress causes the hypothalamus in the brain to release corticotropin releasing hormone. This triggers the release of ACTH from the pituitary gland that in turn causes cortisol to be released from the adrenal glands. Adolescents that are depressed may have elevated as well as lower than average levels of the stress hormone cortisol. Cortisol may be measured in blood, saliva and hair. Similar findings have been observed when measuring urine cortisol levels in depressed adults.

The diagnosis of depression is based upon clinical symptoms. However there are medical conditions which may cause a child to feel bad and have mood changes that mimic and overlap with depression. Low or high thyroid function, anemia, head injuries (concussion), diabetes, mononucleosis and vitamin D deficiency may cause symptoms of depression and should be screened especially before any medication is started. Children with learning disorders, ADHD, anxiety, social withdrawal and cognitive problems are more likely to have depression.

Depressed children either from stress or underlying medical conditions may have any of a number of symptoms which aid in making the diagnosis of depression. They may have early-morning awakening or difficulty sleeping, less energy or fatigue, sadness, irritability, loss of interest in activities, appetite or weight changes, moving or talking more slowly, difficulty concentrating or remembering, restlessness, difficulty sitting still, headache, pain, aches, stomach cramps and a feeling of hopelessness. 5 to 10% of depressed children and adolescents do not have symptoms severe enough to diagnose depression. DSM-5 criteria for the diagnosis of depression are shown at the end of this section.

There are different clinical assessment tools and questionnaires that are used to support the diagnosis of depression. One test is the Center for Epidemiologic Studies-Depression scale (CES-D). It may be used in children as young as 6 years of age. It takes around 20 minutes and is completed by the child or adolescent. The Beck Depression Inventory (BDI) is a questionnaire used for children 13 years of age and older. It takes about 10 minutes to finish and is a multiple-choice questionnaire adolescents complete. The Child's Depression Inventory (CDI) is a questionnaire that may be used for those 6 to 18 years of age. It is done during a 15 minute interview by a healthcare professional. The Weinberg Screening Affective Scale (WSAS) is

a more intensive screening questionnaire used for children five years of age and older. It is completed by the child or adolescent. It is more detailed and evaluates different symptoms of depression. Using different screening tools, children and adolescents may not have enough symptoms to satisfy the criteria as outlined by the DSM-5 guidelines to diagnose depression.

Depression and anxiety have common and unique triggering factors and may overlap with 15 to 75% of depressed youths also having anxiety. They are separate but related disorders. Anxiety is more likely to occur in adolescents that are severely depressed and these youths are more likely for their anxiety to be severe. The younger the age of onset for depression, there is a greater chance of also having anxiety.

If sadness or depression interferes with a child dealing with daily events or causes them to avoid activities, then they need help. Try to reduce symptoms of depression as soon as possible. Non-treatment is not an option. 40% of those treated will have recurrence of depression, one third of those that recover will attempt suicide with 3 to 4% being successful. Treatment may be through cognitive behavior therapy (CBT), other behavioral interventions (ITP) and medication. It is been recommended that for treatment of depressed adolescents, begin with CBT. CBT teaches the depressed individual to replace negative thoughts with healthy realistic thoughts.

ITP works on interpersonal relationships. Behavioral interactions through ITP would include talking out strategies and practice situations to deal with peer and family interactions. The therapist may help to evaluate behavior or events that have contributed to depression as well as help the depressed individual understand and resolve issues. They would also address the role of unconscious feelings that contribute to their depression. These types of therapy may increase negative feelings. If adolescents can identify their problem then they are more likely to develop effective coping strategies that improve if not resolve depression.

If medicine is started there are reports that it may take antidepressants two weeks or longer to start to work. Fluoxetine (Prozac) is the only SSRI licensed for treatment of depression in adolescents and it may produce a 60% remission rate for depression. Medication when combined with CBT may produce greater than a 70% response rate. However for children less than 18 years of age, adding an antidepressant medication to behavioral therapy may not produce any added benefit over CBT.

Due to a difference in the maturation of different neurotransmitter systems in the brain, compared to adults, antidepressants will have a different effect

in adolescents. There may also be a different effect for these medicines in adolescents when compared to children. There may be an age difference for antidepressant medication effects. In adolescents, SSRIs reduce the amygdala's response to "fear", changing the way the brain processes information.

SSRIs that are used for treating depression may have a direct affect on the hippocampus and increase maturational changes "neurogenesis". The SSRIs will readjust this communication between the prefrontal cortex and hypothalamus and normalize responses. However adolescents taking fluoxetine will have elevated serotonin levels which may actually delay or stop hippocampus neurogenesis. With SSRIs there may also be brain tissue damage and mental and behavioral changes. It is possible that what is occurring is that adolescents may have a vulnerable time when the brain is more susceptible to damaging effects of fluoxetine.

Counseling sessions may be challenging with children and adolescents. Adolescence is a time when they are struggling for autonomy. They are less likely to establish a therapeutic alliance with a counselor. Parents may force therapy and wish to participate in the sessions. Adolescents may be fearful that sensitive information may be shared with their parents. Adolescents are less likely to interact with the therapist, more likely to skip sessions and not complete the program. Depression decreases motivation and may make counseling treatment less effective and more difficult.

Eating dark chocolate may help to relieve symptoms of depression. Dark chocolate contains different psychoactive agents, two of which may produce euphoric feelings similar to canabinol and phenylethylamine that helps to regulate mood. Non-dark chocolate does not have a similar effect. The higher the intake of dark chocolate, the better an individual may feel. The precise amount of dark chocolate that would need to be ingested has not been quantified or measured. Maintaining a proper diet and consuming yogurt, fruits and vegetables which have low levels of sodium and high levels potassium may exert a protective effect against depression. Daily exercise and appropriate amounts of sleep can help to maintain healthy mental health.

Concern or Depression Crisis: Substance Abuse and Mental Health Services Adminstration (SAMHSA) 1-800-662-4357

Signs of depression in children:

1. Changing eating or sleeping patterns.
2. Frequent absence from school.
3. Loss of interest in favorite activities or hobbies.

4. Sudden drop in school grades.
5. Irritability/agitation/upset/anger outbursts.
6. Loss of interest in friends.
7. Low energy.
8. Sadness for two or more weeks.
9. Hopelessness.
10. Frequent headaches, stomach ache, fatigue.
11. Talk/thoughts of death or suicide.
12. Feels worthless.
13. Increase or decrease in body weight.

DSM-5 Diagnosis of Depression:
Five or more of the following symptoms have been present during the same two week period and represented change from previous functioning. At least one of the symptoms is either #1 depressed mood or #2 loss of interest or pleasure

1. Depressed mood most of the day, nearly every day as indicated by the subjective report (feels sad, empty, hopeless) or observation made by others (appears tearful).
2. Markedly diminished interest or pleasure in all, or almost all, activities most of the day nearly every day (as indicated by subjective account or observation).
3. Significant weight loss when not dieting or weight gain (change of more than 5% of body weight in a month) or decrease or increase in appetite nearly every day.
4. Insomnia or hypersomnia nearly every day.
5. Psychomotor agitation or retardation nearly every day (observed by others, not merely subjective feelings of restlessness or being slowed down).
6. Fatigue or loss of energy nearly every day.
7. Feelings of worthlessness or excessive or inappropriate guilt (which may be delusional) nearly every day (not merely self reproach or guilt about being sick).
8. Diminished ability to think or concentrate, or indecisiveness, nearly every day (either by subjective account or is observed by others).
9. Recurrent thoughts of death (not just fear of dying), recurrent suicidal ideation without a specific plan, or suicide attempt or a specific plan for committing suicide.

The symptoms cause clinically significant distress or impairment in social, occupational or other important areas of functioning.

The episode is not attributable to the physiological effects of a substance or to another medical condition.

The occurrence of the major depressive episode is not better explained by schizoaffective disorder, schizophrenia, schizophreniform disorder, delusional disorder, or other specified and unspecified schizophrenia spectrum and other psychotic disorders.

There has never been a manic episode or hypomanic episode.

Bullying

Bullying is by no means a new problem. It has been going on even before man began walking upright whether it occurs during a recess or at a bus stop. It is not a harmless rite of passage or part of normal growing up. It does not lead to a healthier adulthood. It is a serious problem which may lead to significant short and long-term health problems for both the bully and the victim. Bullying is different from teasing. Teasing is harmless and both parties find it funny. With bullying it is repetitive, hurtful and for the victim no longer or not funny.

Bullying may occur anywhere but school is the most common site and the most common kind of school violence. With bullying there is the bully, the victim, the bystander and there may be a situation where the bully is also a victim. The bullies may precipitate retaliatory homicide or suicide. The victims themselves may fight back and become aggressive as in school shootings or cause self-harm. For different school shootings, as many as two thirds of the shooters may have been the victims of long-standing and severe harassment, threatening, persecution or bodily harm.

A child with new onset school problems with difficulty focusing on classwork or health problems may be the victim of bullying. One in three children report they have been bullied and one in seven the victims of cyber bullying (email, Internet, texting, Facebook, MySpace). Bullying occurs more often in males and is more common in lower grades than high school. A breakdown shows that 11.3 up to 49.8% of children in elementary school grades one through five are bullied. Specifically for the United States this number may be 14 to 19% for those in elementary or lower school.

Bullying in middle school may range between 9 to 11% and for children between 11 to 15 years of age bullying ranges between 9 to 54%. For children between 12 to 18 years of age, 28% report being bullied at school with 20% reporting that it happened at least one to two times a week. Overall estimates for all ages in the United States for bullying may vary from

10 to 20% up to 70%. The occurrence of bullies being bullied in high school is 4.2%. Cyber bullying may range from 4 to 35% for adolescents. When cyber bullying is combined with other forms of bullying, there is no escape for the victim. In England it is estimated that there are 16,000 children permanently not attending school because of school bullying.

There are typical dynamics for bullying. The goal is to intentionally cause mental or physical pain or suffering or a combination to the victim through verbal, physical or psychological ways. With bullying there is an imbalance with victims tending to be smaller and weaker for boys and conversely socially isolated, excluded and withdrawn for girls. There may be name-calling, shunning, kicking, hitting, shoving, spreading rumors, threats or extortion of money and taking possessions. The bully has a dominant position over the victim. Victims are bullied because they don't seem to fit in. A conflict between children or adolescents of similar physical or mental strength is not bullying.

In early adolescence there is a greater vulnerability for psychological harm from bullying. For actions to be considered bullying, it occurs at least once a week, is repetitive and may be intense. Bullying may not itself lead to suicide but contribute to or exacerbate insecurity, instability and a sense of hopelessness in adolescents who are already trying to cope with a stressful life. Additionally depression when present may magnify the effects of bullying in vulnerable, fragile adolescents. For direct or overt bullying there is physical or verbal aggression or abuse. These would include hitting, kicking, insulting, teasing, taking personal items by force, name-calling or threatening.

Alternatively bullying may be indirect using social isolation, exclusion, spreading rumors, ignoring, teasing, taunting, backbiting, making sexual comments and cyber bullying. It may be carried out by a third party. For all ages, 10 to 20% of bullying may be cyber bullying. Direct bullying is more likely in boys and indirect bullying more commonly done by girls. Relational victimization occurs when peer groups or friendships are threatened or damaged. Verbal bullying is the most common bullying type overall but boys are more likely than girls to use direct physical bullying. For both boys and girls picking on looks or speech are the most common targets for bullying. Ethnic, race or religion are not typically targets for bullying but may occur depending upon the specific social setting.

Victims have characteristics that may predispose them to the victimization. Being bullied is stressful. Those that are bullied have internalized behaviors (anxiety, depression). Youths that are bullied have poor relationships with classmates and difficulty making friends. The more socially accepted and

having a greater number of friends lowers the likelihood of being bullied. Those bullied are less assertive and introverted. They are less popular with their peer group. Victims have school adjustment problems and higher rates of absenteeism and school avoidance. Victims may perform poorly at school due to their continuous stress and anxiety from being victimized.

Those bullied are conditioned to think that they are worthless and will internalize these feelings. They are 4 times more likely to be depressed and two times more likely to have suicidal ideation. This is especially true for boys overall and for both boys and girls between 9 to 13 years of age. Indirect bullying is more likely to cause depression and suicidal ideation for both boys and girls because they are more socially isolated and feel bad about themselves.

Direct bullying does not seem to precipitate depression and suicidal ideation for boys but it will for girls, but to a lesser extent than indirect bullying. For females any bullying increases risk of suicidal ideation, attempts and depression. Bullying of males must be frequent to increase their risk of suicide. The greater number of types of bullying that occur, the greater the risk of suicidal ideation and depression.

If the bullying is long-standing, suicidal ideation and actions are more common. As a result children and adults are more likely to be anxious, and unhappy about life and school. They are more likely to have eating problems, be lonely, insecure, have bedwetting, have low self-esteem and suicidal behavior. Additionally victims of bullying are less likely to smoke, drink or be involved in delinquent activities. They are less popular and spend a lot of time alone. They may have a harsh home environment. Their parents may be involved in school activities but are overall more controlling, demanding, less supportive and responsive to their child.

A child is less likely to be bullied if their parents are responsive and supportive of their child. In families where the father is involved in the child's life, bullying is less likely to occur. If the parents are controlling, the child has fewer opportunities to learn and control their own social situations. Intense closeness in the family may result in boys being more likely to become victims of bullying.

Bullies may begin a school year by targeting and bullying a large number of individuals initially, then specifically selecting those whose emotional response gratify the bully. Bullying will continue because the victim does not fight back. The bully feels empowered with control and mastery over their victim. Conversely the bully may be helpless and hopeless in their own family and social setting. Even though bullies themselves self report that

the bullying does not make them feel good, the bully does feel good about himself/herself and better than the victim. The self reporting may simply be self-serving.

A number of common features have been seen for bullies. Bullies externalize behavior and aggression. They may have disrupted family dynamics and a harsh home environment. They may have authoritarian parents who are less responsive, less supportive and have poor parent child communication. Their parents may use punitive or physical discipline causing child abuse and poor adult role modeling. Bullies are socially aggressive, begin dating at an earlier age and may be aggressive towards their partner. They may also be involved in criminal activity including stealing, vandalism and carrying a weapon.

For both boys and girls, children doing the direct bullying are more likely to have delinquent behavior compared to indirect bullying. Those that are bullies at eight years of age are more likely as adults to be failures in life for relationships, employment and involved in criminal activity. By 24 years of age, 60% of them have at least one conviction and 35 to 40% have at least three convictions. Overall they have a fourfold greater rate of criminal activity. Bullies are more likely to have a dislike for school, difficulty with adjusting to school rules, poor academic performance and school failure. They may be guilty of cheating, skipping school and school misconduct. These may be worsened by an underlying conduct disorder which is more common for bullies.

Bullies are more likely to engage in self-destructive behaviors. They may engage in antisocial behaviors for their age like underage drinking, substance abuse and smoking. They are more likely to have mental illness, eating disorders, depression and suicidal ideation because of their social setting and home life. Bullies who are depressed may be so because they have been victimized. Bullies are 2.8 to 4.3 times more likely to have depression and four times more likely to have suicidal ideation. The more aggressive the bullying, the greater the instability, impulsivity and emotional lability. Bullies themselves are more likely to have physical illnesses and somatic complaints.

Bullies appear to be popular and make friends easily. However these friends themselves may be bullies, are of large physical size and support and reinforce the bullying activity. With their maladaptive aggressive behaviors, bullies including both males and females may fail to learn socially acceptable ways of dealing with conflict and solving problems with others.

Bully victims have a worse prognosis. Bully victims are more likely to come from a harsh home life with maternal hostility. In this setting they

have a higher risk of experiencing emotional and physical abuse. They have a higher risk for academic problems and school failures. At some point they may have started out as victims themselves and then become aggressive, disruptive and initiating fights. Those bullied are 6.3 to 8.8 times more likely to be depressed. Their rate of suicidal ideation is 2.5 times more likely than those not bullied and they are 6.4 times more likely to have anxiety. Those being bullied are more likely to have separated or divorced parents and be from a lower social economic class.

Victims of bullying do not usually report bullying to their parents or teachers. They are afraid of retaliation, they won't be believed or afraid they are simply told to "man up". Further, adults may not consider social exclusion as bullying. Their classmates may believe the victim brings the bullying on themselves. They may think that bullying may help to make the victim stronger and teasing is no more than good harmless fun. Bystanders may avoid the victim for fear they will become a target of the bully or lose social status with their peers.

Boys especially in grades four through six are more likely to reinforce the bullying and encourage bullying by providing an audience. Girls when witnessing bullying are more likely to intervene, make the bully stop and defend the victim. Adults responding and immediately stopping a bully on the spot sends a clear message that it is not acceptable behavior. Suicide is probably the most significant serious result of school bullying. It is the peer rejection and abuse from bullying that may lead to suicide. Children are more sensitive to and affected by verbal cuts or actions by their peers rather than their parents. By preventing bullying, the occurrence of childhood suicide is decreased.

Bullying prevention programs when started early are especially effective long-term for both the victims and their tormentor. These prevention programs do effectively reduce peer and bully aggression. The goals of these programs would be to increase teacher and parent involvement and supervision, establish and enforce clear rules that have zero tolerance and have measures in place for both the protection and support of victims of bullying. Students may be taught what action and measures to take to stop the bullying. Schools may coordinate conferences with bullies, victims and their parents. Role playing, behavior modeling and anti-bullying videos may be used to increase the awareness of problems from bullying and that all the children involved in bullying are ultimately victims. Teachers may not see the bullying if it does not occur in the classroom.

Data shows that for middle and high school students the occurrence of physical and verbal bullying has declined by nearly 50% over the past decade.