CHIROPRACTIC AND ADHD/ HYPERACTIVITY

Welcome To Great Health!

You are joining millions of others who have taken control of their health with chiropractic care. Chiropractic offers a natural, drug-free way to not only regain your health, but also to maintain it.

We're glad you are taking the time to learn more about the incredible science, art and philosophy chiropractic provides. We want you to benefit greatly from the next several pages, so let's explain the contents.

You will be examining literature from both the popular press as well as that of medical literature. While we don't expect you to be well versed in the medical terminology, we do believe that you deserve the information at your fingertips. The doctor will be happy to discuss any of the articles with you.

You may notice articles designed to inform you about the potential side effects of certain medication. There will also be medical literature that supports chiropractic as a possible means of helping your body to regain health. In addition, you will review survey material praising chiropractors for their efforts. Lastly, you will note a Family and Friend Health Profile. We suggest that you complete this form and return it to your chiropractor as soon as possible.

Remember, the more you know about your health, the healthier you will be. The sooner your doctor of chiropractic examines you the sooner you can be on the road to good health. The longer you wait for help the worst the condition becomes. Delays will only hurt you more and cost you more!

The Role of Chiropractic in Good Health

Although chiropractors work primarily upon the spine, their goal is to improve the health of your entire body.

A chiropractor is a specialist that works diligently to detect and correct vertebral subluxations. Vertebral subluxations occur when the spinal column has become "misaligned." This misalignment produces interference in your nervous system. Your nervous system is responsible for controlling every function of your body.

Henry Windsor M.D. noted in the Medical Times that he found a nearly 100% correlation between "minor curvatures" of the vertebrae and diseases of the internal organs. His findings were indeed profound.

A chiropractic adjustment is the means by which your D.C. (Doctor of Chiropractic) corrects vertebral subluxation. Regardless of age or physical condition, everyone needs a nervous system free of interference.

Please review the following pages and learn about the benefits of chiropractic care for you and your entire family...

The Drugging of America's Children

Millions of kids are downing a diet of pills to treat problems ranging from hyperactivity to learning disability. Are they really troubled—or have we become obsessed with making "perfect" children?

By ANTONIA BLACK

Seven-year-old Sam*, a second grader in an Ohio suburb, eats breakfast in his sunny kitchen just before he catches the school bus. By then he's already had his first 10-milligram dose of Ritalin. He gets his second when he stops in at the school nurse's on the way to gym later in the morning. Sam, says his doctor, is hyperactive.

In Nyack, New York, 12-year-old Seth, diagnosed as depressed, cuts a 10-milligram Prozac in half at the kitchen counter and washes it down with orange juice before he gathers up his books and heads off to eighth grade.

For six months, Kate, 10, has been on Catapres, prescribed for attention deficit disorder. When she comes home from her Bloomington, Indiana, school, she takes half of her pill with her milk and cookies.

These children are not unusual. Last year more than 6 million psychiatric drug prescriptions were written for children under 18. Ritalin use among kids has doubled in the last six years. Drugs, new and old, are being used to calm kids down and cheer them up. The boom in prescriptions for children and teens has led to the creation of a medical journal devoted exclusively to the subject.

There's no question that for many children with biologically based diseases, such as schizophrenia, depression, or panic disorder, drug treatment vastly improves their lives. "If it weren't for medication," says Carolyn Sanger of Potomac, Maryland, "my son wouldn't be alive." The boy suffered from depression on and off since kindergarten, she says, with his grades lurching from As to Fs when an episode of depression hit. From fifth through eleventh grade he had no friends, and as a teenager he made a serious suicide attempt. When he was 13, a psychiatrist put the boy on desipramine and later, on Prozac. Today, a sophomore in college, he's still on Prozac and doing well.

"We anticipate he will be on drugs for life," says Sanger, now a vice chairman of the Child and Adolescent Network for the National Alliance of the Mentally Ill. Does that worry her? "Would you want to get a child off medication for juvenile diabetes?" she asks. "Prozac helps my son's malfunctioning brain do what everyone else's brain does."

Proponents of medication also argue that when kids do need help, drugs can keep them from losing ground socially and academically. If a disorder hampers the development that should be going on at a certain stage, says child psychiatrist Peter Jensen, M.D., chief of the Child and Adolescent Disorders Research Branch of the National Institute of Mental Health (NIMH), a child falls behind and has to grapple with more problems—school failure, the disappointment of parents. "When you treat a child, in many *(continued on page 42)*

**Apart from Carolyn Sanger, the names of all parents and children, and some identifying details, have been changed at the parents' request.*

USA Today 11-16-95

Ritalin maker's ties to advocates probed

Financial link called understated

By Karen Thomas
USA TODAY

Government officials are questioning the relationship between the maker of the drug Ritalin, widely used to treat children with attention deficit disorders, and a high-profile parent advocacy group.

After a year-long investigation, the United Nations and the U.S. Drug Enforcement Administration say financial ties between the company, Ciba-Geigy, and Children and Adults with Attention Deficit Disorders may be putting profit margins ahead of child safety.

The drug manufacturer admits to funding a portion of CHADD's $2 million budget. The DEA found nearly $1 million in funding, growing from $100,000 in 1991 to $398,000 in 1994.

According to October DEA documents, the agency fears the financial relationship is "not well-known by the public, including CHADD members that have relied upon CHADD for guidance."

The International Narcotics Control Board, the DEA reports, is concerned about CHADD's recent lobbying efforts to reclassify Ritalin. At present, the stimulant is subject to strict prescription guidelines, in the same category as amphetamines and morphine. Reclassification would make it cheaper and more accessible.

Use of the drug in this country has surged in the past few years. In 1993, numbers were at an all-time high: The U.S. used 85% of the world's supply of methylphenidate, the generic form of Ritalin. According to unreleased figures, U.S. manufacturers increased production of the drug 62% in 1994.

Experts are worried about emerging evidence of widespread abuse and illicit trafficking of the stimulant.

Gene Haislip, DEA's head of diversion control says he found parents abusing their kids' prescriptions, kids selling to kids, illegal drug rings, illicit trafficking. Mexican smuggling rings, even. It's among the top 10 drugs targeted for pharmaceutical thefts, he says.

There were two deaths in March, the DEA reports, from children crushing tablets and inhaling the powder. Haislip also cites a Texas study in which more high school seniors were using Ritalin nonmedically than those prescribed methylphenidate.

Also unsettling: The escalating use among preschoolers. There are no studies of the effects of methylphenidate on children that young, so CHADD and Ciba both discourage use among that age group. But the DEA says it's still happening.

"A lot of people don't know Ritalin is like cocaine," Haislip says. "That doesn't mean don't use it. . . . It can be very dangerous and must be treated with respect. Obviously, it was not under surveillance."

Haislip says CHADD literature "misleads" members about Ritalin's safety while Ciba's profits rose from $50 million to $108 million in recent years. "Looks to me like a lot of factors have pushed this out of balance," he says of what he calls the "unhealthy co-mingling of medical and commercial interests."

Drug companies funding parent groups is "fairly standard practice," says Ciba spokesman Todd Forte, and Ciba funds go to specific educational projects. For example, Ciba funded Spanish translation of CHADD literature and last year's public service announcement.

"We see everything right" in giving CHADD monies, Forte says. "We see it as an ethical responsibility to give back to the community. . . . We'd be remiss if we didn't."

CHADD co-founder Harvey Parker also denies wrongdoing. "In our literature, you will not find that CHADD markets methylphenidate or Ritalin other than in the context of overall treatment programs for children with ADD." CHADD doesn't hide its connection with Ciba-Giegy, he says. Adds Forte: "Everyone knows we have a presence."

But the DEA was not aware of it when CHADD petitioned last year for reclassification of methylphenidate. Neither was the American Academy of Neurology, which co-signed the petition.

Also caught unaware: the U.S. Department of Education. After being tipped off to the Ciba-CHADD link by a *Merrow Report* documentary on PBS late last month, the department pulled a $100,000, CHADD-produced video that was distributed to educators in February.

"Upon reviewing it, we find the message did not clearly represent our position," spokeswoman Kathryn Kahler says. "Medication alone may not be the most appropriate position."

That's CHADD's mantra, too, insists Parker, who preaches medication combined with behavioral programs.

Just recently, Parker says, CHADD created a task force to look into Ritalin abuses, of which he says CHADD was unaware when it asked restrictions be lifted.

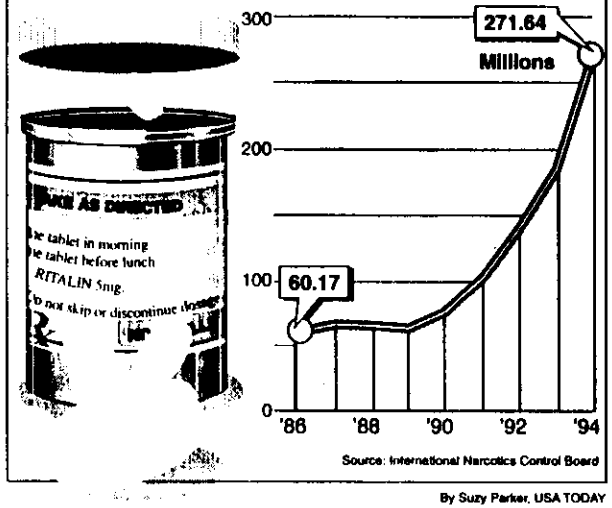
Ciba's Forte downplays abuses. "Most information we're monitoring does not show this to be an epidemic. It is isolated incidents." He says street abuse of Ritalin is "an unfortunate statement on society, more than on Ritalin itself." Abuses at the school level, he says, can be avoided if fewer parents entrust their children with prescriptions.

The DEA's report has been submitted to Donna Shalala, secretary of Health and Human Services, and Haislip is waiting for her recommendation before deciding whether methylphenidate will be reclassified.

He's hoping for a quick response. "We don't have the liberty of waiting a year."

Increasing dosage

The calculated consumption of methylphenidate, the generic form of Ritalin, in the United States. The figures represent millions of daily 25 mg. doses:



By Suzy Parker, USA TODAY

"A lot of people don't know Ritalin is like cocaine. That doesn't mean don't use it. . . . It can be very dangerous and must be treated with respect."

— Gene Haislip, the Drug Enforcement Administration's head of diversion control

Properly used, the drug helps kids concentrate

Ritalin is a lifesaver for some parents of children with attention deficit disorders, parents and experts agree.

It can make a "night-and-day" difference for some, says Harvey Parker of Children and Adults with Attention Deficit Disorders. "It takes away the grueling day-to-day frustration that both they and their children have."

Nancy Nagy, of Fairfax, Va., whose fifth-grader takes the medication, knows what he means. "When the medicine's not working, then behavior management doesn't work and all the accommodations in the world won't work," she says.

"It all has to be kept on track, a full-time job for two adults. It takes a whole team of professionals to keep it going in sync."

The cause of ADD is unknown, though studies point to a neurobiological disorder in the front of the brain. The most recent, presented at CHADD's annual conference this past weekend in Washington, shows certain areas in the brains of boys with ADD are smaller than those of boys without ADD.

Children with ADD are inattentive and impulsive; some are hyperactive, too.

Ritalin is an effective treatment in 75%-90% of cases. The drug acts as a stimulant for adults but has the opposite effect on children: It calms them and helps them weed out extraneous stimuli, enabling them to focus.

"It is not a dangerous drug," says Parker, whose group, along with the Academy of Neurology, is working to have methylphenidate taken out of the class with amphetamines and morphine. "It's the most widely studied medicine in the pediatric literature."

But it's not a panacea, he adds. "It must be used with other treatments."

'90s teens find a new high by abusing Ritalin

By Anita Manning
USA TODAY

Some teen-agers in search of a new way to get high are snorting or injecting Ritalin, a drug prescribed to treat attention deficit disorder in children.

Police in Muskegon, Mich., who charged a high school student last week with selling his medication to another student, say some teens crush Ritalin tablets into powder and snort it like cocaine, while others cook it and inject it, according to a report by the Associated Press.

This example of kids' abuse of a prescription drug has experts shaking their heads, but "it's not a surprise," says Tony Tommasello, director of the office of substance abuse studies at the University of Maryland's School of Pharmacy. He says Ritalin, a stimulant, was abused by teens in the 1970s.

"Its use in hyperactivity is very effective for children properly diagnosed, but for kids who don't have the condition, crushing the tablet and snorting it would produce a stimulant high," he says.

Ritalin can cause an increase in blood pressure and heart rate, along with enhanced mental alertness and energy, and an increased sense of self-confidence, he says.

"These things feel good, but when the drug wears off, there's a price to pay," he says, including depression, apathy, loss of concentration and memory.

Ritalin is "as dangerous as use of any other stimulant," he says. Continued use over long periods, or a single large dose, can produce disastrous results, including heart attack and stroke. "Those who are injecting it are exposing themselves to tremendous risks," he says.

The encouraging news: Use of stimulants by high-schoolers has increased only slightly since 1992, according to a national survey of teen drug abuse by the University of Michigan's Institute for Social Research. In 1994, 15.7% of 12th-graders said they had used them, up from 13.9%.

WHAT CAN RITALIN CAUSE?

Nervousness*Fever*Insomnia
Dermatitis*Urticaria*Nausea
Erythema Multiforme
Necrotizing vasculitis*Angina
Thrombocytopenic Purpura
Anorexia*Dizziness*Weight Loss
Headaches*Palpitations*Anemia
Dyskinesia*Tourette's Syndrome
Blood Pressure Changes
Tachycardia*Toxic Psychosis
Cerebral Arteritis*Depression
Cardiac Arrhythmia*Leukopenia
Scalp Hair Loss*Abdominal Pain
Joint Pain*Pulse Changes
Drowsiness or Skin Rash

-Any more questions?

*According to the Physicians' Desk Reference 47th Edition

The nervous system's control over the immune system

Subluxations caused neurological stress which can impair immune system response, and can be a factor in aging.

Tilley, R.M. Practical aspects of the treatment of chronic systemic infections. *J.A.O.A.*, 1946, May, 391-395. (Improper body mechanics can predispose to systemic infection, and spinal manipulation can help induce autonomic balance and increase white blood cell count.)
Gordienko, A.M., et al. Control of immunogenesis by the nervous system. *U.S. Dept. of Commerce*, 1958, Publication TT60-51069. (The nervous system controls the immune system response.)
Stern, E., et al. Neuroendocrine factors in experimental carcinogenesis. *Ann. N.Y. Aced. Sci.*, 1969, 164, 494-507. (The nervous system is related to stress, cancer, and death.)
Bjorksten, J. The crosslinkage theory of aging clinical implications. *Camp. Ther.*, 1976, 2, 65-74. (Stress affecting the nervous system can be a cause in aging.)

Subluxations and mental health

Certain studies have revealed chiropractic manipulation as effective in the treatment of mental disorders.

Sachar, E.J. Hormonal changes in stress and mental illness. *Hosp. Pract.*, 1975, 10, 49-55. (Neuro-hormones are implicated in mental disease.)
Mentzer, H.Y. Skeletal muscle abnormalities in patients with affective disorders. *J. Psychiatric Res.*, 1973, 19 43-57. (A correlation between neuromyopathies and psychological disorders is discussed.)
Quigley, W.H. Physiological psychology of chiropractic in mental disorders. Mental Health and Chiropractic: *A Multidisciplinary Approach, Schwartz, H.W. (ed.)*. Chap. 10, Sessions Pub., N.Y., 1973 (Out of 72 cases studied, 70% of schizophrenics and 33% of brain syndrome patients were successfully treated by chiropractic manipulation.)

THE NEW YORK TIMES, TUESDAY, DECEMBER 6, 1994

Tracing the Brain's Pathways For Linking Emotion and Reason

By SANDRA BLAKESLEE

IMAGINE walking along a jungle path in the twilight and hearing a lion roar. Your skin turns clammy, a knot forms in your stomach and you can taste the fear rising in your throat.

Now imagine walking along a zoo path at the same time of the evening and hearing the same sound. This time you do not feel afraid.

The reason, scientists say, has to do with how emotions and feelings are processed in the brain. External sensations (the roar) and memories (lions are locked up in the zoo) interact along complex circuits to generate our emotional reactions — in this case, to not be afraid.

Those neural circuits — actual networks of cells that crisscross the brain and send projections throughout the body — are now being described in unprecedented detail by a handful of neuroscientists who say the biological nature of emotions and feelings can at last be described.

Until recently, brain researchers focused most of their attention on the biological basis of cognitive processes such as perception and memory, said Dr. John Allman, a professor of neurobiology at the California Institute of Technology. They tended to ignore emotion, he said, in the belief that emotions and rational thought are separate activities and that emotions are just too difficult to understand biologically.

An emotion like fear has been conserved through evolution, a researcher says.

This attitude is now changing, Dr. Allman said, as researchers have come to realize that emotional brain circuits are just as tangible as circuits for seeing, hearing and touching. In this view, emotions and feelings are not, as poets and philosophers say, ephemeral reflections of the human soul. Rather, emotions are largely the brain's interpretation of our visceral reaction to the world at large.

Pioneering experiments on emotions have turned up some interesting concepts:

¶Emotional memories involving fear are permanently ingrained into the brain; they can be suppressed but never erased.

¶The body, as represented in the brain, is the frame of reference for what humans experience as mind. Our thoughts and actions — our sense of subjectivity — uses the body as a yardstick.

¶Emotions are an integral part of the ability to reason. While too much emotion can impair reasoning, a lack of emotion can be equally harmful.

¶Gut feelings and intuition are indispensable tools for rational decision making; without them humans would have great difficulty thinking about the future.

Much of the new information about the neural circuits underlying emotion stems from experiments on animals. Dr. Joseph LeDoux, a professor of neurobiology at New York University and a pioneer in such research, said that a basic emotion like fear and the circuits that support its expression were highly con-

Continued on Page C3

Tracing the Brain's Pathways For Linking Emotion and Reason

Continued From Page C1

served through evolution. Understanding fear mechanisms in animals, he said, sheds light on human fears and may help researchers study other emotions. The work is important because many psychiatric disorders, including anxiety, phobias, post-traumatic stress syndrome and panic attacks involve malfunctions in the brain's ability to control fear, he said.

Much of the research is centered on the amygdala, a tiny structure deep in the brain that is crucial for the formation of memories about significant emotional experiences. Damage a rat's amygdala and it "forgets" to be afraid.

To trace the cell networks involved in fear, Dr. LeDoux and his colleagues first conditioned rats by pairing a loud noise with a mild electric shock to their feet. The rats soon showed fear when they heard the noise without the shock. The researchers presume fear conditioning occurs because the shock modifies the way in which neurons in several brain regions interpret the sound of the stimulus.

In time, however, the rats gradually lose their fear of the sound. Some part of the rat's brain outside the amygdala seems to control the fear response, Dr. LeDoux said. But it does not eliminate it.

In further experiments, in which researchers damaged a small region of the rat forebrain, the rats not only did not lose their fear but remained afraid much longer, indicating that the frontal region helps control emotional memories forged in the amygdala and may prevent responses that are no longer useful.

This finding explains why a person who hears a lion's roar in a zoo is not afraid, Dr. LeDoux explained. Input from the frontal area of the brain helps override the fear. But problems with this circuit may underlie phobias, he said. Some people respond with fear to a stimulus such as a lion's roar, even though they know there is no danger. "You can tell phobics all day long, 'This will not hurt you,' " Dr. LeDoux said, "but they don't believe it."

While animal experiments have helped scientists trace exact pathways for fear, the question of how emotions such as joy, sadness, anger or shame are wired in the human brain is more difficult to answer. Psychologists and philosophers have long examined emotions and their impact on behavior, but they have done so by observing what people do and say. Few have ventured into the so-called "black box" of the brain.

But advanced imaging techniques that can look inside the brains of subjects while they talk about feelings and experiences are beginning to lead to a neurobiology of emotions. People with brain damage are particularly revealing in this regard. When specific parts of the brain are damaged, patients may lose the ability to feel emotions, sometimes with disastrous consequences.

Pioneering work in this area is under way at the University of Iowa Medical School, where Dr. Antonio Damasio leads a team that is probing the brains of stroke and accident victims whose personalities have been affected by their injury. Dr. Damasio, a neurologist, recently described his ideas on emotions in a book called "Descartes' Error" published by Grosset/Putnam. The French philosopher René Descartes held that morality, reason, language and spirit were held in the lofty brain whereas biology, emotions and animal instincts reside in the body, Dr. Damasio said. The new neurobiology of emotions seeks to overturn this false dichotomy.

> A finding explains why a person who hears a lion's roar in a zoo is not afraid.

Three groups of patients provide clues to how emotions are processed in the brain, Dr. Damasio said.

One group suffers from damage to a small part of the prefrontal lobe, just behind the forehead above the eyes; they invariably undergo a character change. One patient, called Eliot in the medical literature, approached life on a neutral note after his brain injury, Dr. Damasio said.

"In my many hours of conversation with him, I never saw a tinge of sadness, impatience or frustration," Dr. Damasio wrote in his book.

Moreover, Eliot had difficulty making ethical decisions. "I became intrigued with the idea that reduced emotion and feeling might play a role in Eliot's decision-making failures," Dr. Damasio said. Perhaps this area of the brain is involved in personal and social dimensions of reasoning, he said.

The second group of patients suffers from damage to an area on the right side of the brain where sensory signals from the body are processed. Called neglect patients, they exhibit a strange behavior that can be temporary or long-lasting. Although they are paralyzed on the whole left side of their bodies, Dr. Damasio said, when asked if they can tie their shoes or wave their left arm, they say, "Of course I can." Ask them to do it and they say, "O.K., happy to oblige." When they fail to move and the researcher asks why, they say, "Give me time. I'll do it!" Eventually they may say that they don't feel like it now and will do it later.

In neglect patients, the damaged area of the brain is responsible for processing information about the external sense of touch, temperature, pain, internal sense of joint position, state of the limbs, trunk and head, visceral state and pain. This brain area and other regions that it talks to provide the brain with a comprehensive, integrated map of the body's current state of being, he said. While both sides of the brain collect such information for representing extrapersonal space and emotion, the right side is dominant. If the left hemisphere is damaged, neglect does not occur.

A third type of patient has bilateral damage to the amygdala, Dr. Damasio said. Such patients have difficulty recognizing fear in themselves and in others. They would have no qualms about walking down a dangerous street at midnight, he said, and often get themselves into trouble.

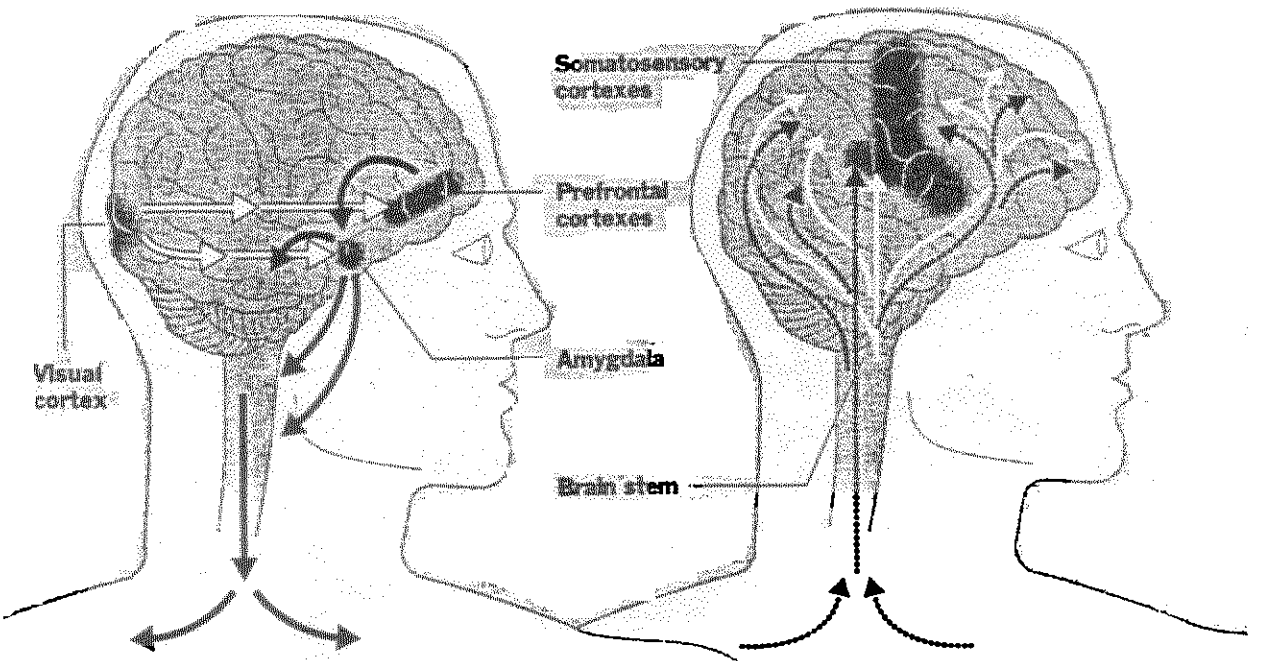
The prefrontal lobes, amygdala and right cerebral cortex form a system for reasoning and decision-making in social and personal domains and give rise to emotions and feelings, Dr. Damasio said.

The amygdala and prefrontal regions evaluate a visual stimulus conceptually in terms of earlier experience, Dr. Damasio said, and together they generate a response that is transmitted along two pathways, one to the body proper and one back to the brain.

"The brain gets a double wham-

Following the Brain's Wiring Diagram for Emotional Reactions

Researchers now believe that traceable physical pathways are responsible for emotional reactions. The necessary basis for feelings, the new research holds, is a perception of both body changes and cognitive changes induced by the evaluation of a particular stimulus in terms of earlier experience.



PROCESSING A PERCEPTION

The perception of a trigger stimulus, like the face of a loved one, in the visual cortex and the association cortexes causes parallel signals to go to limbic system structures like the amygdala and to prefrontal cortexes. The prefrontal cortexes send signals to the amygdala, and amygdala signals the hypothalamus and brain stem.

PROCESSING THE REACTION

Signals from the hypothalamus and brain stem generate an emotional body state, which is then signaled to several somatosensory cortexes. But the neurotransmitter nuclei in the brain stem also signal many areas of the cerebral cortex and subcortical regions with neurotransmitters. Signals following these pathways cause widespread alterations in how the system handles information.

Source: Dr. Antonio Damasio/University of Iowa

The New York Times; Illustration by Baden Copeland

my," Dr. Damasio said. It receives a barrage of signals from the body, describing how the body has changed. For instance, fear may be accompanied by the gut contracting, the heart racing and skin turning pale. This is the core of the emotional state that goes to the somatosensory cortex, which is dominant in the right hemisphere.

"At the same time," Dr. Damasio said, "the signal from the brain stem spritzes chemicals and changes the way brain networks operate. The result is that you become aware of your body changes and you also become aware of the fact that something has changed in your mind process."

An emotion or a feeling is a combination of these two things, Dr. Damasio said. The essence of an emotion is the collection of changes in the body state and mind state that are detected by these circuits, he said. A feeling is the experience of those changes.

Primary emotions such as fear and hunger are deeply ingrained in these circuits, Dr. Damasio said. Secondary emotions such as melancholy and shyness are variations on primary emotions and result from experience involving memories and connections between categories of objects and situations.

"The overall function of the brain is to be well informed about what goes on in the rest of the body and about how the body interacts with the external world in order to survive," Dr. Damasio said. "We monitor the background state of our bodies all the time. Hence we usually have an answer to the question, 'How do you feel?' "

In this view, a brain has no mind until it can display images internally and manipulate those images in a process called thought, Dr. Damasio said. Thought eventually influences behavior by helping to predict the future, to plan and choose the next action.

In this view, brain and body coevolved, "If there had been no body, there would be no brain," Dr. Damasio said. When a brain is deprived of bodily sensations, as in severe spinal cord injuries that result in paralysis from the neck down, the mind is affected, he said. Quadriplegics often describe themselves as being blunted of emotion, Dr. Damasio said.

Dr. Damasio also has an explanation for the state of mind called intuition. To explain why people have emotions and feelings in the absence of strong stimuli, he proposes the idea that the brain can generate signals internally from the amygdala and prefrontal cortex and can send them directly to the somatosensory cortex, in a kind of "as if" emotional loop. Such emotional responses and feelings are less vivid than externally generated ones, Dr. Damasio noted, but they can drive behavior. They are also a factor in intuition — the seemingly mysterious mechanism by which we arrive at a solution without reasoning toward it, he said.

Atlanta Constitution
***** Thursday, March 16, 1995 A7

Brain signal breakdown clue is found

By Bill Hendrick
STAFF WRITER

Scientists have discovered tantalizing evidence of how brain cells receive, organize and transmit messages that — when blocked — can cause everything from kidney failure in children to learning problems to memory loss, the journal Nature reported today.

The research is aimed at producing drugs to cure or reduce the severity of such ailments, said Dr. John Merlie of Washington University in St. Louis, who co-wrote the Nature study with Dr. Joshua Sanes.

In the first study of its kind involving living animals, they discovered that a specific molecule — s-laminin — is involved in "communication" between brain cells.

In an interview, Merlie said that understanding how such communication takes place should lead to better knowledge of how such connections change during learning and fail during neurological and psychiatric illnesses.

They said they inadvertently may have discovered that s-laminin may be present in kidneys as well as in muscles, and thus may be a cause of kidney failure. It also may be involved in muscle weakness and problems such as recall of long-term memory.

In midlife, millions of people experience memory loss and have trouble recalling the names of people they have met only days before, he said.

DID YOU KNOW?

"EVERY FUNCTION OF THE HUMAN BODY IS UNDER CONTROL OF THE NERVOUS SYSTEM."

- Grays Anatomy, 29th edition, p.4

New Survey Rates Chiropractors

Exactly how effective is chiropractic care when measured against traditional medical treatment? According to *Prevention*, which claims to be America's leading health magazine, ". . . clearly, chiropractors are doing something right."

Prevention has been widely criticized in the past for ignoring or trivializing alternative methods of health care, and for promoting the "pill for every ill" approach to medical problems. The October 1989 issue of the magazine contains the results of an exclusive survey on chiropractic care. *Prevention* commissioned the survey in an attempt to determine if people who go to chiropractors find the relief they are looking for. Based on the answers from people who had seen a chiropractor at least once, the survey proved to be an impressive show of support for the profession: three out of four people polled said that chiropractors were successful in correcting their health problems. On the whole, chiropractic patients realized greater relief from pain, were happy with the number of visits required and found chiropractors friendlier and more supportive than medical doctors.

Although some patients were aware that chiropractic care was effective in correcting the causes of migraine headaches, neck pains, whiplash injuries, scoliosis, allergies and chronic fatigue, most still sought help for back problems. The *Prevention* survey was another step in documenting the positive results that can be achieved through chiropractic care. According to the magazine:

- seventy-six percent said they would go back to a chiropractor, the majority of which would do so "without a second thought";
- nearly sixty percent of those who noticed a difference felt they received more lifestyle counseling, more advice on exercising and more nutritional information from their chiropractor than from a medical doctor;
- three times more respondents said their chiropractors are friendlier and more concerned about their patients than medical doctors;
- three-quarters of respondents selected their chiropractor based on recommendations from friends, relatives or neighbors, while fourteen percent let their fingers do the walking through the telephone yellow pages or made their selections based on advertisements. Only five percent were referred by a medical doctor. ■