

Improving the Nation's Health

The National Institute of Mental Health

The mission of the National Institute of Mental Health (NIMH) is to diminish the burden of mental illness through research. This public health mandate demands that we harness powerful scientific tools to achieve better understanding, treatment and, eventually prevention of mental illness.

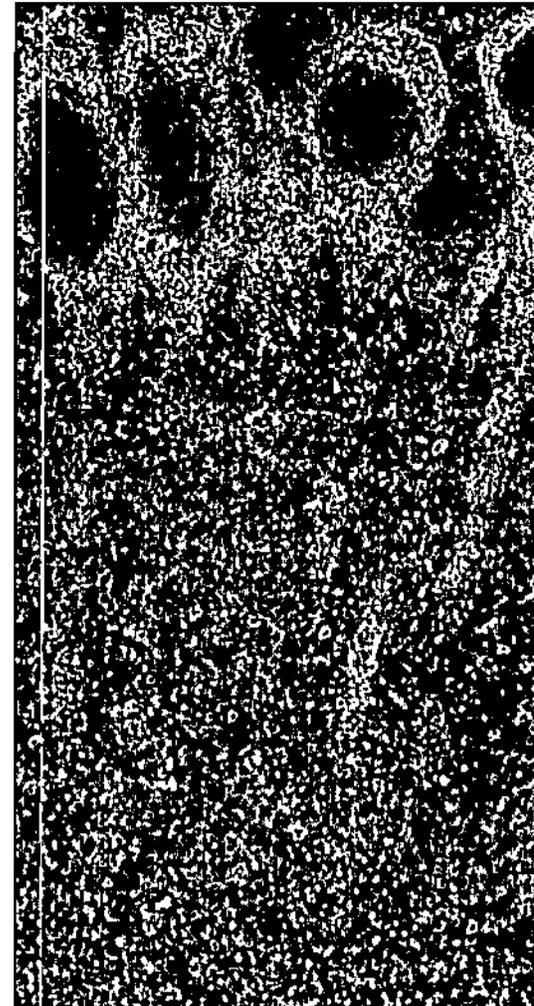
Through research in basic neuroscience, behavioral science, and genetics, we can gain an understanding of the fundamental mechanisms underlying thought, emotion, and behavior – and an understanding of what goes wrong in the brain in mental illness. In itself this information will give us profound insights into ourselves as a species, but we must, at the same time, hasten the translation of this basic knowledge into clinical research that will lead to better treatments that ultimately must be effective in our complex world with its diverse populations and evolving health care systems.

The stakes for our Nation are high. According to the landmark "Global Burden of Disease" study, commissioned by the

World Health Organization and the World Bank, mental disorders represent four of the ten leading causes of disability for persons age 5 and older. Among "developed" nations, including the United States, major depression is the leading cause of disability. Also near the top of these rankings are manic-depressive illness, schizophrenia, and obsessive-compulsive disorder. Mental disorders also are tragic contributors to mortality, with suicide perennially representing one of the leading preventable causes of death in the United States and worldwide.

Grim as they are, such statistics do not capture fully the costs of mental illness. Mental disorders often strike early in life, during childhood, adolescence or early adulthood. Because mental disorders may have severe symptoms, and often run a chronic or recurrent course, they are profoundly destructive, not only to life and productivity, but to the well being of families, causing immeasurable suffering to affected individuals and their loved ones.

Fortunately, research has given us effective treatments for many mental disorders. An array of safe and potent medications and psychosocial



Laser-scanning confocal microscope image of phospho-CaM kinase II in pyramidal neurons of rat hippocampus. Photo courtesy of Drs. Y. Ouyang and M.B. Kennedy, Silvio O. Conte Center for Neuroscience Research at Caltech.

interventions, typically used in combination, permit us to treat schizophrenia, manic-depressive illness, major depression, anxiety disorders, and other mental illnesses. We recognize, however, that our successes to date are far from complete. As is true of treatments for most serious chronic illnesses that afflict humanity, current treatments for mental disorders control symptoms but do not cure the disorder. Even with state-of-the-science treatments, residual symptoms and recurrent episodes of illness are the rule. Many treatments, moreover, have unacceptably serious side effects.

Especially urgent needs exist in the critical area of childhood mental disorders. At present, we lack the full knowledge we need to make diagnoses with certainty, and we lack treatments that have been validated for the particular needs of children and adolescents. Yet, clearly, the often unrecognized and untreated symptoms of mental illness have a profound, long-term impact on the child's developing brain and his or her family, social, and academic interactions. Gaining the information needed to recognize promptly and accurately, treat safely and effectively, and, when possible, prevent long-term mental disorders is critical for children and their families and for the future of our Nation.

As you review our *Science on Our Minds* series, I hope that you will glimpse some of the richness of our research efforts and gain a sense of how we set our research

priorities. The tragedy of mental illness demands that as a society we respond to it effectively, ethically, compassionately, and together.

We thank you for your interest in the scientific activities of the National Institute of Mental Health.

Steven E. Hyman, M.D.
Director

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The Numbers Count

Mental Illness in America

According to a recent study by the World Health Organization, the World Bank, and Harvard University, mental disorders account for 4 of the 10 leading causes of disability in established market economies worldwide. These disorders are: major depression, manic-depressive illness, schizophrenia, and obsessive-compulsive disorder. Other research has estimated that the cost of mental illnesses in the United States, including indirect costs such as days lost from work, was \$148 billion in 1990, the last time the total bill was measured.

Depression

- More than 19 million adult Americans age 18 and over will suffer from a depressive illness—major depression, bipolar disorder, or dysthymia—each year. Many of them will be unnecessarily incapacitated for weeks or months because their illness is untreated.
- The onset of depression may be occurring earlier in life in people born in recent decades compared to the past.
- Nearly twice as many women (12 percent) as men (7 percent) are affected by a depressive illness each year.
- Depression is a frequent and serious complication of heart attack, stroke, diabetes, and cancer, but is very treatable.
- Depression increases the risk of having a heart attack. According to one recent study that covered a 13-year period, individuals with a history of major

depression were four times as likely to suffer a heart attack compared to people without such a history.

- Depression costs the nation more than \$30 billion per year in direct and indirect costs, according to the most recent data available.
- Major depression is the leading cause of disability in the United States and worldwide, according to a recent study by the World Health Organization, the World Bank, and Harvard University.

Manic-Depressive Illness

- More than 2.3 million Americans ages 18 and over – about 1 percent of the population – suffer from manic-depressive illness.
- As many as 20 percent of people with manic-depressive illness die by suicide.
- Men and women are equally likely to develop manic-depressive illness.

Suicide

- In 1996, approximately 31,000 people died from suicide in the United States.
- Almost all people who kill themselves have a diagnosable mental disorder, most commonly depression or a substance abuse disorder.
- The highest suicide rates in the United States are found in white men over age 85.
- The suicide rate in young people has increased dramatically in recent years. In

1996, the most recent year for which statistics are available, suicide was the 3rd leading cause of death among 15 to 24 year olds.

- Men are more than four times as likely as women to commit suicide.

Schizophrenia

- More than 2 million adult Americans are affected by schizophrenia.
- In men, schizophrenia usually appears in the late teens or early twenties. The disorder usually shows up when women are in their twenties to early thirties.
- Schizophrenia affects men and women with equal frequency.
- Most people with schizophrenia suffer chronically throughout their lives.
- One of every 10 people with schizophrenia eventually commits suicide.
- Schizophrenia costs the nation \$32.5 billion annually according to the most recently available data.

Anxiety Disorders

- More than 16 million adults ages 18 to 54 in the United States suffer from anxiety disorders, which include panic disorder, obsessive-compulsive disorder, post-traumatic stress disorder, social phobia, and generalized anxiety disorder.
- Anxiety disorders cost \$46.6 billion in 1990.
- Anxiety disorders are frequently complicated by depression, eating

disorders, or substance abuse. Many people have more than one anxiety disorder.

Panic Disorder

- Panic disorder affects about 1.7 percent of the U.S. adult population ages 18 to 54, or 2.4 million people, in a given year.
- Panic disorder typically strikes in young adulthood. Roughly half of all people who have panic disorder develop the condition before age 24.
- Women are twice as likely as men to develop panic disorder.
- People with panic disorder may also suffer from depression and substance abuse. About 30 percent of people with panic disorder abuse alcohol and 17 percent abuse drugs such as cocaine and marijuana.
- About one-third of all people with panic disorder develop agoraphobia, an illness in which they become afraid of being in any place or situation where escape might be difficult or help unavailable in the event of a panic attack.

Obsessive-Compulsive Disorder (OCD)

- About 2.3 percent of the U.S. adult population ages 18 to 54, approximately 3.3 million Americans, has OCD in a given year.
- OCD affects men and women with equal frequency.
- The nation's social and economic losses due to OCD totaled \$8.4 billion in 1990.

Post-Traumatic Stress Disorder (PTSD)

- In the United States, about 3.6 percent of adults ages 18 to 54, or 5.2

million people, have PTSD during the course of a given year.

- PTSD can develop at any age, including childhood.
- PTSD is more likely to occur in women than in men.
- About 30 percent of men and women who have spent time in war zones experience PTSD. The disorder also frequently occurs after violent personal assaults, such as rape or mugging or domestic violence; terrorism; natural or human-caused disasters; and accidents.
- Depression, alcohol or other substance abuse, or another anxiety disorder often accompany PTSD.

Social Phobia

- About 3.7 percent of American adults ages 18 to 54, or 5.3 million people, have social phobia in a given year.
- Social phobia occurs in women twice as often as men, although a higher proportion of men seek help for this disorder.
- The disorder typically begins in childhood or early adolescence and rarely develops after age 25.
- Social phobia is often accompanied by depression and may lead to alcohol or other drug abuse.

Attention Deficit Hyperactivity Disorder (ADHD)

- ADHD is one of the most common mental disorders in children, affecting 3 to 5 percent of school-age children.
- Two to three times more boys than girls are affected.
- ADHD has long-term adverse effects on success at school, work, and in social relationships.
- National public school expenditures on behalf of students with ADHD exceeded \$3 billion in 1995.
- As they grow older, children with untreated ADHD who have a coexisting

conduct disorder often experience drug abuse, antisocial behavior, teenage pregnancy, and injuries of all sorts.

Autism

- Autism and related disorders (also called autism spectrum disorders or pervasive developmental disorders) represent chronic and severely disabling developmental disorders. There is no known cure.
- There are 1 to 2 cases of autism per 1,000 people.
- These disorders develop in childhood and are generally apparent by age three.
- Autism is three to four times more common in boys than girls. Girls with the disorder, however, tend to have more severe symptoms and lower intelligence.
- These disorders present families with financial and emotionally costly challenges over the lifespan of their affected children. About 60 percent of adults with autism will require continued care throughout their lives.
- The cost of health and educational services to those affected by autism exceeds \$3 billion each year.

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“...the burden of psychiatric conditions has been heavily underestimated.”

The Impact of Mental Illness on Society

The burden of mental illness on health and productivity in the United States and throughout the world has long been underestimated. Data developed by the massive Global Burden of Disease study¹ conducted by the World Health Organization, the World Bank, and Harvard University, reveal that mental illness, including suicide, accounts for over 15% of the burden of disease in established market economies, such as the United States. This is more than the disease burden caused by all cancers.

This Global Burden of Disease study developed a single measure to allow comparison of the burden of disease across many different disease conditions by including both death and disability. This measure was called Disability Adjusted Life Years (DALYs). DALYs measure lost years of healthy life regardless of whether the years were lost

to premature death or disability. The disability component of this measure is weighted for severity of the disability. For example, disability caused by major depression was found to be equivalent to blindness or paraplegia whereas active psychosis seen in schizophrenia produces disability equal to quadriplegia.

Using the DALYs measure, major depression ranked second only to ischemic heart disease in magnitude of disease burden in established market economies. Schizophrenia, bipolar disorder, obsessive-compulsive disorder, panic disorder, and post-traumatic stress disorder also contributed significantly to the total burden of illness attributable to mental disorders.

The projections show that with the aging of the world population and the conquest of infectious diseases, psychiatric and neurological conditions could increase their share of the total global disease burden by almost half, from 10.5 percent of the total burden to almost 15 percent in 2020.

Facts

- Depression is the leading cause of disability worldwide among persons age five and older.
- For women throughout the world as well as those in established market economies, depression is the leading cause of DALYs. In established market economies, schizophrenia and bipolar disorder are also among the top ten causes of DALYs for women.



¹ The global burden of disease. A comprehensive assessment of mortality and disability from diseases, injuries, and risk factors in 1990 and projected to 2020. (Murray CL, Lopez AD, eds. World Health Organization, World Bank, Harvard University, 1996.)

The Leading Sources of Disease Burden in Established Market Economies, 1990

(measured in DALYs*)

	Total (millions)	Percent of Total
All Causes	98.7	
1 Ischemic heart disease	8.9	9.0
2 Unipolar major depression	6.7	6.8
3 Cardiovascular disease	5.0	5.0
4 Alcohol use	4.7	4.7
5 Road traffic accidents	4.3	4.4
6 Lung & UR cancers	3.0	3.0
7 Dementia & degenerative CNS	2.9	2.9
8 Osteoarthritis	2.7	2.7
9 Diabetes	2.4	2.4
10 COPD	2.3	2.3

Disease Burden by Selected Illness Categories in Established Market Economies, 1990

(measured in DALYs*)

	Percent of Total
All cardiovascular conditions	18.6
All mental illness including suicide	15.4
All malignant disease (cancer)	15.0
All respiratory conditions	4.8
All alcohol use	4.7
All infectious and parasitic disease	2.8
All drug use	1.5

Mental Illness as a Source of Disease Burden in Established Market Economies, 1990

(measured in DALYs*)

	Total (millions)	Percent of Total
All Causes	98.7	
Unipolar major depression	6.7	6.8
Schizophrenia	2.3	2.3
Bipolar disorder	1.7	1.7
Obsessive-compulsive disorder	1.5	1.5
Panic disorder	0.7	0.7
Post-traumatic stress disorder	0.3	0.3
Self-inflicted injuries (suicide)	2.2	2.2
All mental disorders*	15.3	15.4

* DALYs measure lost years of healthy life regardless of whether the years were lost to premature death or disability.

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Youth in a Difficult World



Not all children enjoy the “carefree” days of childhood. Unfortunately, when things start to go wrong, people often despair of being able to repair the damage. NIMH has made research on diagnosis, early intervention, and treatment of children an absolute priority.

Arguments are waged as to the management of children who attempt suicide, commit crimes or even those who are abandoned and neglected. Our society has impoverished resources to answer such questions and while some hospitals are available, all too often the answer is prison. Research has demonstrated, however, that children do not need to be

hospitalized or incarcerated to get the help they need. A home-based model of therapy, called Multisystemic Therapy or MST, offers treatment services to young people and their families in their homes. Youth with serious emotional or behavioral problems, such as antisocial behaviors, substance abuse, delinquency, or severe depression and suicidality, have been successfully treated through MST.

This approach shows a more hopeful and positive approach and focuses on how to help parents assist their children and how to teach young people to deal with their schools and communities. This program

has been found to be an effective alternative to hospitalization and to jails.

The magnitude of the problem is this: 1 in 10 children and adolescents suffer from mental illness severe enough to cause some level of impairment. Nonetheless, fewer than one in five of these ill children receives treatment. There is heated debate in our society about the proper roles of medications and psychotherapies for children at risk and children already suffering. But, one thing is clear: children who go untreated, suffer, cannot learn, and may not form healthy relationships with peers and family. Some children are placed on a trajectory for jail rather than college at a very early age.

MST is a mental health service that focuses on changing how youth function in their natural settings—that is, at home, in school, and in their neighborhoods. It is designed to promote positive social behavior while decreasing problematic behavior, including delinquency, depression, or substance abuse. MST therapists focus on strengthening the ability of parents or caretakers to raise children who have complex problems. Therapists working in the home identify strengths in the families and use these strengths to develop natural support systems and to improve their parenting. Therapy is approached as a collaboration between the family and the MST therapist. The family sets treatment goals and the therapist suggests strategies to accomplish them.

Specific treatments are used within MST. The interventions are individualized to the family's strengths and weaknesses and address the needs of the child, family, school, peers, and neighborhood. Therapists working in the home have small caseloads and are available 24 hours a day, 7 days a week. Treatment teams usually consist of professional counselors, crisis caseworkers, and psychiatrists or psychologists who provide clinical supervision.

In a series of randomized clinical trials, MST has proven effective in reducing long-term rates of criminal offending in serious juvenile offenders and in reducing their rates of out-of-home placements. For these youths, long term effects of MST even 4 years post-treatment, were found. MST reduced long-term rates of re-arrest by 25% to 70% compared with control groups.

MST has recently been found to be an effective alternative to psychiatric hospitalization with children in a psychiatric emergency. In the most recent randomized trial, MST was found to significantly decrease behavior problems, increase family cohesion, and increase school attendance compared with hospitalization. MST also reduced symptoms of internalizing distress and depression. Importantly, families who received MST were significantly more satisfied with their treatment than were families whose children were hospitalized.

In addition, MST was successful in preventing a significant proportion of adolescents from being hospitalized. Further, the use of hospitalization was not offset by increases in the use of other restrictive placement options. Youth in the hospitalization condition had almost double the number of days in other out-of-home placements in comparison with youths in the MST condition.

Studies comparing the costs of MST for serious juvenile offenders to traditional services have found that MST results in cost savings by decreasing out-of-home placement costs and costs of incarceration.

A complete manual for MST is available. MST has stringent quality assurance mechanisms to assure treatment fidelity. Following the treatment guidelines is critical as research has shown that strong adherence to the model is correlated with strong case outcomes, and poor adherence is associated with substantially poorer outcomes. Training, which is key to the success of the model, is intensive and ongoing. On-site clinical supervision is necessary to ensure that therapists adhere to the MST program.

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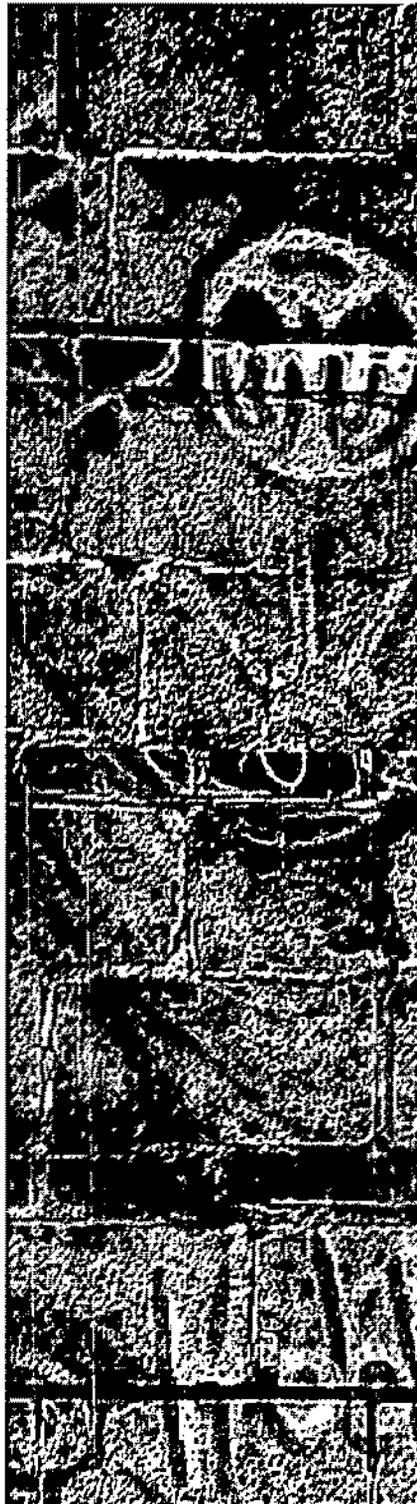
Teens: The Company They Keep

Preventing Destructive Behavior by Harnessing the Power of Peers

Recent tragic events such as school shootings have presented us with images of adolescent aggressive and antisocial behavior. There is a national search for answers. Fortunately, a long-term commitment to basic behavioral research at the National Institute of Mental Health (NIMH) is now having some very practical payoff for just these vexing problems.

Recent data from the National Youth Survey (NYS), a long-term study of violent offenders, point compellingly to the influence of deviant peers on a young person's tendency to engage in aggressive and violent behavior. The flip side of this finding is that interventions must pay attention to the peer group, a key factor influencing whether a young person will lead a young adulthood characterized by violent and aggressive behaviors.

In 1976, the NYS began to follow a nationally representative sample of 1,725 boys and girls, ages 11 to 17. NYS investigators have monitored participants' self-reports of serious violent behaviors as well as official records of law violations. At the time of the most recent interview, the survey participants were between ages 27 and 33. More than half of all participants with records of violent behavior began to engage in such behavior between the ages of 14 and 17, although a substantial number began as young as age 12. After age 20, the risk of



initiating a pattern of violent behavior was found to be close to zero.

They found that association with delinquent peers precedes the initiation and progression to serious violent offenses in 90 percent of cases. This finding was true of young people of all races.

Many well-intended attempts to "reform" severely delinquent youths have had few positive effects and even negative outcomes. Typically, these programs place delinquent youth with other delinquents in settings such as "group homes." One alternative based on the new understanding of peer influence is the Therapeutic Foster Care program, a treatment model for serious and chronic delinquents (i.e., with an average of 14 arrests, including 4 for felonies). In this program, severely delinquent youths are placed in the homes of "therapeutic foster parents" – carefully selected couples who are specially trained in science-based procedures for working with these troubled youngsters and are given round-the-clock support as well.

Evaluations of the Therapeutic Foster Care program have shown that it is more effective in reducing delinquency than the usual placement in group homes. It is also significantly less expensive, and has fewer runaways and fewer program failures. The Foster Family-based

Treatment Association, developed under NIMH leadership, now has some 400 agency members across the U.S. who promote the use of this science-based and effective model. The research and its effective application seriously challenge the policies, programs and procedures that bring problem youth together.

Today's research is also suggesting new ways to prevent antisocial behavior through an array of interventions for youth that is aimed at peers and other key components of their social environment. That research has revealed that although there are identifiable and escalating pathways to antisocial behavior, and possibly some biological factors placing some children at risk, they are not set in stone, and individuals can make a long-term difference in the lives of troubled and troubling children.

As summed up in a major review of current research on antisocial and aggressive behavior:

"Current levels of delinquency and violence in many Western societies, particularly the United States, are sufficiently high in many communities that successful intervention and prevention require a focus on the attitudes and behavioral norms of the whole

adolescent peer culture. In many urban schools, an aggressive reputation is positively related to adolescent peer popularity. It is not just the deviant peer group that influences delinquency and risk taking. Children in these schools grow up in neighborhoods of poverty and high crime rates, being exposed to homicide and the frequent use of guns. All this is embedded in a media culture of highly explicit violence... The challenge of contemporary prevention, whether for the high-risk early starter group or the late-starting adolescence-limited group is to alter these adolescent norms.

The primary strategy currently employed to achieve this goal is through the use of classroom and school-based programs in social problem solving, conflict management, violence prevention, and more broad-based curriculum for promoting emotional and social development in the total school population.

...These universal interventions should not be considered as alternatives to more targeted interventions with high-risk youth, because each approach provides a complementary strategy to reducing violence and antisocial activity in the entire community. The success of one approach should influence the success of another."

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“This Child Needs Help”

Attention Deficit Hyperactivity Disorder

Many childhood mental illnesses escape notice, but children with attention deficit hyperactivity disorder (ADHD) are often the subject of great concern on the part of parents and teachers. Children with ADHD—the most common of the psychiatric disorders that appear in childhood—can't stay focused on a task, act without thinking, can't sit still, and rarely finish anything. If untreated, the disorder can have long-term effects on a child's ability to make friends or do well at school or work. Over time, children with ADHD may develop depression, lack of self-esteem, and other emotional problems.

- Experts estimate that ADHD affects 3 to 5 percent of school-age children.
- ADHD affects two to three times as many boys as girls.
- Children with untreated ADHD have higher than normal rates of injury.
- ADHD frequently co-occurs with other problems, such as depression and anxiety disorders, conduct disorder, drug abuse, or antisocial behavior.

Treatments

Research has shown that certain medications, stimulants in most cases, and behavioral therapies that help

children sit still, pay attention, and focus on tasks are the most beneficial treatments for children with ADHD.

Problems Faced by Families

ADHD can be reliably diagnosed when appropriate guidelines are used. Ideally, a health care practitioner making a diagnosis should include input from parents and teachers. But some health practitioners make a diagnosis without all this information and tend to either overdiagnose the disorder or underdiagnose it. Despite data showing that stimulant medication is safe, there are widespread misunderstandings about



the safety and use of these drugs, and some health care practitioners are reluctant to prescribe them. Like all drugs, the medications used to treat ADHD do have side effects and need to be closely monitored.

Given the controversy in the health care community, parents need to think carefully about treatment choices when their child receives a diagnosis of ADHD. And when they pursue treatment for their children, families face high out-of-pocket expenses because treatment for ADHD and other mental illnesses is often not covered by insurance policies. In schools, treatment plans are often poorly integrated. In addition, there are few special education funds directed specifically for ADHD. All this leads to children who do not receive proper and adequate treatment. To overcome these barriers, parents may want to look for school-based programs that have a team approach involving parents, teachers, school psychologists, other mental health specialists, and physicians.

Recent Research Findings

Magnetic resonance imaging research has shown that the brains of children with ADHD differ from those of children without the disorder. In addition, there appears to be a link between a person's ability to pay continued attention and the use of glucose—the body's major fuel—in the brain. In people with ADHD, the brain areas that control attention use less glucose and appear to be less active, suggesting that a lower level of activity in some parts of the brain may cause inattention.

Research shows that ADHD tends to run in families, so there are likely to be genetic influences. Children who have ADHD usually have at least one close relative who also has ADHD. And at least one-third of all fathers who had ADHD in their youth have children with ADHD. Even more convincing of a possible genetic link is that when one twin of an identical twin pair has the disorder, the other is likely to have it too.

Data from 1995 show that physicians treating children and adolescents wrote six million prescriptions for stimulants—methylphenidate (Ritalin®), dextroamphetamine (Dexedrine®), and pemoline (Cylert®). Of all the drugs used to treat psychiatric disorders in children, stimulant medications are the most well-studied. A 1998 Consensus Development Conference on ADHD sponsored by the National Institutes of Health and a recent, comprehensive scientific report confirmed many earlier studies showing that short-term use of stimulants is safe and effective for children with ADHD. Evidence is mounting that suggests stimulants are more effective than behavioral therapies in controlling the core symptoms of ADHD—inattention, hyperactivity/impulsiveness, and aggression. But the addition of behavioral treatments seems to result in improved functioning, in terms of better social skills and higher academic achievement. More studies are needed to assess the combination of medication and behavioral therapies and to examine the long-term use of stimulant medication.

A two-day consensus conference on ADHD, held at the National Institutes of Health in November 1998, brought together national and international ADHD experts as well as representatives from the public. The Consensus Statement is now available at http://odp.od.nih.gov/consensus/cons/110/110_statement.htm

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Unraveling Autism

Autism, a brain disorder that affects 1 to 2 in 1,000 Americans, too often results in a lifetime of impaired thinking, feeling and social functioning – our most uniquely human attributes. Autism typically affects a person's ability to communicate, form relationships with others, and respond appropriately to the world around them.

Some people with autism are relatively high-functioning, with speech and intelligence intact, but others are mentally retarded, mute, or have serious language delays. For some, autism makes them seem closed off and shut down; others appear locked into repetitive behaviors

and rigid patterns of thinking. An infant with autism may avoid eye contact, seem deaf, and abruptly stop developing language. The child may act as if unaware of the coming and going of others, or physically attack and injure others without provocation. Affected infants often remain fixated on a single item or activity, rock or flap their hands, sniff or lick toys, seem impervious to burns and bruises, and may even mutilate themselves.

The National Institute of Mental Health – in collaboration with the National Institute of Child Health and Human Development, the National Institute of

Neurological Disorders and Stroke, and the National Institute of Deafness and other Communication Disorders – is searching for answers about the causes, diagnosis, prevention, and treatment of this devastating disorder. Research has made it possible to identify earlier those children who show signs of developing autism and thus initiate early intervention. Both psychosocial and pharmacological interventions can improve the behavioral and cognitive functioning of individuals with autism. Studies are evaluating medications such as risperidone and valproate, looking at mechanisms of action, safety, efficacy, and effects on cognition, behavior, and development.

Improved early diagnosis and differentiation of various forms of autism is a goal of brain imaging studies that are building a database on normal brain development in children. Scans of the normal structural and functional maturation of the brain will be compared with those from individuals with autism, speeding development of targeted treatments and evaluations of their effects. Yet, even the most advanced scanners cannot substitute for post-mortem brain tissue. Brain banks, such as the Harvard Brain Tissue Resource Center, are working with families touched by autism to arrange for tissue donation when affected members die.



Researchers are comparing the impairments seen in individuals with autism to impairments found in those with other disorders that affect the "executive" functions of the brain, such as schizophrenia, attention deficit disorder and Tourette's syndrome. In addition to cognitive impairments, individuals with autism often suffer from multiple psychopathologies, including impulse-control disorders, psychoses, obsessive-compulsive disorder, mood and anxiety disorders, and mental retardation.

Evidence suggests that unaffected family members may share with their ill relatives genes that predispose for milder behavioral characteristics that are qualitatively similar to those of autism. Some relatives of people with autism may exhibit subtle cognitive problems. Family members may also share telltale chemical signatures in the cells of brain circuits that may be implicated in the disorder. Researchers are studying such families to characterize these behavioral and biological traits, in hopes of tracing the variations in the genetic blueprint that contribute to illness.

Once autism-linked genes are identified, scientists will bring to bear sophisticated tools to find out what turns them on, what brain components they code for, and how they affect behavior. The prospect of acquiring such molecular knowledge holds great hope for the engineering of new therapies.

Treatment

Both psychosocial and pharmacological interventions can improve the behavioral and cognitive functioning of individuals with autism. A network of five NIMH-supported research centers that combine expertise in psychopharmacology and psychiatry are evaluating drug treatments for autism, such as risperidone and valproate. Studies are examining dose range and regimen of medications, and their mechanisms of action, safety, efficacy, and effects on cognition, behavior, and development. Among studies of psychosocial treatments in autism, two NIMH-funded research teams are evaluating parent training interventions that are tailored to the particular characteristics of the child and family.

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Women Hold Up Half the Sky

Women and Mental Health Research

Some mental disorders affect women harder than men, some are more common in women than men. The contribution of biological and psychosocial variations to mental health and mental illness is only now being teased apart. It appears also that some psychopharmacologic drug treatments may affect women differently than men. The special problems of treatment for serious mental illness such as schizophrenia, as well as for anxiety and depression during pregnancy are now being studied.

For the last 15 years there has been a greater emphasis on medical research focused on women's health and understanding differences between women and men in the course of diseases and in treatment responses. Historically, research studies were conducted only with men, and the resulting innovations were applied to both men and women without consideration of the physiological and emotional differences between the sexes. Today's research provides a clearer understanding of both risk and protective factors for various mental illnesses in women.

NIMH-supported research is investigating why certain mental disorders such as depression, anxiety disorders, and eating disorders affect more women than men.

Epidemiological studies have provided a clear picture of the specific differences in the prevalence of these disorders between women and men. Neurodevelopmental, hormonal, and sociocultural influences all need to be examined in looking at mental disorders in women and men.

Depressive Disorders

In the U.S., nearly twice as many women (12 percent) as men (7 percent) are affected by a depressive disorder each year. Depressive disorders include unipolar major depression, manic-depressive illness, and dysthymia (a less severe form of depression). While women and men are equally likely to develop manic-depressive illness, women are more likely than men to suffer from major depression and dysthymia. According to a recent study by the World Health Organization, the World Bank, and Harvard University, unipolar major depression is the leading cause of disease burden among females ages 5 and older worldwide.

Depressive disorders can put women at risk for suicide. Although men are more likely than women to die by suicide, women report *attempting* suicide about twice as often as men. Self-inflicted injury, including suicide, ranks 9th out of



the 10 leading causes of disease burden for females ages 5 and older worldwide.

Research shows that before adolescence and late in life, females and males experience depression with the same frequency. Because the gender difference in depression is not seen until after puberty and decreases following menopause, scientists hypothesize that hormonal factors are involved in women's greater vulnerability. Stress due to psychosocial factors, such as multiple roles in the home and at work and the increased likelihood of women to be poor, at risk for violence and abuse, and raising children alone—also plays a role in the development of depression and other mental disorders.

Twenty to forty percent of women may experience premenstrual syndrome (PMS), and an estimated 3 to 5 percent have symptoms severe enough to be classified as Premenstrual Dysphoric Disorder (PMDD). PMS can cause mood swings and physical symptoms that can interfere with

work and social life. PMS appears to be an abnormal response to normal hormonal changes. Researchers are studying what makes some women susceptible to PMS including genetic differences in hormone sensitivity, history of other mood disorders, and individual differences in the function of brain chemical messenger systems.

Antidepressant medications known to work via serotonin circuits are effective in relieving PMS. Women with susceptibility to depression may be more vulnerable to the mood-shifting effects of hormones.

Depression after childbirth, or postpartum depression, is another active area of research. Postpartum depression is a serious disorder where the hormonal changes combined with psychosocial stresses such as sleep deprivation may disable some women with an apparent underlying vulnerability. NIMH research is evaluating the use of antidepressant medication and psychosocial interventions following delivery to prevent post-partum depression in women with a history of this disorder.

Anxiety Disorders

In the U.S., women are about twice as likely as men are to suffer from anxiety disorders. Anxiety disorders, which include panic disorder, obsessive-compulsive disorder, post-traumatic stress disorder (PTSD), social phobia, and generalized anxiety disorder, affect more than 19 million American adults ages 18-54 in a given year. Women outnumber men in each illness category except for obsessive-compulsive disorder, in which both sexes have an equal likelihood of being affected.

Results from an NIMH-supported survey showed that female risk of developing PTSD following trauma was two times that of males. PTSD is characterized by persistent symptoms of fear that occur after experiencing events such as rape or other criminal assault, war, child abuse, natural disasters, or serious accidents. Nightmares, flashbacks, numbing of emotions, depression and feeling angry, irritable, or distracted and being easily startled are common. Females also are more likely to develop long-term PTSD than males and have higher rates of co-occurring medical and psychiatric problems than do males with the disorder. Researchers are studying the role of hormonal factors.

Eating Disorders

More than 90 percent of people in the U.S. who have eating disorders—*anorexia nervosa*, *bulimia nervosa*, and *binge eating*—are young women. In addition to causing various physical health problems, eating disorders are associated with illnesses such as depression, substance abuse, and anxiety—especially obsessive-compulsive disorder. Among those with eating disorders, it is estimated that between 0.5 and 1.0 percent suffer from anorexia, 1 to 3 percent have bulimia, and 0.7 to 4 percent experience binge-eating disorder. Eating disorders are not due to a failure of will or behavior; rather, they are real, treatable illnesses. Because of their complexity, eating disorders call for a comprehensive treatment plan involving medical care and monitoring, psychotherapy, nutritional counseling, and medication management. Studies are investigating the causes of eating disorders and effectiveness of treatments.

Schizophrenia

Schizophrenia is the most chronic and disabling of the mental disorders with psychotic symptoms first appearing in the late teens or early twenties. Although men and women alike are affected, there are differences in age of onset, pattern of symptoms, and treatment responses. Women may have more depressive symptoms, paranoia and auditory hallucinations than men and tend to respond better to typical antipsychotic medications. A significant proportion of women with schizophrenia experience increased symptoms during pregnancy and postpartum.

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The Invisible Disease

Depression

Depression is a serious medical illness. In contrast to the normal emotional experiences of sadness, loss, or passing mood states, clinical depression is persistent and can interfere significantly with an individual's ability to function.

Symptoms of depression include sad mood, loss of interest or pleasure in activities that were once enjoyed, change in appetite or weight, difficulty sleeping or oversleeping, physical slowing or agitation, energy loss, feelings of worthlessness or inappropriate guilt, difficulty thinking or concentrating, and recurrent thoughts of death or suicide. A diagnosis of *unipolar major depression* (or *major depressive disorder*) is made if a person has five or more of these symptoms and impairment in usual functioning nearly every day during the same two-week period. Major depression often begins between ages 15-30 or even earlier. Episodes typically recur.

Some people have a chronic but less severe form of depression, called *dysthymia* (or *dysthymic disorder*), that is diagnosed when depressed mood persists for at least two years and is accompanied by at least two other symptoms of depression. Many people with dysthymia also have major depressive episodes. While unipolar major depression and dysthymia are the primary forms of depression, a variety of other subtypes exist.

Depression can be devastating to all areas of a person's everyday life, including family relationships, friendships, and the ability to work or go to school. Many people still believe that the emotional symptoms caused by depression are "not real," and that a person should be able to shake off the symptoms if only he or she were trying hard enough. Because of these inaccurate beliefs, people with depression either may not recognize that they have a treatable disorder or may be discouraged from seeking or staying on treatment because of feelings of shame and stigma. Too often, untreated or inadequately treated depression leads to suicide.

- Depression affects nearly 10 percent of adult Americans ages 18 and over in a given year, or more than 19 million people in 1998.
- Unipolar major depression is the leading cause of disability in the United States and worldwide.
- Nearly twice as many women (12 percent) as men (7 percent) are affected by a depressive illness each year.
- Evidence from studies of twins supports the existence of a genetic component to risk of depression. Across six studies, the average concordance rate in identical twins (40%) for unipolar depression is more than twice the concordance rate in fraternal twins (17%).



- Research has shown that stress in the form of loss, especially death of close family members or friends, may trigger major depression in vulnerable individuals.

Treatment

Antidepressant medications are widely used, effective treatments for depression. Existing antidepressant drugs are known to influence the functioning of certain neurotransmitters (chemicals used by brain cells to communicate), primarily serotonin, norepinephrine, and dopamine, known as monoamines. Older medications – tricyclic antidepressants (TCAs) and monoamine oxidase inhibitors (MAOIs) – affect the activity of both of these neurotransmitters simultaneously. Their disadvantage is that they can be difficult to tolerate due to side effects or, in the case of MAOIs, dietary and medication restrictions. Newer medications, such as the selective serotonin reuptake inhibitors (SSRIs), have fewer side effects than the older drugs, making it easier for patients to adhere to treatment. Both generations of medications are effective in relieving depression, although some people will respond to one type of drug, but not another. Medications that take entirely different approaches to treating depression are now in development.

Electroconvulsive therapy (ECT), although not generally used as a first-line treatment, is an effective and safe treatment for severe depression.

Psychotherapy is also effective for treating depression. Certain types of psychotherapy, cognitive-behavioral therapy (CBT) and interpersonal therapy (IPT), have been shown to be particularly useful.

More than 80 percent of people with depression improve when they receive appropriate treatment with medication, psychotherapy, or the combination.

Recently there has been enormous interest in herbal remedies for various medical conditions including depression. One herbal supplement, *Hypericum* or St. John's Wort, has been promoted as having antidepressant properties. However, no carefully designed studies have determined the antidepressant efficacy of the supplement. NIMH is currently enrolling patients in the first large-scale, multi-site, controlled study of St. John's wort as a potential treatment for depression.

Recent Research Findings

Modern brain imaging technologies are revealing that in depression, neural circuits responsible for moods, thinking, sleep, appetite, and behavior fail to function properly, and that the regulation of critical neurotransmitters is impaired. Genetics research indicates that vulnerability to depression results from the influence of multiple genes acting together with environmental factors. Studies of brain chemistry, mechanisms of action of antidepressant medications, and the cognitive distortions and disturbed interpersonal relationships commonly associated with depression, continue to inform the development of new and better treatments.

The hormonal system that regulates the body's response to stress – the hypothalamic-pituitary-adrenal (HPA) axis – is overactive in many patients with depression. The hypothalamus, the brain region responsible for managing hormone release from glands throughout the body,

increases production of a substance called corticotropin releasing factor (CRF) when a threat to physical or psychological well-being is detected. Elevated levels and effects of CRF lead to increased hormone secretion by the pituitary and adrenal glands which prepares the body for defensive action. The body's responses include reduced appetite, decreased sex drive, and heightened alertness. Research suggests that persistent overactivation of this hormonal system may lay the groundwork for depression. The elevated CRF levels detectable in depressed patients are reduced by treatment with anti-depressant drugs, and this reduction corresponds to improvement in depressive symptoms.

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Depression Can Break Your Heart

Research over the past two decades has shown that depression and heart disease are common companions and what is worse, each can lead to the other. It appears now that depression is an important risk factor for heart disease along with high blood cholesterol and high blood pressure. In a study conducted in Baltimore, it was found that of 1,551 people who were free of heart disease those who were depressed were four times more likely to have a heart attack in the next 14 years than those who were not. Researchers in Montreal found that

heart patients who were depressed were four times as likely to die in the next six months as those who were not depressed.

Depression may make it harder to take the medications needed and to carry out the treatment for heart disease. Depression may also result in chronically elevated levels of stress hormones, such as cortisol and adrenaline, and the activation of the sympathetic nervous system (part of the "fight or flight" response) which can have deleterious effects on the heart.

The first studies of heart disease and depression showed that people with heart disease were more depressed than healthy people. While about one in six people have an episode of major depression, the number goes to one in two for people with heart disease. Furthermore, other researchers have found that most heart patients are not treated for depression. Doctors tend to miss the diagnosis of depression and even when they treat it they often treat it with sedatives which may make the depression worse.

The public health impact of depression and heart disease, both separately and together, is enormous. Depression is the estimated leading cause of disability worldwide, and heart disease is by far the leading cause of death in the United States. Approximately one in three of Americans will die of some form of heart disease.

Studies indicate that depression can appear after heart disease and/or heart disease surgery. In one investigation, nearly half of the patients studied one week after cardiopulmonary bypass surgery experienced serious cognitive problems, which may contribute to clinical depression in some patients. There are also multiple studies indicating that heart disease can follow depression.



Psychological distress may cause rapid heartbeat, high blood pressure, and faster blood clotting. It can also lead to elevated insulin and cholesterol levels. These risk factors, with obesity, form a constellation of symptoms and often serve as a predictor of and a response to heart disease. Depressed individuals may feel slowed down and still have high levels of stress hormones. This can increase the work of the heart. When patients are caught in a fight or flight reaction, the body's metabolism is diverted away from the type of tissue repair needed in heart disease.

Regardless of cause, the combination of depression and heart disease is associated with increased sickness and death making effective treatment of depression imperative. Pharmacological and cognitive-behavioral therapy treatments for depression are relatively well developed and play an important role in reducing the adverse impact of depression. With the advent of the selective serotonin reuptake inhibitors to treat depression, more medically ill patients can be treated without the complicating cardiovascular side effects of the previous drugs available. Ongoing research is investigating whether these treatments also reduce the associated risk of a second heart attack. Furthermore, preventive

interventions based on cognitive-behavior theories of depression also merit attention as approaches for avoiding adverse outcomes associated with both disorders. These interventions may help promote adherence and behavior change that may increase the impact of available pharmacological and behavioral approaches to both diseases.

Exercise is another potential pathway to reducing both depression and heart disease. Exercise is related to fewer depressive symptoms in observational studies and appears to be as efficacious as psychotherapy in patients with mild depression. Exercise, of course, is a major protective factor against heart disease as well.

The NIMH and the National Heart, Lung and Blood Institute are invested in uncovering the complicated relationship between depression and heart disease. They support research on the basic mechanisms and processes linking co-morbid mental and medical disorders to identify potent, modifiable risk factors and protective processes amenable to medical and behavioral interventions that will reduce the adverse outcomes associated with both types of disorders.

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Older Adults Depression and Suicide Facts

Major depression, a significant predictor of suicide in elderly Americans, is a widely underrecognized and undertreated medical illness. According to one study, many older adults who commit suicide have visited their primary care physician very close to the time of the suicide: *20 percent on the same day, 40 percent within one week, and 70 percent within one month of the suicide.* These findings point to the urgency of enhancing both the detection and the adequate treatment of depression as a means of reducing the risk of suicide among the elderly.

Older Americans are disproportionately likely to commit suicide. Comprising only 13 percent of the U.S. population, individuals ages 65 and older account for 20 percent of all suicide deaths, with white males being particularly vulnerable. The highest rate is for white men ages 85 and older: 65.3 deaths per 100,000 persons in 1996 (the most recent year for which statistics are available), about 6 times the national U.S. rate of 10.8 per 100,000.

More than 2 million of the 34 million Americans age 65 and older suffer from some form of depression. In contrast to the normal emotional experiences of sadness, grief, loss, or passing mood states, major depression is extreme and persistent and can interfere significantly with an individual's ability to function. Less severe forms of depression are also common among the elderly and are associated with an increased risk of

developing major depression. Depression, however, is *not* a normal part of aging.

Both doctors and patients may have difficulty recognizing the signs of depression. In an effort to improve recognition of the illness and promote discussion about depression during medical visits, the National Institute of Mental Health (NIMH) has developed this cue card for older adults:

Older Adults...

| Before you say,
"I'm fine" ...

| Ask yourself if you feel:

- nervous or "empty"
- guilty or worthless
- very tired and slowed down
- you don't enjoy things
the way you used to
- restless or irritable
- like no one loves you
- like life is not worth living

Or if you are:

- ☐ sleeping more or less than usual
- ☐ eating more or less than usual
- ☐ having persistent headaches,
stomach aches, or chronic pain

**These may be symptoms of Depression,
a treatable medical illness.**

**But your doctor can only treat you if
you say how you are really feeling.**

Depression is not a normal part of aging.

Talk to your doctor.



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Research and Treatment

Modern brain imaging technologies are revealing that in depression, neural circuits responsible for the regulation of moods, thinking, sleep, appetite, and behavior fail to function properly, and that critical neurotransmitters – chemicals used by nerve cells to communicate – are out of balance. Genetics research indicates that vulnerability to depression results from the influence of multiple genes acting together with environmental factors. Studies of brain chemistry and of mechanisms of action of antidepressant medications continue to inform the development of new and better treatments.

Antidepressant medications are widely used effective treatments for depression. Existing antidepressant drugs are known to influence the functioning of certain neurotransmitters in the brain, primarily serotonin and norepinephrine, known as monoamines. Older medications – tricyclic antidepressants (TCAs) and monoamine oxidase inhibitors (MAOIs) – affect the activity of both of these neurotransmitters simultaneously. Their disadvantage is that they can be difficult to tolerate due to side effects or, in the case of MAOIs, dietary and medication restrictions. Newer medications, such as the selective serotonin reuptake inhibitors (SSRIs), have fewer side effects than the older drugs, making it easier for patients

including older adults to adhere to treatment. Both generations of medications are effective in relieving depression, although some people will respond to one type of drug, but not another.

Psychotherapy is also an effective treatment for depression. Certain types of psychotherapy, cognitive-behavioral therapy (CBT) and interpersonal therapy (IPT), are particularly useful. More than 80 percent of people with depression improve when they receive appropriate treatment with medication, psychotherapy, or the combination.

In fact, recent research has shown that a combination of psychotherapy and antidepressant medication is extremely effective for reducing recurrence of depression among older adults. Those who received both interpersonal therapy and the antidepressant drug nortriptyline (a TCA) were much less likely to experience recurrence over a three-year period than those who received medication only or therapy only.

Studies are in progress on the efficacy of SSRIs and short-term specific psychotherapies for older persons. Findings from these studies will provide important data regarding the clinical course and treatment of late-life depression. Further study will be needed to determine the role of hormonal factors in the development of depression, and to find out whether hormone replacement therapy with estrogens or androgens is of benefit in the treatment of depression in the elderly.

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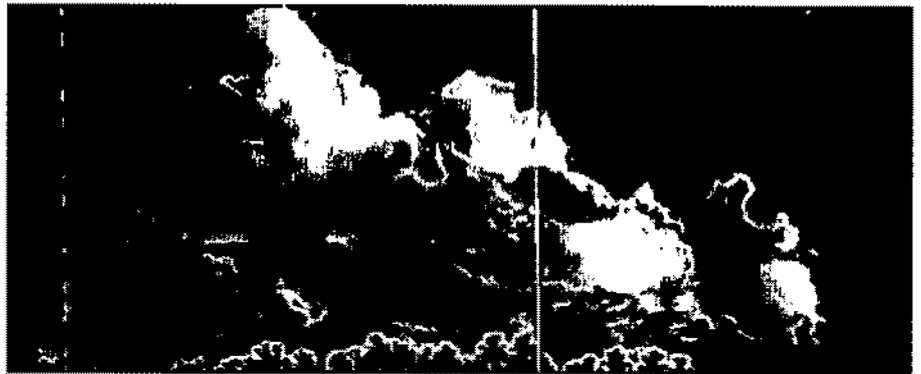
In Harm's Way

Suicide in America

Suicide is a tragic and potentially preventable public health problem. In 1996, the most recent year for which statistics are available, suicide was the 9th leading cause of death in the United States. Specifically, 10.8 out of every 100,000 persons died by suicide. The total number of suicides was approximately 31,000, or 1.3 percent of all deaths, which was about the same number of deaths as from AIDS. It was estimated that there were 500,000 suicide attempts. Taken together, the numbers of suicide deaths and attempts reflect the magnitude of the problem and the need for well-designed prevention efforts.

Suicidal behavior is complex. Some risk factors vary with age, gender and ethnic group and may even change over time. The risk factors for suicide frequently occur in combination. Research has shown that 90 percent of people who kill themselves have depression or another diagnosable mental or substance abuse disorder. In addition, research has shown that alterations in neurotransmitters such as serotonin are associated with the risk for suicide. Diminished levels have been found in patients with depression, impulsive disorders, a history of violent suicide attempts, and also in postmortem brains of suicide victims.

Adverse life events in combination with other strong risk factors, such as



depression may lead to suicide. However, suicide and suicidal behavior are not normal responses to the stresses experienced by most people. Many people experience one or more risk factors and are not suicidal. Other risk factors include: prior suicide attempt; family history of mental or substance abuse disorder; family history of suicide; family violence, including physical or sexual abuse; firearms in the home; incarceration; and exposure to the suicidal behavior of others, including family members, peers, and/or via the media in news or fiction stories.

Gender Differences

More than four times as many men than women die by suicide. However, women report attempting suicide about twice as often as men. Suicide by firearms is the most common method for both men and women, accounting for 59 percent of all suicides in 1996. Seventy-three percent of all suicides are committed by white men,

and 79 percent of all firearm suicides are committed by white men. The highest suicide rate was for white men over 85 years of age—65.3 per 100,000 persons.

Children, Adolescents, and Young Adults

Over the last several decades, the suicide rate in young people has increased dramatically. In 1996, suicide was the 3rd leading cause of death in 15 to 24 year olds—12.2 of every 100,000 persons—following unintentional injuries and homicide. Suicide was the 4th leading cause in 10 to 14 year olds, with 298 deaths among 18,949,000 children in this age group. For adolescents aged 15 to 19, there were 1,817 deaths among 18,644,000 adolescents. The gender ratio in this age group was 5:1 (males: females). Among young people 20 to 24 years of age, there were 2,541 deaths among 17,562,000 people in this age group. The gender ratio in this age group was 7:1 (males: females).

Attempted Suicides

No national surveillance data on attempted suicide are available; however, reliable scientific research has found that:

- There are an estimated 8 to 25 attempted suicides to 1 completion; the ratio is higher in women and youth and lower in men and the elderly.
- The strongest risk factors for attempted suicide in *adults* are depression, alcohol abuse, cocaine use, and separation or divorce.
- The strongest risk factors for attempted suicide in *youth* are depression, alcohol or other drug use disorder, and aggressive or disruptive behaviors.
- The majority of suicide attempts are expressions of extreme distress that need to be addressed, and not just a harmless bid for attention. A suicidal person should not be left alone and needs immediate mental health treatment.

Prevention

All suicide prevention programs need to be scientifically evaluated to demonstrate whether or not they work. Preventive interventions for suicide must also be complex and intensive if they are to have lasting effects over time. Recognition and appropriate treatment of mental and substance abuse disorders for particular high-risk age, gender, and cultural groups is the most promising way to prevent suicide and suicidal behavior.

Because most elderly suicide victims—70 percent—have visited their primary care physician in the month prior to their suicides, recognition and treatment of depression in the medical setting is a promising way to prevent elderly suicide. Limiting young people's access to firearms, especially in conjunction with

the prevention of mental and addictive disorders, also may be beneficial avenues for prevention of suicides. Most school-based, information-only, prevention programs focused solely on suicide have not been evaluated to see if they work, and research suggests that such programs may actually increase distress in the young people who are most vulnerable. School and community prevention programs designed to address suicide and suicidal behavior as part of a broader focus on mental health, coping skills in response to stress, substance abuse, aggressive behaviors, etc., are most likely to be successful in the long run.

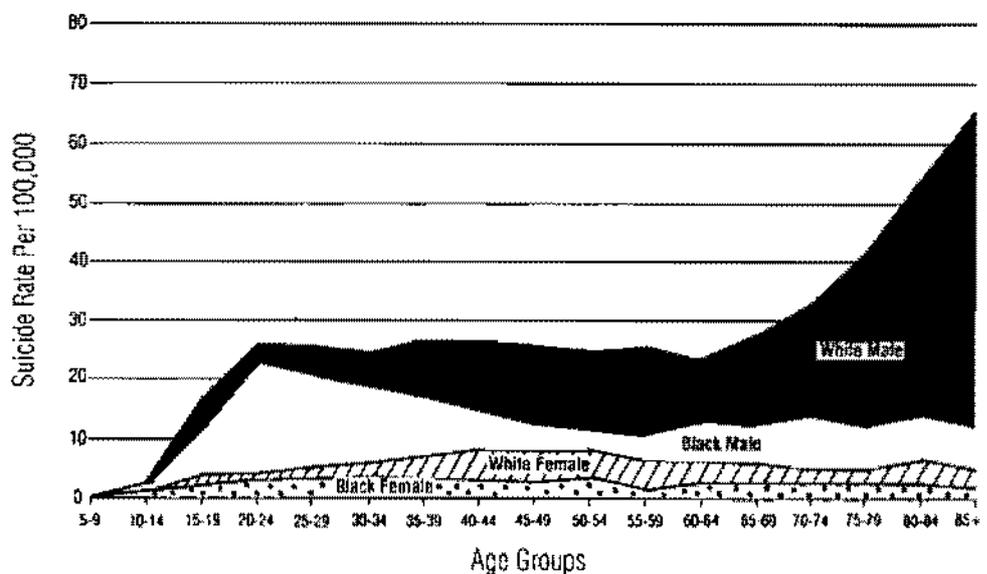
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U.S. Suicide Rates by Age, Gender, and Racial Group - 1996



Going to Extremes

Manic-Depressive Illness

There is a tendency to romanticize manic-depressive disorder. Many artists, musicians and writers have suffered from its mood swings. But in truth, many lives are ruined by this disease and, left untreated, the illness leads to suicide in approximately 20 percent of cases. Manic-depressive illness, also known as bipolar disorder, a serious brain disease that causes extreme shifts in mood, energy, and functioning, affects approximately 2.3 million adult Americans—about one percent of the population. Men and women are equally likely to develop this disabling illness. Different from normal mood states of happiness and sadness, symptoms of manic-depressive disorder can be severe and life threatening. Manic-depressive illness typically emerges in adolescence or early adulthood and continues to flare up across the life course, disrupting or destroying work, school, family, and social life. Manic-depressive illness is characterized by symptoms that fall into several major categories:

Depression: Symptoms include a persistent sad mood; loss of interest or pleasure in activities that were once enjoyed; significant change in appetite or body weight; difficulty sleeping or oversleeping; physical slowing or agitation; loss of energy; feelings of worthlessness or inappropriate guilt; difficulty thinking or concentrating; and recurrent thoughts of death or suicide.

Mania: Abnormally and persistently elevated (high) mood or irritability accompanied by at least three of the following symptoms: overly-inflated self-esteem; decreased need for sleep; increased talkativeness; racing thoughts; distractibility; increased goal-directed activity such as shopping; physical agitation; and excessive involvement in risky behaviors or activities.

Psychosis: Severe depression or mania may be accompanied by periods of psychosis. Psychotic symptoms include: hallucinations (hearing, seeing, or otherwise sensing the presence of stimuli that are not there) and delusions (false personal beliefs that are not subject to reason or contradictory evidence and are not explained by a person's cultural concepts). Psychotic symptoms associated with manic-depressive disorder typically reflect the extreme mood state at the time.

"Mixed" state: Symptoms of mania and depression are present at the same time. The symptom picture frequently includes agitation, trouble sleeping, significant change in appetite, psychosis, and suicidal thinking. Depressed mood accompanies manic activation.

Symptoms of mania, depression, or mixed state appear in episodes, or distinct periods of time, which typically recur and become more frequent across the life span. These episodes, especially early in the course of illness, are separated by periods of wellness during which a person suffers few to no symptoms. When four or more episodes of illness occur within a 12-month period, the person is said to have manic-depressive disorder with *rapid cycling*. Manic-depressive disorder is often complicated by co-occurring alcohol or substance abuse.



Treatment

A variety of medications are used to treat manic-depressive disorder. But even with optimal medication treatment, many people with manic-depressive disorder do not achieve full remission of symptoms. Psychotherapy, in combination with medication, often can provide additional benefit.

Lithium has long been used as a first-line treatment for manic-depressive disorder. Approved for the treatment of acute mania in 1970 by the U.S. Food and Drug Administration (FDA), lithium has been an effective mood-stabilizing drug for many people with manic-depressive disorder.

Anticonvulsant medications, particularly valproate and carbamazepine, have been used as alternatives to lithium in many cases. Valproate was FDA approved for the treatment of acute mania in 1995. Newer anticonvulsant medications, including lamotrigine and gabapentin, are being studied to determine their efficacy as mood stabilizers in manic-depressive disorder. Some research suggests that different combinations of lithium and anticonvulsants may be helpful.

During a depressive episode, people with manic-depressive disorder commonly require treatment with antidepressant medication. The relative efficacy of various antidepressant medications in this disorder has not yet been determined by adequate scientific study. Typically, lithium or anticonvulsant mood stabilizers are given along with an antidepressant to protect against a switch into mania or rapid cycling, which can be provoked in some people with manic-depressive disorder by antidepressant medications.

In some cases, the newer, *atypical* antipsychotic drugs such as clozapine or olanzapine may help relieve severe or refractory symptoms of manic-depressive disorder and prevent recurrences of mania. Further research is necessary, however, to establish the safety and efficacy of atypical antipsychotics as long-term treatments for manic-depressive disorder.

Recent Research Findings

More than two-thirds of people with manic-depressive disorder have at least one close relative with the illness or with unipolar major depression, indicating that the disease has a heritable component. Studies seeking to identify the genetic basis of manic-depressive disorder indicate that susceptibility stems from multiple genes. Despite tremendous research efforts, however, the specific genes involved have not yet been conclusively identified. Scientists are continuing their search for these genes using advanced genetic analytic methods and large samples of families affected by the illness. The researchers are hopeful that identification of susceptibility genes for manic-depressive disorder, and the brain proteins they code for, will make it possible to develop better treatments and preventive interventions targeted at the underlying illness process.

Genetics researchers believe that a person's risk for developing manic-depressive disorder most likely increases with each susceptibility gene carried, and that inheriting just one of the genes is probably not sufficient for the disorder to appear. The particular mix of genes may determine various features of the illness, such as age of onset, type of symptoms,

severity, and course. In addition, environmental factors are known to play an important role in determining whether and how the genes are expressed.

New Clinical Trial

The National Institute of Mental Health has initiated a large-scale study to determine the most effective treatment strategies for people with manic-depressive disorder. This multicenter study will begin recruitment later in 1999. The study will follow patients and document their treatment outcome for 5 years.

For More Information About NIMH

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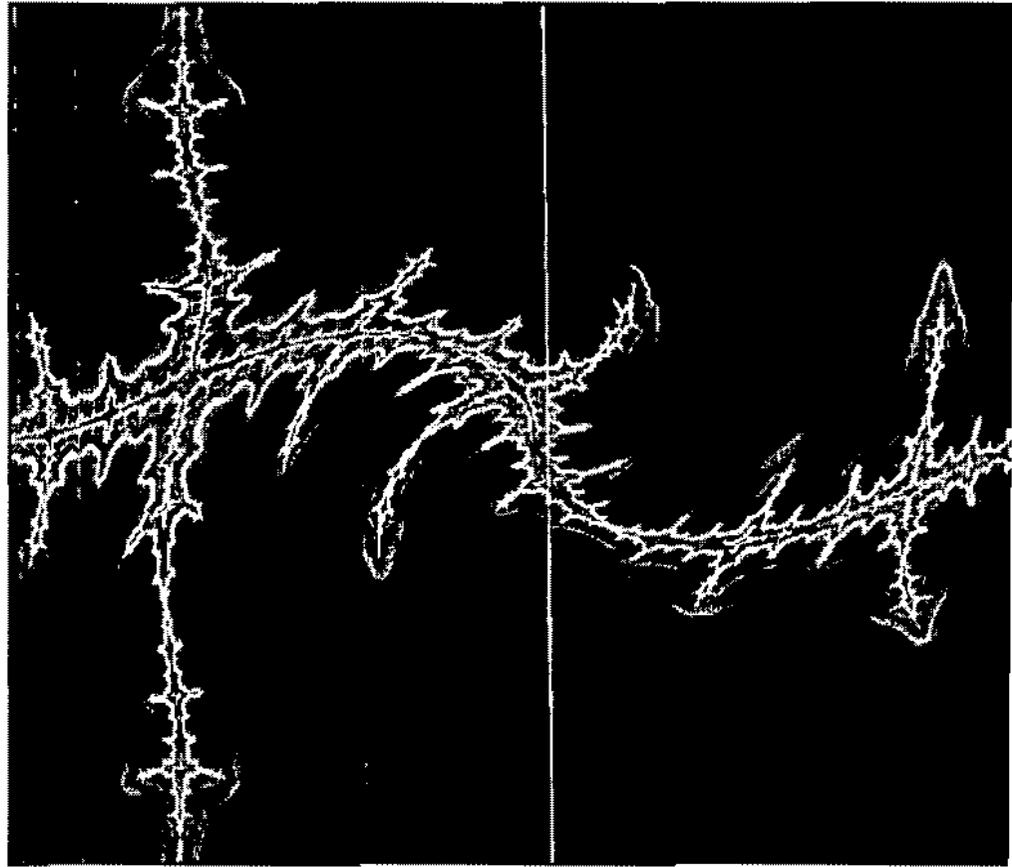
When Fear Holds Sway

Panic Disorder

Panic disorder is characterized by unexpected and repeated episodes of intense fear accompanied by physical symptoms that may include chest pain, heart palpitations, shortness of breath, dizziness or abdominal distress. These sensations often mimic symptoms of a heart attack or other life-threatening medical conditions. As a result, the diagnosis of panic disorder is frequently not made until extensive and costly medical procedures fail to provide a correct diagnosis or relief.

Many people with panic disorder develop intense anxiety between episodes. It is not unusual for a person with panic disorder to develop phobias about places or situations where panic attacks have occurred, such as in supermarkets or other everyday situations. As the frequency of panic attacks increases, the person often begins to avoid situations where they fear another attack may occur or where help would not be immediately available. This avoidance may eventually develop into agoraphobia, an inability to go beyond known and safe surroundings because of intense fear and anxiety.

Fortunately, through research supported by the National Institute of Mental Health (NIMH) and by industry, effective treatments have been developed to help people with panic disorder.



How Common Is Panic Disorder?

- About 1.7% of the adult U.S. population ages 18 to 54 – approximately 2.4 million Americans – has panic disorder in a given year.
- Women are twice as likely as men to develop panic disorder.
- Panic disorder typically strikes in young adulthood. Roughly half of all people who have panic disorder develop the condition before age 24.

Recent Research Findings

Heredity, other biological factors, stressful life events, and thinking in a way that exaggerates relatively normal bodily reactions are all believed to play a role in the onset of panic disorder. The exact cause or causes of panic disorder are unknown and are the subject of intense scientific investigation.

Studies in animals and humans have focused on pinpointing the specific brain areas and circuits involved in anxiety and

fear, which underlie anxiety disorders, such as panic disorder. Fear, an emotion that evolved to deal with danger, causes an automatic, rapid protective response that occurs without the need for conscious thought. It has been found that the body's fear response is coordinated by a small structure deep inside the brain, called the amygdala.

The amygdala, although relatively small, is a very complicated structure, and recent research suggests that anxiety disorders may be associated with abnormal activation in the amygdala. One aim of research is to use such basic scientific knowledge to develop new therapies.

What Treatments Are Available for Panic Disorder?

Treatment for panic disorder includes medications and a type of psychotherapy known as cognitive-behavioral therapy, which teaches people how to view panic attacks differently and demonstrates ways to reduce anxiety. NIMH is conducting a large-scale study to evaluate the effectiveness of combining these treatments. Appropriate treatment by an experienced professional can reduce or prevent panic attacks in 70 to 90% of people with panic disorder. Most patients show significant progress after a few weeks of therapy. Relapses may occur, but they can often be effectively treated just like the initial episode.

Can People With Panic Disorder Have Other Illnesses?

Research shows that panic disorder can coexist with other disorders, most often depression and substance abuse. About 30% of people with panic disorder abuse alcohol and 17% use drugs, such as cocaine and marijuana, in unsuccessful attempts to alleviate the anguish and distress caused by their condition. Appropriate diagnosis and treatment of other disorders such as substance abuse or depression are important to successfully treating panic disorder.

For More Information About Panic Disorder and Other Anxiety Disorders, Write:

The Anxiety Disorders Education Program,
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6001 Executive Blvd.,
Room 8184, MSC 9663,
Bethesda, MD 20892-9663.
Or call 301-443-4513.

Publications and other information are also available online from the NIMH Anxiety Disorders Web site at <http://www.nimh.nih.gov/anxiety> or by calling toll-free 1-88-88-ANXIETY (1-888-826-9438).

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Reliving Trauma

Post-Traumatic Stress Disorder

Post-traumatic stress disorder (PTSD) can be an extremely debilitating condition that can occur after exposure to a terrifying event or ordeal in which grave physical harm occurred or was threatened. Traumatic events that can trigger PTSD include violent personal assaults such as rape or mugging, natural or human-caused disasters, accidents, or military combat.

Military troops who served in Vietnam and the Gulf Wars; rescue workers

involved in the aftermath of disasters like the Oklahoma City bombing; survivors of accidents, rape, physical and sexual abuse, and other crimes; immigrants fleeing violence in their countries; survivors of the 1994 California earthquake, the 1997 South Dakota floods, and hurricanes Hugo and Andrew; and people who witness traumatic events are among those who develop PTSD. Families of victims can also develop the disorder.

Fortunately, through research supported by the National Institute of Mental Health (NIMH) and the Department of Veterans Affairs (VA), effective treatments have been developed to help people with PTSD.

How Common Is PTSD?

About 3.6 percent of U.S. adults ages 18 to 54 (5.2 million people) have PTSD during the course of a given year. About 30 percent of the men and women who have spent time in war zones experience PTSD. One million war veterans developed PTSD after serving in Vietnam. PTSD has also been detected among veterans of the Persian Gulf War, with some estimates running as high as 8 percent.

What Are the Symptoms of PTSD?

Many people with PTSD repeatedly re-experience the ordeal in the form of

flashback episodes, memories, nightmares, or frightening thoughts, especially when they are exposed to events or objects reminiscent of the trauma. Anniversaries of the event can also trigger symptoms. People with PTSD also experience emotional numbness and sleep disturbances, depression, anxiety, and irritability or outbursts of anger. Feelings of intense guilt are also common. Most people with PTSD try to avoid any reminders or thoughts of the ordeal. PTSD is diagnosed when symptoms last more than 1 month.

What Treatments Are Available for PTSD?

Research has demonstrated the effectiveness of cognitive-behavioral therapy, group therapy, and exposure therapy, in which the patient repeatedly relives the frightening experience under controlled conditions to help him or her work through the trauma. Studies have also shown that medications help ease associated symptoms of depression and anxiety and help promote sleep.

Some studies show that debriefing people very soon after a catastrophic event may reduce some of the symptoms of PTSD. A study of 12,000 schoolchildren who lived through a hurricane in Hawaii found that those who got counseling early on were doing much better 2 years later than those who did not.



Do Other Illnesses Tend to Accompany PTSD?

Co-occurring depression, alcohol or other substance abuse, or another anxiety disorder are not uncommon. The likelihood of treatment success is increased when these other conditions are appropriately diagnosed and treated as well.

Headaches, gastrointestinal complaints, immune system problems, dizziness, chest pain, or discomfort in other parts of the body are common. Often, doctors treat the symptoms without being aware that they stem from PTSD.

Who Is Most Likely to Develop PTSD?

People who have been abused as children or who have had other previous traumatic experiences are more likely to develop the disorder. Research is continuing to pinpoint other factors that may lead to PTSD.

It used to be believed that people who tend to be emotionally numb after a trauma were showing a healthy response, but now some researchers suspect that people who experience this emotional distancing may be more prone to PTSD.

Recent Research Findings

Studies in animals and humans have focused on pinpointing the specific brain areas and circuits involved in anxiety and fear, which underlie anxiety disorders such as PTSD. Fear, an emotion that evolved to deal with danger, causes an automatic, rapid protective response that occurs without the need for conscious

thought. It has been found that the body's fear response is coordinated by a small structure deep inside the brain, called the amygdala.

The amygdala, although relatively small, is a very complicated structure, and recent research suggests that different anxiety disorders may be associated with abnormal activation of the amygdala. One aim of research is to use such basic knowledge to develop new therapies.

People with PTSD tend to have abnormal levels of key hormones involved in response to stress. Some studies have shown that cortisol levels are lower than normal and epinephrine and norepinephrine are higher than normal.

When people are in danger, they produce high levels of natural opiates, which can temporarily mask pain. Scientists have found that people with PTSD continue to produce those higher levels even after the danger has passed; this may lead to the blunted emotions associated with the condition.

Research to understand the neurotransmitter system involved in memories of emotionally charged events may lead to discovery of drugs that, if given early, could block the development of PTSD symptoms.

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Step on a Crack...

Obsessive-Compulsive Disorder

People with obsessive-compulsive disorder (OCD) suffer intensely from recurrent, unwanted thoughts (obsessions) or rituals (compulsions), which they feel they cannot control. Rituals such as hand-washing, counting, checking, or cleaning are often performed with the hope of preventing obsessive thoughts or making them go away. Performing these rituals, however, provides only temporary relief, and not performing them markedly increases anxiety. Left untreated, obsessions and the need to perform rituals can take over a person's life. OCD is often a chronic, relapsing illness.

Fortunately, through research supported by the National Institute of Mental Health (NIMH) and by industry, effective treatments have been developed to help people with OCD.

How Common Is OCD?

- About 2.3% of the U.S. population ages 18-54 – approximately 3.3 million Americans – has OCD in a given year.
- OCD affects men and women equally.
- OCD typically begins during adolescence or early childhood.
- OCD cost the U.S. \$8.4 billion in 1990 in social and economic losses, nearly 6% of the total mental health bill of \$148 billion.

What Treatments Are Available for OCD?

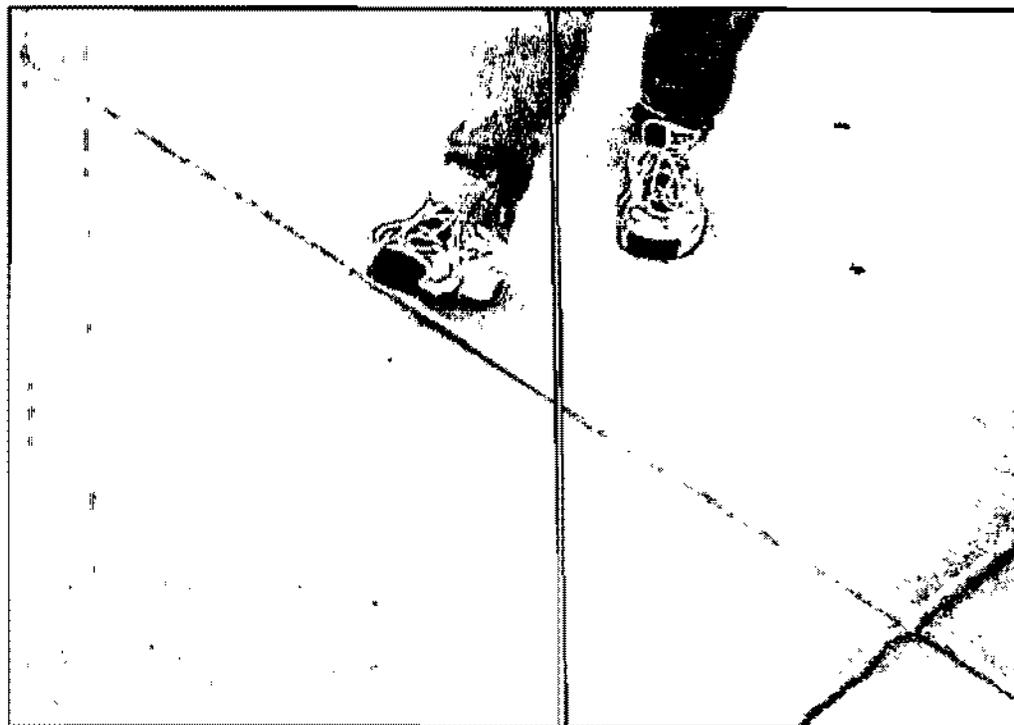
Treatments for OCD have been developed through research supported by the NIMH and other research institutions. These treatments, which combine medications and behavioral therapy (a specific type of psychotherapy), are often effective.

Several medications have been proven effective in helping people with OCD: clomipramine, fluoxetine, fluvoxamine, sertraline, and paroxetine. If one drug is not effective, others should be tried. A number of other medications are currently being studied.

A type of behavioral therapy known as "exposure and response prevention" is very useful for treating OCD. In this approach, a person is deliberately and voluntarily exposed to whatever triggers the obsessive thoughts, and then is taught techniques to avoid performing the compulsive rituals and to deal with the anxiety.

Recent Research Findings

There is growing evidence that OCD represents abnormal functioning of brain circuitry, probably involving a part of the brain called the striatum. OCD is not caused by family problems or attitudes



learned in childhood, such as an inordinate emphasis on cleanliness, or a belief that certain thoughts are dangerous or unacceptable. Brain imaging studies using a technique called positron emission tomography (PET) have compared people with and without OCD. Those with OCD have patterns of brain activity that differ from people with other mental illnesses or people with no mental illness at all. In addition, PET scans show that in patients with OCD, both behavioral therapy and medication produce changes in the striatum. This is graphic evidence that both psychotherapy and medication affect the brain.

Can People With OCD Have Other Illnesses?

OCD is sometimes accompanied by depression, eating disorders, substance abuse, attention deficit hyperactivity

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disorder, or other anxiety disorders. When a person also has other disorders, OCD is often more difficult to diagnose and treat.

Symptoms of OCD can also coexist and may even be part of a spectrum of other brain disorders, such as Tourette's syndrome. Appropriate diagnosis and treatment of other disorders are important to successful treatment of OCD.

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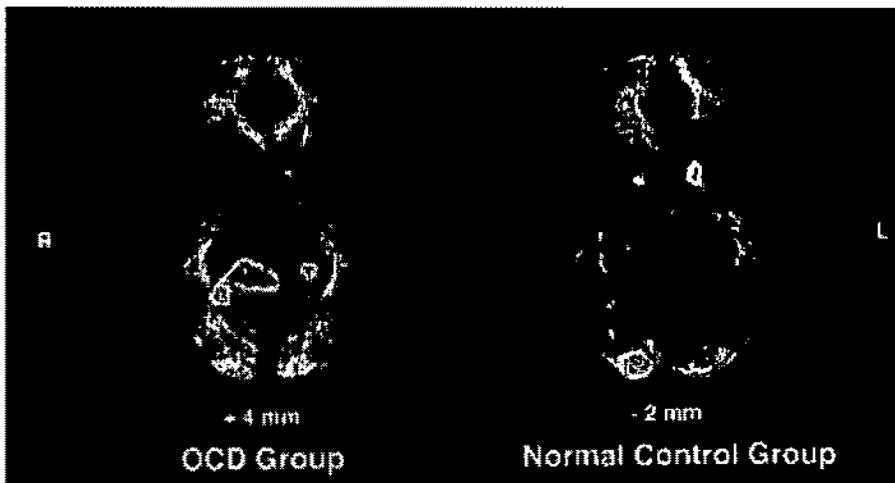
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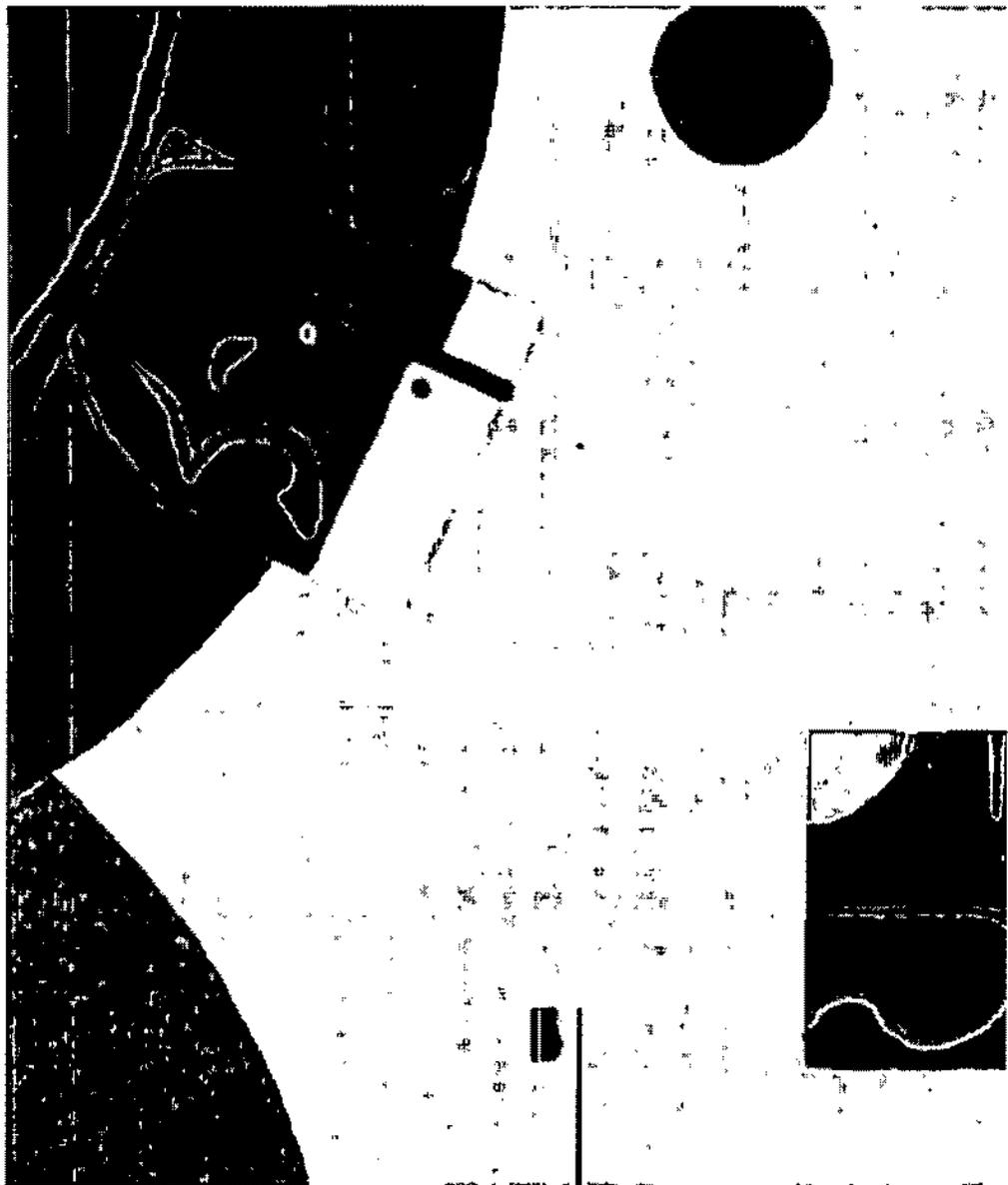
Persons with obsessive-compulsive disorder use different brain circuitry in performing a cognitive task than people without the disorder. Rauch SL, et al. *J Neuropsychiatry Clin Neurosci*, 1997; 9:568-573.

When Someone Has Schizophrenia

Schizophrenia is a devastating mental illness—the most chronic and disabling of the severe mental disorders. The first signs of schizophrenia, which typically emerge in young people in their teens or twenties, are confusing and often shocking to families and friends. Hallucinations, delusions, disordered thinking, unusual speech or behavior and social withdrawal impair the ability to interact with others. Most people with schizophrenia suffer chronically or episodically throughout their lives, losing opportunities for careers and relationships. They are stigmatized by lack of public understanding about the disease. While newer treatments with fewer side effects have improved the lives of many people with schizophrenia, only one in five recovers. One in 10 commits suicide.

Some Facts About Schizophrenia

- In the United States, more than 2 million people have schizophrenia.
- Schizophrenia costs the United States \$32.5 billion annually.
- Worldwide, rates of schizophrenia are about 1% of the population, very similar from country to country.
- People with schizophrenia are far more likely to be victims of violence and



This painting was done for the *Schizophrenia Bulletin* which features art created by current and former mental hospital patients. The artist, Philip Kurz, has provided us with the following description of his artwork: *I believed that everything within me and around me was passing through my blank mind and my arm onto the paper. I felt that keeping a blank mind was important to the success of the painting, and this was relatively easy to do since it approximated my normal state. This feeling all seems outlandish now.*

crime than to commit violent acts themselves. People with schizophrenia have an increased risk of violent behavior only when untreated or when engaging in substance abuse.

- Many years of family studies indicate that vulnerability to schizophrenia is inherited. However, among individuals with schizophrenia who have an identical twin, and thus share the exact genetic makeup, there is only a 50 percent chance that both twins will be affected with the disease. Scientists conclude that some environmental influence, perhaps occurring during fetal development, accounts for the difference.
- Advances in neuroimaging technology have shown that some people with schizophrenia have abnormalities in brain structure consisting of enlarged ventricles, fluid-filled cavities deep within the brain.
- Research indicates that schizophrenia may be a developmental disorder resulting from impaired migration of neurons in the brain during fetal development.

Treatments for Schizophrenia

A number of new, effective medications for schizophrenia with fewer side effects than older medications have been introduced in the past decade. The newer drugs are very effective in the treatment of psychosis, including hallucinations and delusions, and may also be helpful for treating reduced motivation or blunted emotional expression.

Because of the nature of the disorder, some people with schizophrenia may deny that they need medications and may either refuse to take them or stop taking them because of undesired side effects. Remembering to take medications may be difficult because of the disorganized thinking characteristic of people with schizophrenia. A major goal of research at NIMH is the discovery of new, effective and safe treatments that can be given in longer-acting doses.

Present and Future Research Directions

In addition to the development of new treatments, NIMH research is focusing on the relationships among genetic, behavioral, developmental, social and other factors to identify the cause or causes of schizophrenia. Utilizing increasingly precise imaging techniques, scientists are studying the structure and function of the living brain. New molecular tools and modern statistical analyses are enabling researchers to close in on the particular genes that affect brain development or brain circuitry involved in schizophrenia. Scientists are continuing to investigate possible prenatal factors, including infections, that may affect brain development and contribute to the development of schizophrenia.

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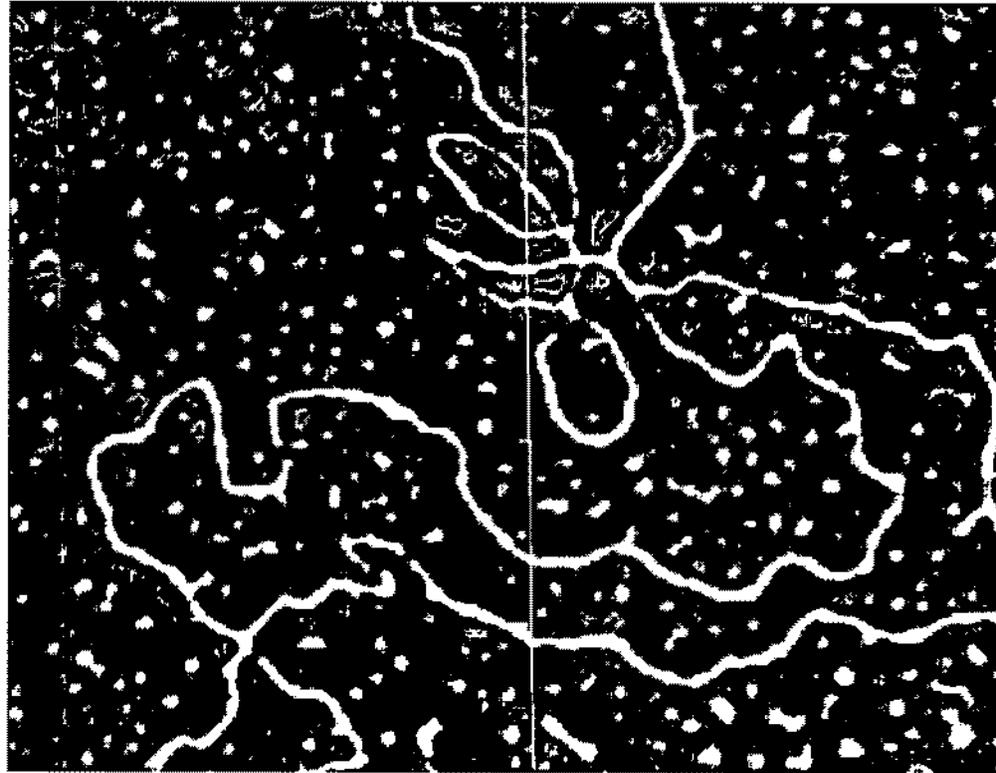
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Gene Hunting

Many years of research have demonstrated that vulnerability to mental illnesses – such as schizophrenia, manic depressive illness, early onset depression, autism and attention deficit hyperactivity disorder – has a genetic component. More recently it has been found that this vulnerability is not due to a single defective gene, but to the joint effects of many genes acting together with nongenetic factors. Despite the daunting complexity, progress is being made. Researchers are hunting genes because they are likely to be a vital key to deciphering what goes wrong in the brain in mental illness.

Detecting multiple genes, each contributing only a small effect, requires large sample sizes and powerful technologies that can associate genetic variations with disease and pinpoint candidate genes from among the estimated 50,000 genes that are expressed in the human brain. And even after human disease vulnerability genes are found, sophisticated tools will be needed to find out what activates them, what brain components they code for, and how they affect behavior. The prospect of acquiring such molecular knowledge holds great hope for the engineering of new therapies.

Linkage studies are often based on the identification of large, densely affected families so that the inheritance patterns of known sections of DNA (called "markers") can be compared to the family's transmission of the disorder. If a known



Chromosomes, visualized here, are long molecules of DNA, the genetic material.

marker can be correlated with the presence or absence of the disorder, this finding narrows the location of the suspect gene.

Linkage-disequilibrium studies in isolated populations capitalize on the likelihood that the susceptibility genes for a particular disorder probably came from one or a few founding members. Whether the isolation is geographic or cultural, there are fewer individuals in the community's genealogies and therefore fewer variations of the disease genes within the population. This limited

variation makes the search easier. In addition, the groups of markers that surround each of these susceptibility genes are likely to have the same limited variation, which further simplifies identification.

Association studies depend on the investigator hypothesizing that a specific gene or genes may influence the disorder. In this type of study, the investigator examines whether those people with the disorder have a different version of the gene than those without the disorder among related or unrelated individuals.

Evidence suggests that unaffected family members may share with their ill relatives genes that predispose for milder, but qualitatively similar behavioral characteristics. For example, some relatives of people with schizophrenia or autism may exhibit subtle cognitive problems. Family members may also share biological anomalies that could be clues to the underlying genetic component of the illness. For example, they may share telltale chemical signatures in cells of implicated brain circuits. NIMH-supported investigators are studying such families to characterize these behavioral and biological traits, in hopes of tracing the variations in the genetic blueprint that contribute to illness.

Some gene variants are likely to turn on too much or too little – or in the wrong place. This could interfere with the way brain cells work. It may also affect how cells migrate to other parts of the brain and connect with one another during early development. NIMH has mounted an effort to vastly expand the set of available tools for discovering the molecular mistakes that produce mental illness.

A vital resource for doing this, now under development, will be a shared scientific infrastructure called the BMAP (Brain Molecular Anatomy Project). The goals of this multidisciplinary effort are to catalog the genes that are active in various parts of the brain at different developmental stages, and to make this information readily available to investigators on a Web-based map.

The mouse's brain is a major initial focus of BMAP. A Web-based digital mouse brain atlas will offer 3-D and 2-D views of this biological blueprint, covering different strains and ages of animals. In addition to advancing basic knowledge, the BMAP database promises to enhance clinical science, providing new leads for studying gene expression in post-mortem tissue, for the identification of candidate genes, and enhanced capacity to screen for individuals who might be at risk for developing brain disorders.

A related set of developing tools also centers on the mouse: identifying the neural basis of complex behaviors. The mouse has become a critical model in studying human disease because scientists have access to many inbred strains, each expressing distinctive physiological and behavioral characteristics. Researchers can now insert, knock out, or mutate mouse genes, quickly breed a generation that expresses the change, and then see how it affects behavior. When illness-linked genes are discovered, they will be inserted and expressed in mice to find out what they do at the molecular, cellular and behavioral levels. Researchers will be able to track a wiring abnormality, a cell migration abnormality, or other anomaly that may lead to symptoms in humans.

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Seeing Our Feelings

Imaging Emotion in the Brain

In the last few years, there has been a revolution in the study of emotions. Our emotions – love, fear, anger, desire – give coloration and meaning to everything in life. Our emotions are indispensable whenever we choose to pursue one goal and not another. The derangement of emotions is what leads to the profound pain and much of the disability experienced in mental illness. The emotions were once thought to reside in the heart, but scientists know now that they originate in the brain.

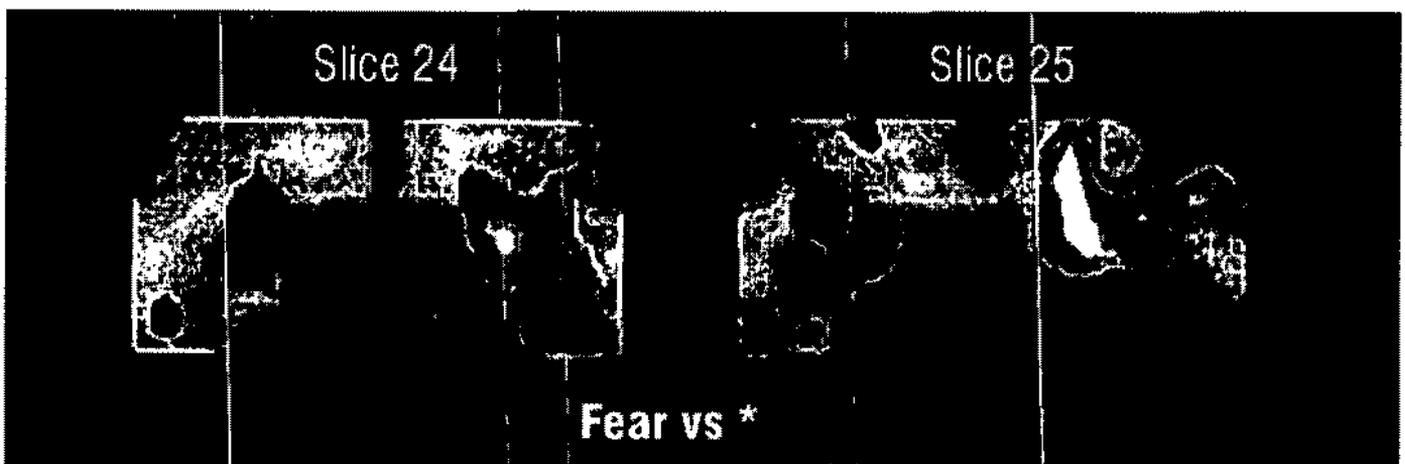
New Imaging Tools

Scientists have learned to use neuroimaging to see the living, thinking, feeling human brain at work. Neuroimaging tools include functional

magnetic resonance imaging (fMRI), which uses magnetic fields and radio waves to elicit signals from the brain, and positron emission tomography (PET), that uses low doses of a radioactive tracer to obtain signals from the brain. Both of these technologies have been designed to reveal signals that correlate with human brain activity. These approaches have been used to study the pathways in the brain involved in sensory processes such as vision, and in a variety of cognitive processes. We are now at the dawn of an era when we can use these technologies to see pathways in the brain that underlie emotions such as fear and desire. In the near future, these approaches will allow us to see precise abnormalities in brain pathways that produce mental illness.

Brain Pathways

Fear is the emotion that has been most successfully studied. Fear is required for our survival, but when it is not regulated, it becomes responsible for anxiety disorders and some of the symptoms of depression. We have learned that fear depends on very specific circuits in the brain. In fact, the way that the brain processes emotion is no different from the way it processes vision or voluntary movements which also rely on their own specific circuitry. The emotion of fear relies on pathways that involve a structure deep in our brains called the amygdala. The details of this circuitry have been worked out in rat models; however, a series of studies that began in 1996 and have become increasingly



fMRI images showing activation of the amygdala in response to viewing faces, as compared to watching a simple visual fixation point (*). Slice 24 = forward part of amygdala; Slice 25 = back part of amygdala. Image is viewed as though the person is looking out from the page, so the left amygdala is on the right of the picture. More intense colors show greater activation.

sophisticated have demonstrated that showing a fearful face to a normal subject while scanning his/her brain permits us to see activation of the amygdala and associated brain pathways. Subsequent experiments have shown that if humans learn a connection between a neutral signal and something noxious, like a loud buzzing sound, we actually can observe the brain in the act of storing information about the signal that predicts danger.

We can see that the brain processes information about threat and fear even when the person is not concentrating on it and may not even consciously remember seeing the danger signal.

Although this research is still in its early phase, success to date in delineating specific fear pathways has encouraged the investigations of emotional pathways in mental illness. We are finding out, for example, whether phobias hitchhike on the same pathways used by normal fear. Soon we will have information about other emotions and conditions such as depression. Over time, these tools will be used to study the effects of medications and psychological therapies on mental illness.

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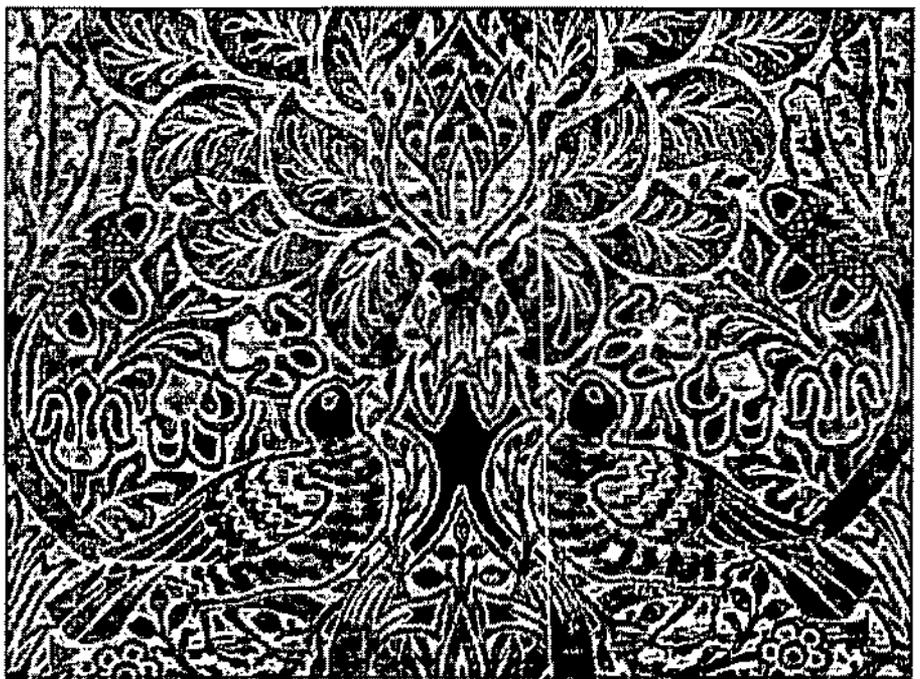
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What We Learned From Songbirds

The Adult Brain Can Generate New Nerve Cells

Once, neuroscientists believed that our complement of nerve cells was created prenatally and during the first years of life, and that no new neurons could be generated. Now we know that this belief was wrong. It had been thought that unlike other bodily organ systems, such as skin which continuously generates cells to replace those that die or are injured, neurons that were lost due to trauma, stroke or disease were irreplaceable. Recent research has shown that the brain can add nerve cells during adult life. This process is called neurogenesis. These findings and their implications for therapeutic interventions are currently under investigation.

The first solid evidence that adult brains may be able to add nerve cells emerged several years ago from basic animal research involving songbirds. Researchers showed that increases and decreases in the number of neurons in certain brain areas occurred in conjunction with the mating season. Previous research had indicated that a *low* level of neurogenesis occurs in certain regions of the rodent brain, including the hippocampus (a brain region required for the formation of conscious memories) during the adolescent period, long after the generation of



neurons in most brain areas had ceased. But the songbird research yielded such dramatic evidence of neurogenesis that interest in higher animal models was rekindled. Animal investigators went on to show that not only does the rodent brain continue to generate neurons during late adolescence, but that this process continues even into adulthood.

With interest spurred by new technical developments in imaging, numerous laboratories are developing a clearer and

encouraging picture of neurogenesis. In 1998, NIMH-supported investigators showed that the hippocampus in adult monkeys also generates neurons. Within a few months of that report, other researchers demonstrated the phenomenon of neurogenesis in the adult human brain!

Ongoing work in laboratories nationwide is finding that the rate at which the new nerve cells are generated can be influenced by environmental factors. For

example, stress inhibits the formation of new neurons. These findings are changing the way neuroscientists think about the nervous system, and about possible future interventions to address nerve cell loss due to trauma, stroke or, eventually, diseases like schizophrenia or autism. Information gained to date about neurogenesis also fits well with data from brain imaging studies that reveal a relative decrease in hippocampal volume in patients suffering from recurrent depressive illness with its accompanying increase in circulating levels of stress hormones. It also offers hope that if the rate of generation of new neurons is open to outside influences, perhaps therapeutic interventions may be developed that are capable of actively and precisely repairing the damage wreaked on brains by severe, protracted mental illnesses.

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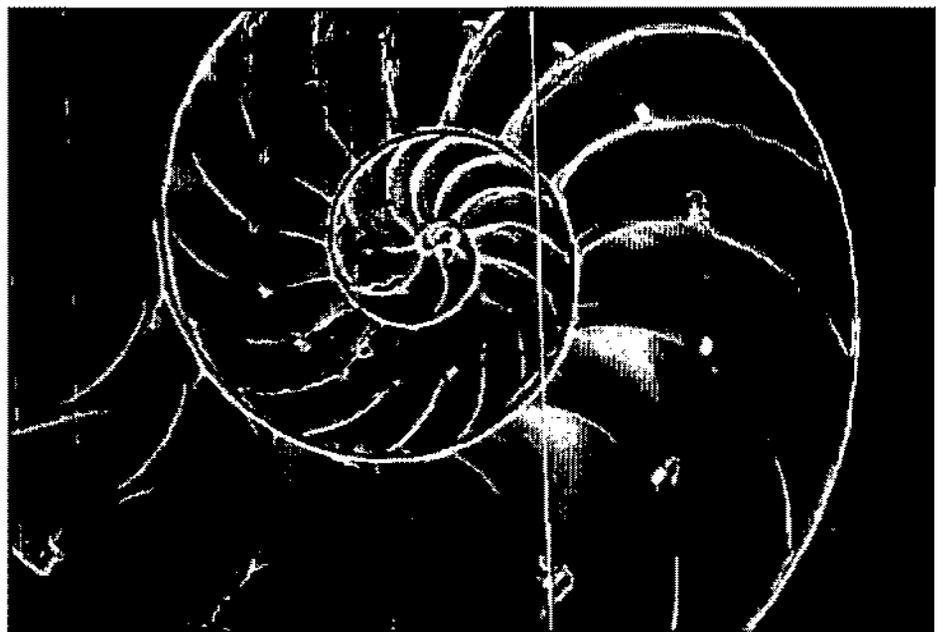
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Stress and the Developing Brain

We know that the early months and years of life are critical for brain development. But the question remains: just how do early influences act on the brain to promote or injure emotional development? Research has shown that many environmental influences such as infections or trauma have an effect on a young child's brain development. Years of observation have shown that chronic stressors adversely affect brain development and now, animal studies are showing us in greater detail how this occurs.

One important line of research has focused on brain systems that control stress hormones—cortisol, for example. Cortisol and other stress hormones play an important role in emergencies: they help our bodies make energy available to enable effective responses, temporarily suppress the immune response, and sharpen attention. However, a number of studies conducted in people with depression indicate that excess cortisol released over a long time span may have many negative consequences for health. In the brain excess cortisol may cause shrinking of the hippocampus, a brain structure required for the formation of memories of persons, places, and events.

In experiments using animal models, scientists have shown that the first week of life is a critical period in the rat pup for



its capacity to handle stress throughout life. In one set of experiments, rat pups were removed each day from their mothers for a period of 15 minutes and then returned. The maternal response of intensively licking and grooming the returned pup was shown to alter the brain chemistry of the pup in a positive way, making the animal less stress reactive. While these pups are able to mount an appropriate stress response in the face of threat, their response does not become excessive or inappropriate. Rat mothers who spontaneously lick and groom their pups with the same intensity even without human handling of the pups

also produce pups that have a similarly stable, appropriate stress hormone response.

Striking differences were seen in rat pups removed from their mothers for periods of three hours a day, a model of neglect. In these instances, the mother rats tended to ignore the pups, at least initially, upon their return. In sharp contrast to those pups that were greeted attentively by their mothers after a short absence, the "neglected" pups were shown to have a more profound and excessive stress response in subsequent tests. This response appeared to last into adulthood.

While the implications of these animal studies are worrisome, preliminary evidence now indicates that in rodents that have hypersensitive or dysregulated stress responses – for example, those “neglected” rat pups that were removed from their mothers for three hours a day – much of the damage can be repaired if the animals then are raised in an enriched environment.

Animal investigators are well aware of another kind of long-term change, again rooted in the first days of life. Laboratory rats are often raised in shoebox cages with few sources of stimulation. Scientists have compared these animals to rats raised in an enriched environment – characterized, for example, by a diverse and varied diet, a running wheel, mazes, and changes of toys – and found that the “privileged” rats consistently have a thicker cerebral cortex and denser networks of nerve cells than the “deprived” rats.

Another study recently reported that infant monkeys raised by mothers who experienced unpredictable conditions in obtaining food showed markedly high levels of corticotropin releasing factor (CRF), in their cerebrospinal fluid, and as adults, abnormally low levels of cerebrospinal fluid cortisol. This is a pattern often seen in humans with post-traumatic stress disorder and depression.

The distressed monkey mothers, uncertain about finding food, behaved inconsistently and sometimes neglectfully toward their offspring. The affected young monkeys were abnormally anxious when

confronted with separations or new environments. They were also less social and more subordinate as adult animals.

It is far too early to draw firm conclusions from these animal studies about the extent to which early life experience produces a long-lived or permanent set point for stress responses or influences the development of the cerebral cortex. However, animal models that show the interactive effect of stress and brain development deserve serious consideration and continued study.

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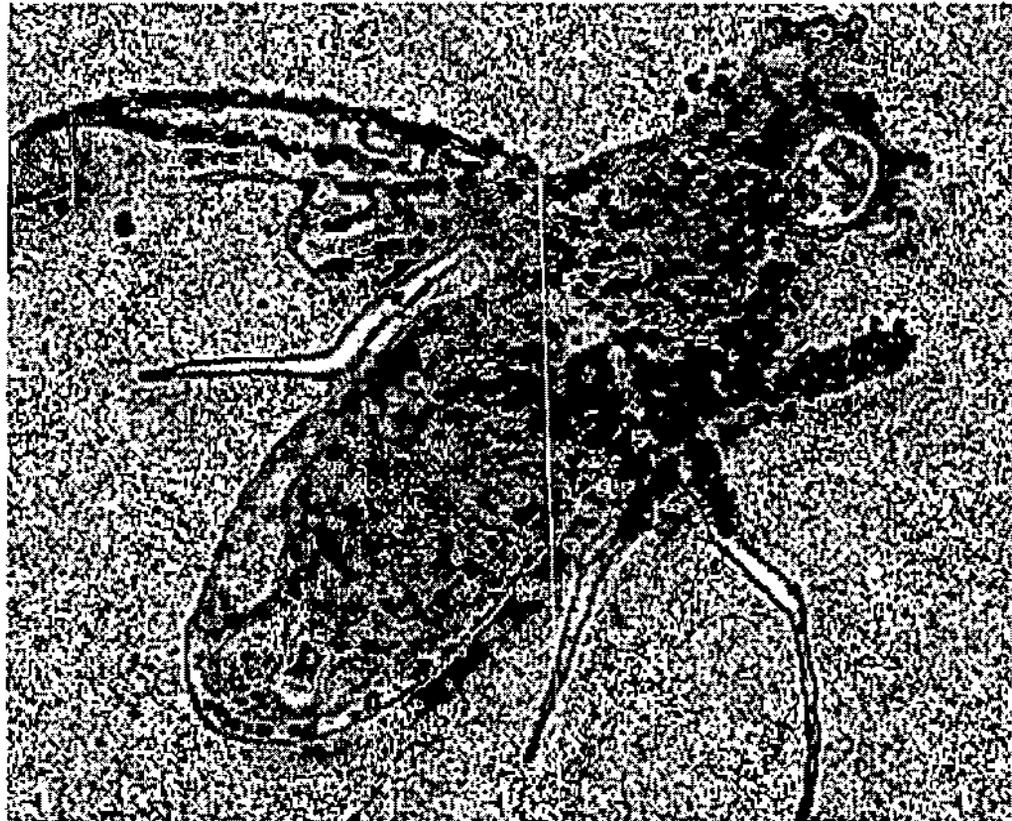
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How Biological Clocks Work

Anyone who has traveled has experienced jet lag — that groggy realization that while your day is beginning in Washington, DC, the night you just left in San Francisco is hardly over. Jet lag is an inconvenient reminder that the body is set to a 24-hour clock, known by scientists as circadian rhythms, from the Latin *circa dies*, "about one day." An internal biological clock is fundamental to all living organisms, influencing hormones that play a role in sleep and wakefulness, metabolic rate, and body temperature. Disruption of circadian rhythms is involved in changes in sleep patterns and can exacerbate the course of serious mood disorders, such as bipolar disorder and depression. Other types of illnesses also are affected by circadian rhythms; for example, heart attacks occur more frequently in the morning while asthma attacks occur more often at night.

Although biological clocks have been the focus of intensive research over the past four decades, only recently have the tools needed to examine the molecular basis of circadian rhythm become available. Early studies pointed to an area of the brain, the hypothalamus, as the location of the circadian pacemaker in mammals. More recent findings show proteins called cryptochromes, located throughout the body, are also involved in detecting changes in light and setting the body's clock. A genetic component to the clock was suspected more than two decades ago when circadian differences were detected



Genes that code for the clock protein, PER, glow in the head and other body parts of a fruit fly. Researchers made the clocks glow by engineering transgenic strains of flies in which the same genes that illuminate a jellyfish and a firefly's tail are attached to PER. The gene for luciferase, the enzyme that glows intermittently in fireflies, was expressed along with period to reveal when the clock protein was being produced. Flies were also molecularly altered to brightly mark the clock sites with Green Fluorescent Protein, which glows constantly in jellyfish. Source: Jeffrey Plautz, Ph.D., Stanford University; Steve Kay, Ph.D., Scripps Research Institute

among different inbred strains of rodents. In 1971, the first circadian gene was discovered in the fruit fly; a second circadian gene was detected 13 years later. Following these discoveries, however, the search for clock genes in other organisms faltered. Not until 1997 was the first circadian gene found in a

mammalian model, the mouse. This discovery immediately accelerated the search for other clock genes, and findings in higher order animals are yielding a consistent picture of the role and function of circadian rhythms in organisms from blue-green algae to plants to mammals.

Today, we know the most about the workings of the biological clock in the fruit fly and a peek inside its mechanisms illustrates the complex elegance of the rhythms of life. The fly's clock consists of a core system of four regulatory proteins that interact to give the clock periodicity. The cycle begins when two of these proteins, CLOCK and CYCLE, bind together and increase the production of two other proteins, PER and TIM, the levels of which slowly accumulate over time. When enough PER and TIM are made, they inactivate the CLOCK-CYCLE complex, slowing their own production and signaling the end of the cycle.

Although parts of the puzzle still are missing, discoveries stimulated by this progress are yielding intriguing findings. Proteins, such as DBT ("Double-Time"), that act to fine tune the mechanism have been identified. Recently, variations have

been found in the human *Clock* gene, which may predispose people to be "early birds" or "night owls." Other research has linked academic and behavior problems in adolescents to irregular sleep patterns.

Researchers have found that imposing too early school start times on children requires unrealistic bedtimes to allow adequate time for sleeping. Early school start times for adolescents are frequently associated with significant sleep deprivation, which can lead to academic, behavioral, and psychological problems, as well as increased risk for accidents and injuries, especially for teenage drivers. Completing our understanding of biological clockworks will lead to better treatments for diseases affected by circadian rhythm, as well as to methods of coping with disrupted sleep patterns.

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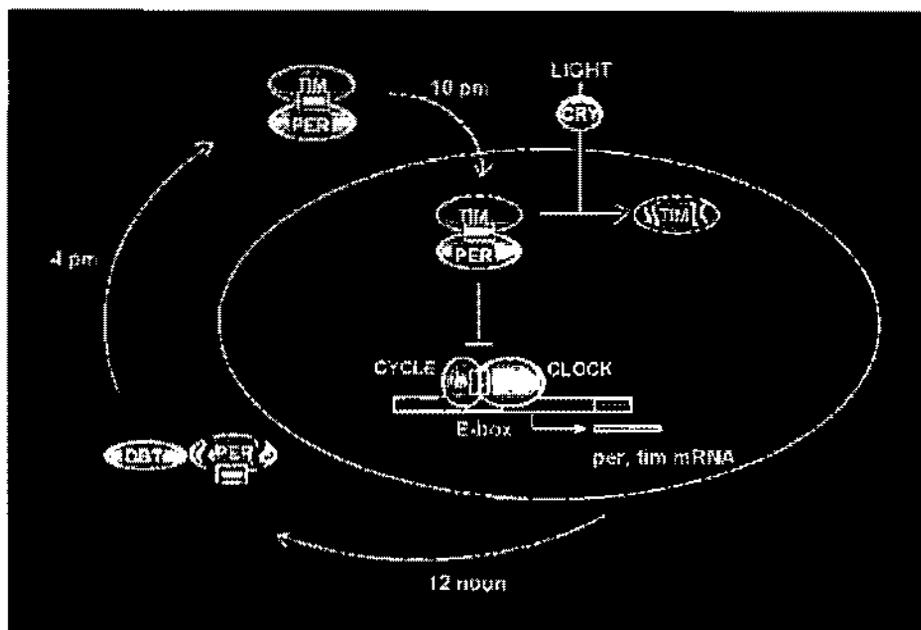
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Fruit fly clock cycle - Interaction of four regulatory proteins, entrained by light, creates the daily rhythm of the fruit fly's clock. The binding of CYCLE and CLOCK turns on genes that make PER and TIM, which accumulate over several hours until they reach levels that turn off CYCLE and CLOCK. This, in turn, slows down the production of PER and TIM, which begins the cycle all over again. Source: Steve A. Kay and Karen Wager-Smith, *The Scripps Research Institute*.

THE WHITE HOUSE
WASHINGTON

June 6, 1999

**WHITE HOUSE CONFERENCE ON MENTAL HEALTH:
*WORKING FOR A HEALTHIER AMERICA***

DATE:	June 7, 1999
LOCATION:	Blackburn Auditorium Howard University
BRIEFING TIME:	11:35am – 11:50am
EVENT TIME:	12:30pm – 1:50pm
FROM:	Bruce Reed, Audrey Tayse-Haynes, Marsha Scott

I. PURPOSE

To bring together a broad coalition of consumers, providers, advocacy groups, business leaders, state, local, and national elected officials, and leaders in the mental health research and pharmacology, service delivery and insurance coverage – as well as communities across the country through over 1,000 satellite sites – to increase awareness on issues surrounding mental illness and its impact on people of all ages.

II. BACKGROUND

Today, at the first-ever White House Conference on Mental Health, chaired by your Mental Health Advisor Tipper Gore, the Clinton/Gore Administration will unveil unprecedented measures to improve mental health. "We are taking new steps to breakdown the myths and misperceptions of mental illness and to encourage and enable Americans to get the care they need," said Tipper Gore. The Administration's proposals provide parity, improve treatment, bolster research, and expand community responses to help those with mental illnesses. Highlights of these initiatives include:

- **Ensuring that the Federal Employees Health Benefits Plan (FEHBP) -- the nation's largest private insurer - implements full mental health and substance abuse parity.** Today, the Office of Personnel Management is sending a letter to the 285 participating health plans informing them that starting next year they will have to offer full mental health and substance abuse parity to participate in the program. This step will provide full parity for nine million beneficiaries by next year and ensure that the Federal government leads the way to providing parity. The Department of Labor is also launching a new

outreach campaign to inform Americans about their rights under the Mental Health Parity Act of 1996.

- **Launching national school safety training program for teachers and education personnel.** You will announce a major nationwide public/private partnership between the National Education Association (NEA), EchoStar, and other partners to improve school safety. The partnership, which includes the Departments of Education, Justice, and Health and Human Services, will create and run a comprehensive program that will be available at the beginning of the new school year with the goal of reaching every school across the country and providing training to teachers, school personnel, and community members on how to improve school safety.
- **Accelerating progress in research.** In July, National Institute of Mental Health (NIMH) will launch a \$7.3 million landmark study to determine the nature of mental illness and treatment nationwide and to help guide strategies and policy for the next century. This new study will collect information on mental illness, including the prevalence and duration of mental illness as well as the types of treatment that are most commonly used. NIMH also will announce the launch of two new clinical trials, investing a total of \$61 million, to build on effective treatments for those affected by mental illness.
- **Encouraging states to offer more coordinated Medicaid services for people with mental illness.** Millions of Americans with severe mental illness rely on Medicaid to pay for their health care. To encourage states to make the most effective services available, the Health Care Financing Administration (HCFA) will advise all state Medicaid directors that: (1) Medicaid will reimburse for services provided in Assertive Community Treatment (ACT) programs targeting people with the most severe and persistent mental illness; (2) Medicaid recipients all have access to medications approved by FDA for the treatment of serious mental illnesses; and (3) states should educate Medicaid providers and beneficiaries about their ability to enter into "advance planning directives" that set out treatment guideline for people who became severely incapacitated in the future.
- **Launching a pilot program to help people with mental illness get the quality treatment they need to return to work.** Of the 4.7 million Americans that receive Social Security Disability Insurance (SSDI), the Social Security Administration (SSA) estimates that approximately one in nine (about 500,000) has an affective disorder (such as depression or a bipolar disorder). Research suggests that many of the people suffering with these disorders could get effective treatment and perhaps return to work. The Administration will launch a new five-year, \$10 million demonstration to provide treatment for SSDI beneficiaries with affective disorders. This complements the Jeffords-Kennedy-Roth-Moynihan legislation, which allows people to buy into the Medicaid or Medicare program when they return to work.

- **Educating older Americans and their health professionals about the risks of depression.** Five million Americans over the age of 65 suffer from some form of depression, but many do not recognize their symptoms as depression and do not receive the treatment they need. NIMH and the Administration on Aging (AoA) will launch an outreach initiative to educate the elderly and their healthcare professionals about mental illness. The Department of Veteran Affairs will also launch six new study sites to test two modes of primary care for older Americans with mental health and/or substance abuse disorders.
- **Reaching out to vulnerable homeless Americans with mental illnesses.** The Department of Housing and Urban Development is launching a new initiative to encourage communities to create safe havens where homeless mentally ill Americans can get treatment and care. HHS will also launch a two-year, \$4.8 million grant program to study the treatment, housing, education, training, and support services needed by homeless women and their children given to as many as 2,000 homeless mothers and their 4,000 children, many of whom suffer from mental illnesses. The Department of Veteran Affairs will double the number of "stand down" events to reach out to homeless Americans with mental illness to help them get the treatment and services they need.
- **Implementing new strategies to meet the mental health needs of crime victims.** To ensure that the federal response to community crises, like acts of terrorism or mass violence, includes a strong mental health component, the Administration is announcing a new interagency partnership between the Department of Justice's Office for Victims of Crime and the Center for Mental Health Services within the Substance Abuse and Mental Health Services Administration (SAMSHA). This partnership also will ensure that strategies are in place to address the mental health needs of victims of violent crime.
- **Developing and implementing new strategies to address mental illness in the criminal justice system.** SAMHSA and DOJ are hosting a conference later this summer to focus on how the criminal justice system can prevent crime by mentally ill people and can address the needs of offenders with mental illness. Following this conference, DOJ will launch an outreach effort to educate the criminal justice community on how to better serve people with mental health needs. This initiative will include a new partnership with the National GAINS center so that communities interested in pursuing these approaches can get technical assistance and ideas about how to implement successful strategies.
- **Implementing a new comprehensive approach to address combat stress in the military.** At least 30 percent of those who have spent time in war zones experience combat stress reaction. Today you will direct the Department of Defense to report back within 180 days on an implementation plan for a comprehensive combat stress program throughout the military. DOD will also hold a conference this fall to develop strategies and educate military leaders and medical personnel about the need to enhance current prevention strategies.

- **Launching the expansion of the “Caring For Every Child” mental health campaign.** At least one in ten American children and adolescents may have behavioral, or mental health problems. The Administration will launch a five-year \$5 million dollar campaign in targeted communities to highlight the special mental health needs of children.
- **Improving the mental health of Native American youth.** The suicide rate for Native Americans between the ages of five and 24 years old is three times higher than the rest of the U.S. population in this age group. This initiative allocates at least \$5 million for a collaboration between the Departments of Interior, Justice, Education, and HHS, to go to ten Native American communities to develop effective strategies to address mental health needs of youth in settings such as the home, school, treatment centers, and the juvenile justice system.
- **The Administration Also Challenged Congress to Pass Legislation to Improve Care and Services for People with Mental Illness.** The Administration urged Congress to:
 - Pass the Jeffords-Kennedy-Roth-Moynihan-Lazio-Waxman-Bliley-Dingell legislation, which would enable people with disabilities to return to work by accessing affordable health insurance.
 - Hold hearings on the mental health parity law to review its strengths and weaknesses.
 - Fund the historic \$70 million increase in the mental health grant.
 - Pass a strong enforceable patients’ bill of rights which ensures that people with mental health needs obtain critical protections such as access to specialists and the continuity of care protections.
 - Pass strong comprehensive privacy and legislation to eliminate genetic discrimination.

I. PARTICIPANTS

Briefing Participants:

Bruce Reed
 Audrey Tayse-Haynes
 Chris Jennings
 Marsha Scott
 Sarah Bianchi
 Neera Tanden
 Jordan Tamagni

Event Participants:

The Vice President
 The First Lady
 Mrs. Gore
 Bob Chase, President, National Education Association
 Bill Vanderpoel, Vice President, EchoStar
 Panel Participants (*see attached participants list*)

IV. PRESS PLAN

Open Press.

V. SEQUENCE OF EVENTS

NOTE: SUGGESTED DISCUSSION SEQUENCE OF EVENTS AND QUESTIONS ATTACHED

- YOU, the Vice President, the First Lady, and Mrs. Gore will be announced onto the stage.
- Mrs. Gore will make brief opening remarks and lead the first group discussion.
- Upon conclusion of the discussion, Mrs. Gore will introduce the Vice President.
- The Vice President will make brief remarks and lead the second group discussion.
- Upon conclusion of the discussion, Mrs. Gore will introduce the First Lady.
- The First Lady will make brief remarks and lead the third group discussion.
- Upon conclusion of the discussion, Mrs. Gore will proceed to the podium.
- Mrs. Gore will make brief concluding remarks and introduce YOU.
- YOU will make remarks from the podium.
- YOU will introduce Bob Chase.
- Bob Chase will make brief remarks and introduce Bill Vanderpoel.
- Bill Vanderpoel will make brief remarks.
- YOU will conclude your remarks and depart.

VI. REMARKS

To be provided by speechwriting.

VII. ATTACHMENTS

- Panel Participants Bios
- Suggested Discussion Sequence of Events and Questions
- Mental Health Fact Sheet

WHITE HOUSE CONFERENCE ON MENTAL HEALTH: *WORKING FOR A HEALTHIER AMERICA*

Panelist Biographies

Mike Wallace,

Co-Editor, CBS' *60 Minutes*

Mike Wallace has become an American icon as co-editor of CBS's *60 Minutes* and an award-winning journalist, whose career spans nearly 60 years. His incisive interviewing techniques and expansive knowledge of current affairs has enabled him to produce an impressive series of interviews with American and international leaders, including every President from John F. Kennedy through George Bush. More recently, Mr. Wallace has openly discussed his experience with depression with the same candor that he has demanded of his interviewees. His hour-long HBO documentary, "Dead Blue: Surviving Depression," has helped draw attention to the pervasiveness of depression and the ability to recover from it. He is a testament to the contributions that people living with mental illness can and do make in our society.

John Wong, Rosemead, CA

John Wong immigrated to the United States with his parents and two stepbrothers from Hong Kong in 1973 when he was seven years old. He first experienced symptoms of schizophrenia when he was 16 years old and had the first of his four psychiatric hospitalizations when he was about 18 years old. John's symptoms have been reduced gradually through medication and psychosocial rehabilitation treatment in the past 17 years. In fact, John is president of the Consumer Planning Council of Pacific Clinics Asian Pacific Family Center (APFC) where he is also a part-time employee. As part of his work duties, he teaches an "English as a Second Language" class to other Asian immigrant consumers. He also participates in home visits and outreach activities in collaboration with other agency staff. John's father, Mr. Hoi Wong, gave up his restaurant business in 1980 in order to take care of his two children- John with mental illness and another son with a heart disease.

Jennifer Gates, Scotch Plains, NJ

Jennifer Gates is a nineteen-year-old from Scotch Plains, NJ. She is a sophomore at the College of William and Mary in Virginia, hoping to double major in English and psychology. She has been recovering from an eating disorder for the past three years, and has always felt strongly about dispelling the misconceptions the public has about eating disorders. She hopes that by speaking about her struggle today she will be able to give a personal perspective and to increase understanding of this very debilitating disease.

Robin Kitchell, Franklin, TN

Robin is a parent and professional who has worked with children and families for ten years. She is married and is the parent of a thirteen-year-old son with bipolar disorder, ADD, and learning disabilities. She has been a passionate advocate for children and families with special needs. She believes that one of the challenges for parents of a child with mental illness is to navigate through the education and mental health system, and thinks it is critical for parents, teachers, and school district officials to work as a team. Mrs. Kitchell is also an advocate with Tennessee Voices for Children, and recently participated in a forum with Mrs. Gore at Vanderbilt University.

**Wayne Burton, M.D., First Vice President /Corporate Medical Director
Bank One Corporation, Chicago, IL**

Bank One is the 5th largest U.S. bank holding company with over 90,000 employees worldwide. The Medical and Benefits Units of Bank One have worked together since 1982 to strategically design health and wellness benefits programs and cost management strategies. To address the impact of depression on employees and Bank One, Dr. Burton with his colleague Dr. Conti, spearheaded a comprehensive effort to improve the company's ability to identify and get appropriate treatment for employees with depression in a timely manner. In addition to his duties at Bank One, Dr. Burton is an Associate Professor of Clinical Medicine and Psychiatry at Northwestern University Medical School.

David Satcher, M.D., Ph.D.

**Assistant Secretary for Health and U.S. Surgeon General
Department of Health and Human Services**

Dr. Satcher is the 16th Surgeon General of the United States, and only the second person to simultaneously hold the position of Assistant Secretary for Health and Surgeon General. Prior to this appointment, Dr. Satcher served four years as the Director of the Centers for Disease Control and Prevention (CDC) and Administrator for the Toxic Substances and Disease Registry from 1993 to 1997. Dr. Satcher will be joining the conference plenary session via satellite from the Carter Center in Atlanta, GA. He will be there with a number of community mental health leaders, and will be focusing on the ways communities can respond to crises or traumas.

Congresswoman Lynn Rivers (D-MI)

Congresswoman Lynn Rivers was born in Au Gres, Michigan, the daughter of a mailman and a homemaker. She is married with three children. While raising her children, working, and going to college at the University of Michigan, she became politically active. Representative Rivers ran for a seat on the school board in 1984 and won, serving for eight years. In 1992, she graduated from Wayne University Law School. In 1994, Representative Rivers ran for the United States Congress and won, becoming one of only 13 freshman Democrats to gain a seat that year, and she now serves on the Science Committee and the House Budget Committee. Though she was diagnosed with manic depression in her twenties, Representative Rivers accomplished a great deal because of her effective treatment.

Harold S. Koplewicz, M.D, New York, NY

Dr. Harold S. Koplewicz, founder and director of the New York University Child Study Center, is a nationally renowned child and adolescent psychiatrist. He is the Editor-in-Chief of the *Journal of Child and Adolescent Psychopharmacology*. He has written many scientific articles on the diagnosis and treatments of children and adolescents with behavioral disorders, anxiety disorders, and mood disorders. He is also the author of *It's Nobody's Fault: New Hope and Help for Difficult Children And Their Parents*. Dr. Koplewicz seeks to change the way we treat and deal with child mental illness so that no parent or child is ashamed to seek the help they need.

Steven E. Hyman, MD

Dr. Hyman is the Director of the National Institute of Mental Health, the component of the National Institute of Health charged with generating the information needed to understand, treat, and prevent mental illness. He was Professor of Psychiatry at Harvard Medical School and Director of Psychiatry Research at Massachusetts General Hospital. He was also the first faculty Director of Harvard University's Interfaculty Initiative on Mind, Brain, and Behavior. In addition to his many scientific writings, he has authored and edited several widely used clinical texts. He also serves on several review and advisory boards including the Riken Brain and Sciences Institute in Japan, the Max Planck Institute in Germany, and the Howard Hughes Medical Institute in the United States.

**WHITE HOUSE CONFERENCE ON MENTAL HEALTH
PLENARY SESSION
SUGGESTED SEQUENCE OF DISCUSSION
June 7, 1999**

Mrs. Gore's Panel

- Q: **Mike Wallace:** And now, I want to introduce a man who also struggled with mental illness — and whose decision to come forward with his experience has inspired many Americans to do the same. Mike we have a broad audience here today, with varying levels of understanding about mental disorders. Will you tell us about your experience with depression?

Background: Recently, Mr. Wallace has openly discussed his experience with depression. His hour-long HBO documentary, "Dead Blue: Surviving Depression," has helped draw attention to the pervasiveness of depression and the ability to recover from it. He is a testament to the contributions that people living with mental illness can and do make in our society.

Possible follow-up: Tell us about the stigma associated with depression for men?

Possible follow-up: What do Americans need to know about depression?

- Q: **John Wong** who came here today from California has been living with schizophrenia for over 13 years. John, when did you first realize you were experiencing a mental illness?

Background: Mr. Wong's illness started in adolescence. (*In men we know that schizophrenia usually appears in the late teens or early twenties.*) Initially John was very resistant to treatment, but for the past nine years he has managed his illness. He now does outreach with others to help them get the treatment and support they need when coping with a mental disorder.

POTUS POSSIBLE FOLLOW-UP: Was there a particular event or symptom that made you realize that you needed mental health treatment and how did you get help?

Possible follow-up: Can you tell us about your recovery and how you have reached out to help others?

Possible follow-up: I know your father is in the audience, and has been very supportive and helpful in your recovery. Tell us how he helped.

- Q: **Jennifer Gates** is here to talk about her experience. Jennifer, you had a very serious experience with anorexia. Tell us when your illness started.

Background: Jennifer, who is now 19-years-old, was 15-years-old when her eating disorder began. She controlled her food intake as a way to lose weight and look "good" for the summer. After a few months the disease took control of her. She can speak to her obsessive thoughts of perfection in all aspects of her life (i.e., grades, weight), and how treatment, 3 years later, remains an important part of her recovery.

Possible Follow-up: With depression we talk about how we can't expect someone to pull themselves up by their bootstraps. I know you have mentioned the stigma you experienced when you were ill, how often family and friends didn't understand why you wouldn't just eat. As best as you can, will you tell us what you were experiencing at that time and the role treatment and support played in your recovery?

Possible Follow-up: What do you see in your future?

Vice President's Panel

Q: **Robin Kitchell**, from Nashville Tennessee, has a son who suffers from bi-polar disorder. She recently met Tipper at an event like this one in Tennessee. Robin, tell us about some of the challenges and rewards of caring for a child with a mental illness?

Background: Mrs. Kitchell struggled with schools to assure her son received the support he needed to succeed. Robin is also an activist with Tennessee Voices for Children and fights to make sure that schools and other aspects of the community work effectively to help children with mental illness.

Possible follow-up: How can we help communities and schools do a better job of reaching and supporting kids with mental illness?

Q: **Dr. Wayne Burton** is the Corporate Medical Director of Bank One Corporation. Dr. Burton, tell us how the comprehensive mental health services Bank One offers has helped your business?

Background: In 1983, Bank One began to implement comprehensive mental health services for its employees including: (1) training managers to reduce stigma; (2) increasing employee awareness of services; and (3) enhancing covered mental health benefits. As a result, the costs of mental health have gone from 15 percent of health care costs in 1982 to 6 percent in 1996.

Possible follow-up: What are some of the things your program does to raise awareness among your employees?

Possible follow-up: Do your employees worry about discussing these issues in the workplace because of confidentiality? How do you all address this issue?

Q: I'd like to call on **Dr. David Satcher**, who is joining us from the Carter Center in Atlanta where he is leading a discussion on how communities can better respond to the short-term and long-term impact of crises, such as school violence or floods. Dr. Satcher, tell us about some of what you all are focusing on today?

Background: Dr. Satcher is with leaders who address mental health needs in their communities, including a woman from Oklahoma who helped set up comprehensive mental health services following the bombings.

POTUS POSSIBLE FOLLOW-UP: What are the long-term mental health effects of these types of crises?

VP possible follow-up: What can communities do to assure they can respond in times of crisis and address every day mental health needs?

Mrs. Clinton's Panel

Q: **Dr. Steven Hyman:** I'd like to talk with this distinguished group of panelists about the science of mental health and illness. We're happy to have Dr. Steven Hyman with us today, a distinguished scientist who directs the National Institute of Mental Health. NIMH is part of the National Institutes of Health.

Dr. Hyman, you are dealing with some very difficult diseases that affect millions of people. Over the last few years, what progress are we making and what have we really learned about these diseases?

Possible Follow-up: How have these scientific discoveries changed the way we as a society deal with mental illness?

Q: **Dr. Koplewicz** is an expert on mental health issues, particularly in children. What steps can we take as a nation to demystify mental illness?

Background: Dr. Koplewicz, founder and director of the New York University Child Study Center, is a nationally renowned child and adolescent psychiatrist. He has written many scientific articles on the diagnosis and treatments of children and adolescents with behavioral disorders, anxiety disorders, and mood disorders. He is also the author of It's Nobody's Fault: New Hope and Help for Difficult Children And Their Parents. Dr. Koplewicz seeks to change the way we treat and deal with child mental illness so that no parent or child is ashamed to seek the help they need.

Possible Follow-up: What are the particular issues associated with children with mental illness?

POTUS POSSIBLE FOLLOW-UP: What can we do to intervene early, before the mental illness causes a child to become violent to themselves or others?

Q: **Representative Lynn Rivers:** So all this offers us new hope about treatment of mental health, but also the importance of early diagnosis. Congresswoman Rivers, would you share with us your experience?

Background: Representative Rivers has been outspoken about her history of mental illness. Though she was diagnosed with manic depression in her early twenties, she has accomplished a great deal due to her effective treatment.

Possible follow-up: How did you decide to come forward?

The Numbers Count

Mental Illness in America

According to a recent study by the World Health Organization, the World Bank, and Harvard University, mental disorders account for 4 of the 10 leading causes of disability in established market economies worldwide. These disorders are: major depression, manic-depressive illness, schizophrenia, and obsessive-compulsive disorder. Other research has estimated that the cost of mental illnesses in the United States, including indirect costs such as days lost from work, was \$148 billion in 1990, the last time the total bill was measured.

Depression

- More than 19 million adult Americans age 18 and over will suffer from a depressive illness—major depression, bipolar disorder, or dysthymia—each year. Many of them will be unnecessarily incapacitated for weeks or months because their illness is untreated.
- The onset of depression may be occurring earlier in life in people born in recent decades compared to the past.
- Nearly twice as many women (12 percent) as men (7 percent) are affected by a depressive illness each year.
- Depression is a frequent and serious complication of heart attack, stroke, diabetes, and cancer, but is very treatable.
- Depression increases the risk of having a heart attack. According to one recent study that covered a 13-year period, individuals with a history of major

depression were four times as likely to suffer a heart attack compared to people without such a history.

- Depression costs the nation more than \$30 billion per year in direct and indirect costs, according to the most recent data available.
- Major depression is the leading cause of disability in the United States and worldwide, according to a recent study by the World Health Organization, the World Bank, and Harvard University.

Manic-Depressive Illness

- More than 2.3 million Americans ages 18 and over – about 1 percent of the population – suffer from manic-depressive illness.
- As many as 20 percent of people with manic-depressive illness die by suicide.
- Men and women are equally likely to develop manic-depressive illness.

Suicide

- In 1996, approximately 31,000 people died from suicide in the United States.
- Almost all people who kill themselves have a diagnosable mental disorder, most commonly depression or a substance abuse disorder.
- The highest suicide rates in the United States are found in white men over age 65.
- The suicide rate in young people has increased dramatically in recent years. In

1996, the most recent year for which statistics are available, suicide was the 3rd leading cause of death among 15 to 24 year olds.

- Men are more than four times as likely as women to commit suicide.

Schizophrenia

- More than 2 million adult Americans are affected by schizophrenia.
- In men, schizophrenia usually appears in the late teens or early twenties. The disorder usually shows up when women are in their twenties to early thirties.
- Schizophrenia affects men and women with equal frequency.
- Most people with schizophrenia suffer chronically throughout their lives.
- One of every 10 people with schizophrenia eventually commits suicide.
- Schizophrenia costs the nation \$32.5 billion annually according to the most recently available data.

Anxiety Disorders

- More than 16 million adults ages 18 to 54 in the United States suffer from anxiety disorders, which include panic disorder, obsessive-compulsive disorder, post-traumatic stress disorder, social phobia, and generalized anxiety disorder.
- Anxiety disorders cost \$46.6 billion in 1990.
- Anxiety disorders are frequently complicated by depression, eating

disorders, or substance abuse. Many people have more than one anxiety disorder.

Panic Disorder

- Panic disorder affects about 1.7 percent of the U.S. adult population ages 18 to 54, or 2.4 million people, in a given year.
- Panic disorder typically strikes in young adulthood. Roughly half of all people who have panic disorder develop the condition before age 24.
- Women are twice as likely as men to develop panic disorder.
- People with panic disorder may also suffer from depression and substance abuse. About 30 percent of people with panic disorder abuse alcohol and 17 percent abuse drugs such as cocaine and marijuana.
- About one-third of all people with panic disorder develop agoraphobia, an illness in which they become afraid of being in any place or situation where escape might be difficult or help unavailable in the event of a panic attack.

Obsessive-Compulsive Disorder (OCD)

- About 2.3 percent of the U.S. adult population ages 18 to 54, approximately 3.3 million Americans, has OCD in a given year.
- OCD affects men and women with equal frequency.
- The nation's social and economic losses due to OCD totaled \$8.4 billion in 1990.

Post-Traumatic Stress Disorder (PTSD)

- In the United States, about 3.6 percent of adults ages 18 to 54, or 5.2

million people, have PTSD during the course of a given year.

- PTSD can develop at any age, including childhood.
- PTSD is more likely to occur in women than in men.
- About 30 percent of men and women who have spent time in war zones experience PTSD. The disorder also frequently occurs after violent personal assaults, such as rape or mugging or domestic violence; terrorism; natural or human-caused disasters; and accidents.
- Depression, alcohol or other substance abuse, or another anxiety disorder often accompany PTSD.

Social Phobia

- About 3.7 percent of American adults ages 18 to 54, or 5.3 million people, have social phobia in a given year.
- Social phobia occurs in women twice as often as men, although a higher proportion of men seek help for this disorder.
- The disorder typically begins in childhood or early adolescence and rarely develops after age 25.
- Social phobia is often accompanied by depression and may lead to alcohol or other drug abuse.

Attention Deficit Hyperactivity Disorder (ADHD)

- ADHD is one of the most common mental disorders in children, affecting 3 to 5 percent of school-age children.
- Two to three times more boys than girls are affected.
- ADHD has long-term adverse effects on success at school, work, and in social relationships.
- National public school expenditures on behalf of students with ADHD exceeded \$3 billion in 1995.
- As they grow older, children with untreated ADHD who have a coexisting

conduct disorder often experience drug abuse, antisocial behavior, teenage pregnancy, and injuries of all sorts.

Autism

- Autism and related disorders (also called autism spectrum disorders or pervasive developmental disorders) represent chronic and severely disabling developmental disorders. There is no known cure.
- There are 1 to 2 cases of autism per 1,000 people.
- These disorders develop in childhood and are generally apparent by age three.
- Autism is three to four times more common in boys than girls. Girls with the disorder, however, tend to have more severe symptoms and lower intelligence.
- These disorders present families with financially and emotionally costly challenges over the lifespan of their affected children. About 60 percent of adults with autism will require continued care throughout their lives.
- The cost of health and educational services to those affected by autism exceeds \$3 billion each year.

For More Information About NIMH

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Outline of Breakout Session #13

13. Community Responses to Youth At Risk

Clinton Administration Co-Chairs: Bruce Reed, Assistant to the President & Director of the Domestic Policy Council

*Congressional Members: Senator Arlen Specter (R-PA)
Representative Peter DeFazio (D-OR)
Representative Jesse Jackson Jr. (IL)*

Facilitator: Richard Socarides, Special Assistant to the President & Senior Advisor for Public Liaison

Recent tragedies in Littleton, Atlanta, and elsewhere have galvanized national attention on the subject of youth violence. How can a more effective and comprehensive national mental health policy address the underlying issues causing these crises? What role can mental health professionals and families play in preventing the outbreak of violence? What can mental health professionals, families, and communities do to respond to the emotional fallout resulting from school violence?

- I. Welcome - Facilitator, Richard Socarides (1 minute)**
(The facilitator will provide an introduction of the topics to be discussed and will also discuss the length and format of the breakout session).
- II. Framing of the Issues - Administration Co-Chair, Bruce Reed (2-3 minutes)**
(The lead Administration person will set the framework for the issues to be discussed and will outline the Administration's accomplishments in these areas.)
- III. Congressional Perspective (2 minutes each)**
(One or more of the Senators or Representatives will give their perspective on the issues.)
- IV. Highlighting of Specific Areas of Concern - Additional Administration Co-Chairs**
(If there are additional Administration co-chairs, the co-chairs could highlight a specific aspect of the issue at this time.)
- V. Open Discussion - Moderated by Facilitator, Richard Socarides (45 minutes)**
(During the open discussion, the Facilitator will call on additional Administration persons in the audience and other conference attendees to: (1) further lay out the issues; (2) identify barriers; and (3) discuss solutions. The Facilitator should make every effort to call upon a wide variety of people, including: (1) additional Administration people; (2) consumer advocates; (3) at least two persons who work with "Best Practices" model programs; (4) a person who can address issues of stigma; and (5) persons who can discuss specific issues relating to children, the elderly, gender, and cultural issues.)

Administration Persons to Be Called Upon by the Co-Chair or Congresspersons

1. Bill Modzeleski

Director, Safe and Drug-Free Schools Program, Department of Education

Mr. Modzeleski is involved in the design and development of drug and alcohol prevention programs, violence prevention programs and activities as they affect the school and in school health-related issues.

Mr. Modzeleski can answer any question in the area of school/community violence.

2. Kathryn Turman, Acting Director Office for Victims of Crime, Department of Justice

Kathryn Turman's expertise is in responding to the mental health needs of victims, including incidences of school violence and children exposed to violence. She has been involved in assisting a number of the communities that experienced recent school shootings in responding to the needs of the victims and of others. Her office supports a number of victim services efforts in state and local jurisdictions, including mental health services.

Questions for Ms. Turman:

- * What have we learned about the mental health needs of the victims, such as the students, staff, and the community in the recent school shootings?
- * What kind of programs show promise in addressing these needs?

3. W. Rodney Hammond, Ph.D.

Director, Division of Violence Prevention, Centers for Disease Control
National Center for Injury Prevention and Control

Oversees research, surveillance, and programs in intentional injury, homicide, suicide, youth violence. Expert on delivery of service to family and children.

Non-Administration Persons to be Called Upon

4. Marlene Wong

Director, Mental Health and Crisis Teams, Los Angeles School District (is working with Springfield, Oregon, school district)

Question for Ms. Wong:

- * How is the Springfield, Oregon, community dealing with the aftermath of the school shooting? What interventions have been particularly helpful to them?

5. Kevin Dwyer

President-Elect, National Association of School Psychologists

Question for Mr. Dwyer

* What are some of the warning signs for youth at risk?

**VI. Concluding Comments - Facilitator, Administration Co-Chair, Congresspersons
(5-10 minutes total)**

(This discussion will provide a wrap up of all the issues that have been discussed during the session.)

**TALKING POINTS
FOR BREAKOUT ON COMMUNITY RESPONSES
TO AT RISK YOUTH**

- * The recent tragedies in Littleton, Colorado, and Conyers, Georgia have focused the nation on trying to make our schools and our children safe.
- * Today we are going to talk about the mental health issues surrounding at risk youth. We will talk about such questions as: How can a more effective and comprehensive national mental health policy address the underlying issues causing these crises? What role can mental health professionals and families play in preventing the outbreak of violence? What can mental health professionals, families, and communities do to respond to the emotional fallout resulting from school violence?
- * Here are some statistics that might surprise you:
 - * In 1996, 4,643 children ages 0-19 years died from firearm injuries. 28% of these deaths (or 1,309 deaths) were from suicide. (CDC)
 - * About 71% of young people said they want to learn the warning signs of violence. *American Psychological Association/Penn, Schoen & Berland Poll*
 - * About 40% of students have been concerned about a potentially violent classmate. *American Psychological Association/Penn, Schoen & Berland Poll*
 - * Suicide is the third leading cause of death for young people aged 15-24 and the fourth leading cause of death for persons between the ages of 10 and 14. "The Psychological Impact of Violence in Underserved Communities," *Journal of Health Care for the Poor and Underserved, Vol. 6, No. 4, 1995, pp. 403-409*
 - * Since 1970, teen suicide has increased 300% for people aged 15-19. *The Jason Foundation, Inc.*
 - * During the 1996-97 school year, 10% of public schools reported one or more serious violent crimes to the police. *National Center for Educational Statistics, 1998.*
 - * In 1989, 6% of students aged 12 through 19, some, or most, of the time feared they were going to be attacked or harmed at school. By 1995, this had risen to 9%. *National Center for Educational Statistics, 1998.*

What We Know About Youth Violence

- * In 1997, 2.8 million youth under the age of 18 were arrested. Juveniles

accounted for 19% of all arrests and 17% of all violent arrests. (Sneider, Howard, *Estimated Number of Juvenile Arrests, 1997*. Adapted from Sneider, H., *Juvenile Arrests, 1997*. Washington, DC, OJJDP.)

- * Research conducted in 1992 indicates that approximately twenty percent of all youth who enter the juvenile justice system have a serious mental health disorder. (Cocozza, J. J., *Identifying the Needs of Juveniles with Co-occurring Disorder*, *Corrections Today*, December 1997.)
- * About half of the 20% of the youth with a serious mental disorder in the juvenile justice system also have a co-occurring substance abuse disorder. (Otto, R. K, Greenstein, J. J., Johnson, M.K. Friedman, R.M., 1992. *Prevalence of Mental Disorders Among Youth in the Juvenile Justice System in the Juvenile Justice System*, The National Coalitional for the Mentally Ill in the Criminal Justice System, pp 7-48.)
- * While there is research on adults that suggests that mental illness combined with co-occurring substance abuse disorder is a important factor in predicting violence (Steadman, H. J.; Monahan, John, et. al, *Violence by People Discharged From Acute Psychiatric Inpatient Facilities and by Others in the Same Neighborhoods*, May 1998.), no research has yet been published on juveniles. There is, however, a growing recognition of the need to address the needs of juveniles with co-occurring disorders.
- * Administration Accomplishments: Since these recent school shootings, the Administration has taken a number of steps to improve the safety of our Nation's children. We have done the following:
 - * We were able to get passed in the Senate a number of the President's proposals to address gun violence: mandatory child safety locks with every new handgun; a lifetime ban on guns purchased by violent juveniles; a nationwide ban on the importation of high-capacity ammunition clips and juvenile possession of assault rifles; and mandatory background checks on gun sales at gun shows. Next, we need to work toward getting the House to pass these measures as well.
 - * We worked to reduce the violence that reaches our children from the media with TV ratings and the V-chip to enforce them, with video ratings, and with new screening devices for the Internet which parents can use.
 - * The President has also issued challenges to the entertainment community -- from keeping guns out of ads and previews that children might see, so that we don't market violence to children; to strictly enforcing the ratings in theaters and video stores; to reevaluating the PG rating.
 - * Just last week the President called on the FTC and the Justice Department to immediately commence a study into the marketing of violence to children.

Safe and Drug Free Schools Initiative in ESEA

Strengthening school response to violent and troubled students. The President's Safe and Drug-Free Schools proposal will contain a number of measures to help schools respond to troubled kids, including those who bring weapons to school. Specifically, the proposal will:

Require counseling for gun-toting students. Under current law, schools are generally required to expel any student who brings a gun or explosive device to school, as well as to report that student to local law enforcement officials and juvenile justice authorities. During the 1996-97 school year, this national policy of "zero tolerance" for guns resulted in more than 6,000 students being expelled from school. Under the President's new proposal, schools will now also be required to refer every student who brings a gun on to campus to a mental health professional for assessment. If the student is determined to pose an imminent threat to himself or others, he will be required to receive appropriate treatment before being permitted to return to school.

Inform parents when guns are brought to school. Although some schools notify parents when gun-related incidents take place, it is not required under current law. To better inform parents, the President's proposal will require schools to report on the number of incidents involving weapons brought to school in an annual report on school violence and drug use.

Support programs that educate students about risks associated with guns. Although the current SDFSCA Program funds a broad range of drug and violence prevention programs, gun safety education programs are generally not funded. The President's new initiative will allow funding for programs that educate students about the risks and possible consequences associated with firearms and helps them to make safe choices and avoid injuries.

More counselors to work with troubled youth. There is a growing sense in our communities that there simply are not enough counselors in our schools to help identify troubled youth and refer them to critical assessment and counseling services. The President's proposal will help schools to fund more counselors to deal with troubled youth. These counselors will help connect troubled and alienated youth with the services, support, and counseling they need to cope with their problems before more serious problems take hold. Funds will also be available to develop innovative programs to reach out to these youth, such as support hot lines for students to call in, speak to an adult, and seek help.

Dealing with disruptive students and helping to instill common sense values.

Promote alternative schools and "second chance" programs. Students who constantly disrupt classes and engage in fights make it more difficult for teachers to teach and for other students to learn. The President's SDFSCA initiative will provide additional funding incentives to allow schools to fund "

second chance* programs that enforce clear, consistent discipline codes; require counseling for problem students; and separate chronically disruptive and violent kids from the rest of the class by placing them in alternative schools and other similar programs. The President's FY 2000 budget also includes \$9 million for the development of model programs and strategies that establish consequences for disruptive students while keeping them on track academically.

Expand character education programs. Current law prevents the Secretary of Education from making more than 10 grants per year for character education programs, and limits overall funding for each state to \$1 million over a 5-year period. The President will recommend lifting these restrictions so that more states can implement character education programs that help instill common sense values in our children.

Helping communities respond to school shootings. The President's Safe and Drug Free Schools reauthorization will contain his Project SERV initiative -- developed with the help of the communities impacted by recent schools shootings -- to provide immediate assistance as soon as a school-related violent or traumatic incident occurs, through:

A \$12 million Emergency Response Fund to help communities meet urgent and unplanned needs, such as additional security personnel, emergency mental health crisis counseling, and longer-term counseling to students, faculty, and their families.

Crisis response experts identified and funded by the Departments of Education, Justice, HHS and FEMA, who can help local officials identify and respond to community needs, help in developing a plan to address those needs, and assist in locating necessary financial and human resources. Officials from the Departments of Justice, Education, Health and Human Services (HHS), and FEMA worked together to help schools impacted by last year's shootings. These agencies will continue to work together as part of Project SERV, and improve ongoing federal crisis response efforts.

The New Safe, Disciplined, and Drug-Free Schools and Communities Program

The Safe and Drug-Free Schools and Communities Program represents the federal government's largest effort to prevent youth drug use and school violence. At the White House Conference on School Safety, the President proposed overhauling the SDFSC program to provide more effective prevention programs for the reduction of drugs and violence in schools, more accountability for results, and better targeting to those schools that need the most assistance. Under the President's new *Safe, Disciplined, and Drug-Free Schools and Communities Program*, school districts will be expected to develop comprehensive plans that:

Adopt and enforce, clear and fair discipline policies, such as zero tolerance policies for guns and drugs, school uniforms, closed campus policies, and parent notification and involvement.

Establish security procedures for schools which could include the use of metal detectors and to implement formal agreements with law enforcement officials to patrol school grounds and pathways to school.

Provide effective anti-drug and violence prevention programs, including research-based, proven effective programs that teach responsible decision-making, mentoring, mediation, or other activities aimed at changing behaviors.

Increase accountability by collecting data and reporting results to the public through annual report cards on school-related drug and/or violent incidents.

Assess and intervene for troubled youth through procedures to identify students for evaluation and counseling; training for teachers and staff; and providing linkages between district officials, mental health, and other community professionals where appropriate.

Connect students to responsible adults in the community through after-school activities to extend the school day or mentoring programs, to keep students away from drugs and violence --and out of trouble.

Develop a plan for crisis management that responds to traumatic incidents on school grounds, such as shootings on school grounds or drug overdoses.

Building on a Record of Accomplishment

- **Funding comprehensive school safety efforts.** The President's Safe Schools-Healthy Students initiative represents an unprecedented collaboration between the Departments of Justice, Education, and HHS to allow 50 communities to receive up to \$3 million for each of the next three years to adopt comprehensive, community-wide approaches to violence and drug prevention. Through this \$380 million initiative, communities will receive assistance to fund school counselors and other mental health services, metal detectors, officers for schools, and after school and conflict resolution programs by the start of the 1999-2000 school year. The President's Safe and Drug-Free Schools reauthorization proposal will help schools to engage in comprehensive community-wide efforts like the Safe-Schools initiative.
- **Adding more law enforcement to prevent crime, violence, and drugs in schools.** School resource officers provide schools with on-site security and a direct link to law enforcement agencies. Last month, President Clinton announced \$70 million in Justice Department COPS Office grants to hire more than 600 police officers in schools in 336 communities across the country. This was the first installment in meeting the President's pledge made at the White House Conference on School Safety to provide funds for up to 2,000 officers in schools this fiscal year.



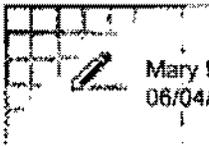
Mary L. Smith
06/04/99 04:33:20 PM

Record Type: Record

To: Bruce N. Reed/OPD/EOP@EOP
cc: Richard Socarides/WHO/EOP@EOP, Cathy R. Mays/OPD/EOP@EOP
Subject: Your breakout session

If you want to meet for a few minutes today to go over this or talk sometime on the weekend, Richard and I are available. Otherwise we could probably go over this in the car on the way over. Thanks, Mary

----- Forwarded by Mary L. Smith/OPD/EOP on 06/04/99 04:32 PM -----



Mary L. Smith
06/04/99 04:31:00 PM

Record Type: Record

To: Bruce N. Reed/OPD/EOP
cc: Cathy R. Mays/OPD/EOP, Richard Socarides/WHO/EOP, Thomas L. Freedman/OPD/EOP
Subject: Your breakout session



MENTBRK.N1MENTBUR-Attached is (1) an updated script for your breakout session. Please note that DeFazio is now added. (2) some talking points for the 2-3 minutes where you will speak in the beginning. The talking points are broken into the following segments: (1) short intro; (2) identification of some of the questions that this breakout will try to address; (3) some statistics on the scope of the problem of youth at risk; and (4) what the Administration is doing to try to address the problem. I will also be getting to you a list of all the persons in your breakout session. Let me know if you need anything else. Thanks, Mary

**CLINTON/GORE ADMINISTRATION UNVEILS NEW INITIATIVES TO ADDRESS
MENTAL HEALTH AT THE FIRST-EVER WHITE HOUSE CONFERENCE
ON MENTAL HEALTH**

June 7, 1999

Today, at the first-ever White House Conference on Mental Health, chaired by the President's Mental Health Advisor Tipper Gore, the Clinton/Gore Administration will unveil unprecedented measures to improve mental health. "We are taking new steps to breakdown the myths and misperceptions of mental illness and to encourage and enable Americans to get the care they need," said Tipper Gore. The Administration's proposals provide parity, improve treatment, bolster research, and expand community responses to help those with mental illnesses. Highlights of these initiatives include:

- **Ensuring that the Federal Employees Health Benefits Plan (FEHBP) – the nation's largest private insurer - implements full mental health and substance abuse parity.** Today, the Office of Personnel Management is sending a letter to the 285 participating health plans informing them that starting next year they will have to offer full mental health and substance abuse parity to participate in the program. This step will provide full parity for nine million beneficiaries by next year and ensure that the Federal government leads the way to providing parity. The Department of Labor is also launching a new outreach campaign to inform Americans about their rights under the Mental Health Parity Act of 1996.
- **Launching national school safety training program for teachers and education personnel.** The President announced a major nationwide public/private partnership between the National Education Association (NEA), EchoStar, and other partners to improve school safety. The partnership, which includes the Departments of Education, Justice, and Health and Human Services, will create and run a comprehensive program that will be available at the beginning of the new school year with the goal of reaching every school across the country and providing training to teachers, school personnel, and community members on how to improve school safety.
- **Accelerating progress in research.** In July, National Institute of Mental Health (NIMH) will launch a \$7.3 million landmark study to determine the nature of mental illness and treatment nationwide and to help guide strategies and policy for the next century. This new study will collect information on mental illness, including the prevalence and duration of mental illness as well as the types of treatment that are most commonly used. NIMH also will announce the launch of two new clinical trials, investing a total of \$61 million, to build on effective treatments for those affected by mental illness.
- **Encouraging states to offer more coordinated Medicaid services for people with mental illness.** Millions of Americans with severe mental illness rely on Medicaid to pay for their health care. To encourage states to make the most effective services available, the Health Care Financing Administration (HCFA) will advise all state Medicaid directors that: (1) Medicaid will reimburse for services provided in Assertive Community Treatment (ACT) programs targeting people with the most severe and persistent mental illness; (2) Medicaid recipients all have access to medications approved by FDA for the treatment of serious mental illnesses; and (3) states should educate Medicaid providers and beneficiaries about their ability to enter into "advance planning directives" that set out treatment guideline for people who became severely incapacitated in the future.

- **Launching a pilot program to help people with mental illness get the quality treatment they need to return to work.** Of the 4.7 million Americans that receive Social Security Disability Insurance (SSDI), the Social Security Administration (SSA) estimates that approximately one in nine (about 500,000) has an affective disorder (such as depression or a bipolar disorder). Research suggests that many of the people suffering with these disorders could get effective treatment and perhaps return to work. The Administration will launch a new five-year, \$10 million demonstration to provide treatment for SSDI beneficiaries with affective disorders. This complements the Jeffords-Kennedy-Roth-Moynihan legislation, which allows people to buy into the Medicaid or Medicare program when they return to work.
- **Educating older Americans and their health professionals about the risks of depression.** Five million Americans over the age of 65 suffer from some form of depression, but many do not recognize their symptoms as depression and do not receive the treatment they need. NIMH and the Administration on Aging (AoA) will launch an outreach initiative to educate the elderly and their healthcare professionals about mental illness. The Department of Veteran Affairs will also launch six new study sites to test two modes of primary care for older Americans with mental health and/or substance abuse disorders.
- **Reaching out to vulnerable homeless Americans with mental illnesses.** The Department of Housing and Urban Development is launching a new initiative to encourage communities to create safe havens where homeless mentally ill Americans can get treatment and care. HHS will also launch a two-year, \$4.8 million grant program to study the treatment, housing, education, training, and support services needed by homeless women and their children given to as many as 2,000 homeless mothers and their 4,000 children, many of whom suffer from mental illnesses. The Department of Veteran Affairs will double the number of “stand down” events to reach out to homeless Americans with mental illness to help them get the treatment and services they need.
- **Implementing new strategies to meet the mental health needs of crime victims.** To ensure that the federal response to community crises, like acts of terrorism or mass violence, includes a strong mental health component, the Administration is announcing a new interagency partnership between the Department of Justice’s Office for Victims of Crime and the Center for Mental Health Services within the Substance Abuse and Mental Health Services Administration (SAMSHA). This partnership also will ensure that strategies are in place to address the mental health needs of victims of violent crime.
- **Developing and implementing new strategies to address mental illness in the criminal justice system.** SAMHSA and DOJ are hosting a conference later this summer to focus on how the criminal justice system can prevent crime by mentally ill people and can address the needs of offenders with mental illness. Following this conference, DOJ will launch an outreach effort to educate the criminal justice community on how to better serve people with mental health needs. This initiative will include a new partnership with the National GAINS center so that communities interested in pursuing these approaches can get technical assistance and ideas about how to implement successful strategies.

- **Implementing a new comprehensive approach to address combat stress in the military.** At least 30 percent of those who have spent time in war zones experience combat stress reaction. Today the President will direct the Department of Defense to report back within 180 days on an implementation plan for a comprehensive combat stress program throughout the military. DOD will also hold a conference this fall to develop strategies and educate military leaders and medical personnel about the need to enhance current prevention strategies.
- **Launching the expansion of the “Caring For Every Child” mental health campaign.** At least one in ten American children and adolescents may have behavioral, or mental health problems. The Administration will launch a five-year \$5 million dollar campaign in targeted communities to highlight the special mental health needs of children.
- **Improving the mental health of Native American youth.** The suicide rate for Native Americans between the ages of five and 24 years old is three times higher than the rest of the U.S. population in this age group. This initiative allocates at least \$5 million for a collaboration between the Departments of Interior, Justice, Education, and HHS, to go to ten Native American communities to develop effective strategies to address mental health needs of youth in settings such as the home, school, treatment centers, and the juvenile justice system.
- **The Administration Also Challenged Congress to Pass Legislation to Improve Care and Services for People with Mental Illness.** The Administration urged Congress to:
 - Pass the Jeffords-Kennedy-Roth-Moynihan-Lazio-Waxman-Bliley-Dingell legislation, which would enable people with disabilities to return to work by accessing affordable health insurance.
 - Hold hearings on the mental health parity law to review its strengths and weaknesses.
 - Fund the historic \$70 million increase in the mental health grant.
 - Pass a strong enforceable patients’ bill of rights which ensures that people with mental health needs obtain critical protections such as access to specialists and the continuity of care protections.
 - Pass strong comprehensive privacy and legislation to eliminate genetic discrimination.