June 11 - 17 Men's Health Week

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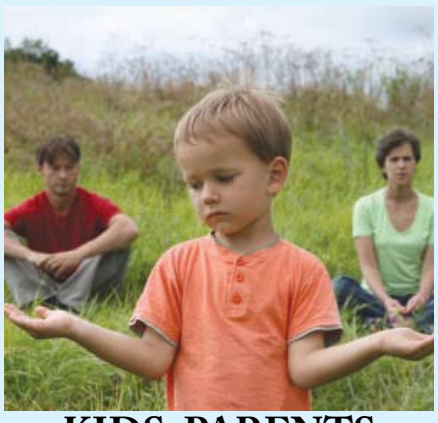
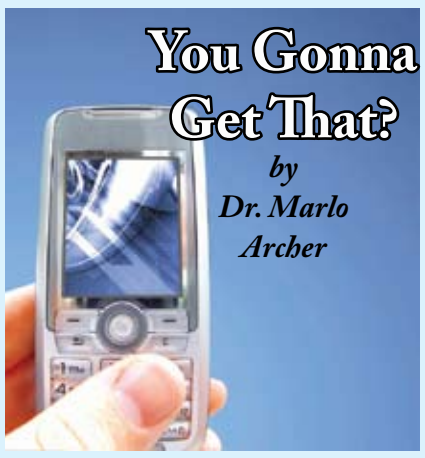
June 2012

INSIDE THIS EDITION



KIDS, PARENTS AND DIVORCE
by Elisabeth Davies



PLUS:
When Life Doesn't Play Fair
by Thomas Crum

10 Signs Your Child Has an Eating Disorder – and How You Can Help

By Dr. Carolyn Coker Ross

If your child develops an eating disorder, who will be the first to know? It could be a classmate who wonders why their friend spends most of their lunch break in the restroom, or an observant teacher who notices a student's sudden lack of focus. Will these concerned individuals intervene on your child's behalf?

It is the hope of most parents that they will be the first to recognize the signs of an eating disorder in their child. After all, parents know their children better than anyone else and are often in the best position to know when something is amiss. But eating disorders are insidious diseases marked by denial and secrecy. A child who has been affected by an eating disorder may go to extreme lengths to hide their behavior.

Signs of an Eating Disorder

Some signs are easier to detect than others. Parents should be on the lookout for the following:

Changes in Weight – Small variations in weight can be normal, but dramatic changes in a short period of time can signal a problem. Weight fluctuations don't happen in a vacuum. Even more important than the weight is looking at the whole child to understand what is happening in their life. Perhaps there's a bully at school or a traumatic experience the child hasn't shared with you yet. Often, challenges arise when a child is going through a significant transition, such as their parent's divorce or graduating from middle school to high school.

Unusual Eating Habits – Young people may attempt to disguise an eating disorder by making excuses for their unusual behaviors. When mealtime comes around, a child struggling with an eating disorder may repeatedly make excuses to avoid a family meal or play with their food by moving it around on the plate or cutting it into small pieces to make it look like they ate something. A child with bulimia might leave the table immediately after eating and spend unusually long periods of time in the bathroom, often running the sink or shower to mute any noise.

Changes in Mood – It is normal for teenagers to fly off the handle from time to time. But if the child gets emotional every time you speak to them about any little issue, there may be a problem. Signs to watch out for include irritability, spending a lot of time alone in their room, and appearing sullen, not just every once in a while but on a daily basis. You know what is typical for your child. Keep an eye out for a significant and persistent shift in mood.

Changes in Behavior – Changes in friendships are another signal that something may be amiss in your child's life. If the usual friends stop calling or coming to visit, or if your child has no friends, it's time to find out why.

Another problematic change in behavior is a growing obsession with exercise. While fitness is important for overall health, it is possible to overdo it. Children who exercise many hours per day, especially when the workout is in addition to involvement in sports at school, put themselves at risk for physical injuries as well as eating disorders. Working out in the middle of the night or refusing to take a day off even when they are sick are other signs that the behavior has become too extreme.

Early Development – Children who reach puberty before their peers are likely to feel "different" and uncomfortable in their changing bodies. A child's peers may use the weight gain and physical changes characteristic of puberty as fodder for bullying, teasing and ridicule, which can trigger extreme methods of dieting that can lead to an eating disorder.

Involvement in Weight-Focused Sports – Certain sports do not encourage a balanced approach to health and fitness. In gymnastics, dance and swim, for example, coaches and teammates may be particularly harsh about a child's weight. A child may become so self-conscious about their weight or appearance that they resort to disordered eating or dieting to please coaches.

Family Conflict – Stressors in the family system can contribute to an eating disorder. When the family faces addiction, financial turmoil, illness, death or other struggles, children are less likely to feel safe and secure. An eating disorder may become a way to feel in control of some aspect of their life.

Low Self-Esteem – Having a poor self-image dramatically increases the likelihood that a child will develop an eating disorder. Although this is a difficult symptom for a parent to assess, a few behaviors to be alert to are constantly putting down themselves or others,

Eating Disorders *continued page 9*

This is Your Brain in Love: *The Sweet Science of Attraction, Sex and Romantic Attachment*

By Jeffrey C. Friedman, MHS, LISAC

"The meeting of two personalities is like the contact of two chemicalsubstances: If there is any reaction, both are transformed.
—Carl Jung

Jung was right. No experience in life is more transformative than falling in love. Love has a remarkable ability to open our hearts and, if tenderly nurtured, bind them to the hearts of others. No single emotion has as much power to enrich lives, even heal nations. But then love is less a single emotion than a patchwork of many. Its boundaries are vast and deep and encompass an ever-evolving medley of the most diverse feelings.

And love is a force so enigmatic that, for millennia, its investigation has been primarily the domain of philosophers, artists and poets. Over many centuries, those whose craft is to define the indefinable have labored to chart love's unfathomable waters, from its balmy, placid promise, through the stinging chop of its sudden squalls and down into the sightless depths of its bitter sorrows.

But, lately, the waters of love have been washing onto the dry and ordered shores of neuroscience, a place where all emotions,

even love, have their distinct and measurable neurobiological substrates. Thanks in part to a new generation of neuroimaging technology, science can now offer new insight into the limbic pathways that govern attraction, sex and romantic attachment. Few would have guessed that it would be white-coated researchers, rather than the world's artists and poets, to whom love would relinquish its final secrets, revealing truths that may help us fully sound love's hidden depths.

The Oxford English Dictionary defines love as ***"an intense feeling of deep attraction or fondness for a person or a thing – a sexual passion or sexual relations."*** It is a definition that is both accurate and dense, though a bit of resonance is felt when the dictionary also tells us that the word "love" shares common etymological roots with the words "desire" and "libido."

But then desire and libido are among the emotional states that, recently, have been subjected to neuroscientific investigation. And what has emerged from that investigation is this: That, viewed through a neurobiological prism, love is a complex chemical alchemy brewed in pleasure and reward pathways deep in the brain - the very same pathways that drive instincts that most powerfully motivate and steer our behavior. And the neurological pathways of love are there because love serves the highest and most crucial of biological goals: it is only because of love that the human race thrives and survives.

Attraction: Love is Blind

"There is always some madness in love. But there is also some reason in madness.
—Friedrich Nietzsche

Brain in Love *continued page 2*

publisher's note

It Ain't All About Me Anymore

By Barbara Nicholson-Brown

I don't like using the word ain't. My parents broke me of that habit when I was about 7 years old, yet it seems to work for what I want to say here.

Writing this column a few weeks before my 22nd anniversary of sobriety, I'm reviewing the changes — rather miracles that have happened during the last 21 years. One biggie is ***"it just ain't about me anymore!"***

Like many addicts and alcoholics, even at my lowest point and on the way to hitting bottom, it was still all about me. What's going to happen to me? What can you do for me? Who's buying the next round? (Not me!) What does everyone think of me? And on and on, all about me.

Guess when things turned? When I dialed the phone on June 16th 1990 and cried out to a friend, Help Me! That was all she needed to hear. It was the beginning, the first infant step toward recovery — gratefully I'm still on the road of this amazing journey.

In sobriety my thinking has changed to being of service, helping another by sharing my story, not the "battle zone" as much as the hope and joy and freedom I now have. In the big book of Alcoholics Anonymous the Promises reads, "We will lose interest in selfish things and gain interest in our fellows. Self-seeking will slip away," something I never considered when I was active in my addictions.

Today I'm blessed with a career in helping others finds their own miracles through this newspaper and the Art of Recovery Expo. Most everyone in my life is involved in the field of recovery, from friends who work at the finest treatment centers in the country, to therapists and interventionists who dedicate their lives to fighting this disease by helping others discover the solutions we are graced with.

I'm honored to work with many wonderful women from all walks of life who trust me enough to share their secrets, shame and desire for a life on this path. I've learned when I get to "into myself and my head" to take my seat at a 12 step meeting – reach out and help someone else. It works it always does. Today I know how to listen, to give, to care and to love — no conditions. It's a miracle. It ain't about me; it's about us on this journey together.

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Brain in Love *from page 1*

Romance typically starts with attraction, a pleasant feeling carrying the twin promises of passionate adventure and the happy hope of finding an ideal mate. In the attraction stage of romance, lovers often focus on the emotional, rather than sexual, expression of their attraction. Biological anthropologists now have uncovered evidence that indicates romantic attraction evolved as a necessary foundation for attachment, and that our survival as a species depends on our being biologically wired for both. While simple lust drives us to seek a variety of sexual partners, attraction persuades us to narrow this drive to the pursuit of a specific mate. The selection of a single partner must happen before a couple stands any chance of forming attachments strong enough to keep them together during the time their children are dependent on their parental care.

But sexual or otherwise, attraction is a feeling that arises in pleasure and reward pathways in the amygdale — a double-globed structure in the neocortex that assigns emotional resonance to people, things and occurrences in our environment. In infancy, it was our amygdale that had us cooing contentedly when we recognized our mother's face.

The amygdale is a part of the brain that has no ability to reason and can't access language or spatial awareness. It is a brain structure that functions solely on an emotional level. The amygdale decides what we like and what we don't — what we are drawn to and what we fear. In regard to attraction, it is the amygdale that decides who is "hot" and who is not.

And, not surprisingly, the amygdale is involved in sexual arousal too. In fact, stimulating their amygdale in just the right way can induce ovulation in women and produce an erection in men. Sexual desire often accompanies attraction because the same cortical regions activated in sexual arousal can also be triggered by an attractive face, form or personality. It is a well-known maxim in advertising that sex sells. But whether this is true or not, it is a biological fact that beauty sells sex.

Once our amygdale has pronounced a person desirable, that assessment is sent on to the brain's frontal cortex (a part of the brain that organizes behavior toward specific goals) where feelings of attraction can be translated into the behavior of pursuit. And love's sales pitch can also have the dual effect of influencing our environment while distorting our subjective reality. As is known in other species, loving attraction in humans may trigger the release of pheromones — hormones capable of acting outside the body and which can generate social responses in others. And just viewing the face of our beloved can disable a part of our brain that is involved in critical assessment. This effect may account for our tendency to overestimate our lovers' virtues while, at the same time, overlooking their imperfections. It is a neuroscientific fact that, while love may not be blind, its vision is often far from perfect.

But we all know romantic attraction can be stressful too. Everyone who has ever been in love knows that falling in love involves the element of risk. What if our tender feelings are not reciprocated? What if our loving advances are rejected? Neuroscientists now believe that stress related to the emotional vulnerability characteristic of the attraction stage love may lay a biological foundation needed for the subsequent life task of forming strong romantic ties with our partner. Mercifully, the brain responds to the stress of initiating a romantic relationship by mobilizing neurotransmitters capable of calming anxiety and minimizing stress-related avoidance.

Sex: The Neurobiology of Passion

The red rose whispers of passion,
And the white rose breaths of love;
O, the red rose is a falcon,
And the white rose is a dove.
— From The White Rose
by John Boyle O'Reilly

The desire for sex is a powerful, instinctive drive coded in the deepest part of the human brain. Our sex drive is more than just simply adaptive; it, too, is a force critical for the survival of our species. The desire for sex occurs in the right hemisphere of our brain — the one primarily involved in lust and sexual pleasure. This finding at first surprised researchers who knew that the left hemisphere is the brain region usually activated by pleasurable activities. The right side of the brain also has been found to be especially active in patients who suffer from hypersexuality and sexual addiction.

And sex can be as addictive as the most powerful of drugs because, just like a drug, sex mobilizes a laundry list of feel-good neurotransmitters, including dopamine, adrenalin, endorphins, and vasopressin — chemicals known to promote feelings of arousal, pleasure, connectedness, calm and well-being. Vasopressin and oxytocin, the so-called "cuddle hormones," also released during sex, help to create feelings of attachment and trust in sexual partners. Even a loving caress can make for emotional bonding. Recently identified sensory-emotive neural pathways have been shown to actually transform the pleasant sensation of a tender touch into feelings of attachment and affection.

And at sexual climax, orgasm lets loose a riot of dopamine, endorphins, serotonin and oxytocin throughout the brain, toppling lovers into a happy state of ecstatic abandon. During the bliss of orgasm, the boundaries of sexual partners' bodies seem to dissolve and lovers can experience a sense of melding together. And orgasm can also trip a brain circuit called the mesolimbic dopamine pathway — a powerful reward network well known to all who work in the field of addiction. The mesolimbic dopamine pathway is a brain circuit key to the reward and reinforcement of drug use, and is a neural pathway now implicated in several biological theories of addiction.

In that spell of happy, exhausted repose as an orgasm resolves, serotonergic activity (promoting satiety) increases to supplant the orgasm's initial dopaminergic energy (facilitating pleasure). Vasopressin and oxytocin also released during orgasm reinforce feelings of

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trust and emotional bonding between sexual partners. In fact, the amounts of oxytocin and vasopressin mobilized during orgasm actually increase as lovers' emotional attachment deepens. Lovers who fire together, it appears, wire together.

The Biology of Romantic Attachment

Love is the blossom where there blows
Every thing that lives and grows
-From Wooing Song by Giles Fletcher

Romance is the heady spice of love, the ingredient that gives love its varied, appetizing, flavors. Romance combines a delightful sense of drama with the reward inherent in forming a deep emotional attachment. For years historians, and even some psychologists, have thought romance to be a man-made notion — created in the last thousand years as a component of the Medieval ideal of chivalry. But from a neurobiological perspective, romantic attachment is less something we created and more likely something that created us. There is now strong evidence that romance is an eons-old bio-emotional potential, a drive that appears to be hardwired in the oldest part of the limbic brain. Evolutionary biologists now believe that the neural circuits that govern romance evolved as a necessary adjunct to our biological system of attraction. Now it is known that romance, too, has its own distinct neurobiological underpinnings.

Though its expression can vary from culture to culture, romantic attachment seems to be practically universal. A 1992 survey of 166 societies by biological anthropologists Jankowiak and Fisher found compelling evidence of romantic love in all but 19. And there seems to be a good biological reason why romance is pan-cultural. Romantic attachment, too, helps assure the survival of our species by making emotional bonds that keep partners together for the benefit of their dependent children. And, though sex and attachment can be related, they are not really the same thing. Though sex and attachment often occur coincidentally, either can occur independently. Our brains allow sex and attachment to arise singly or jointly by mediating sex and romantic attachment in overlapping parts of the limbic brain.

Because romance can be so intensely pleasurable, researchers were not surprised to find that the nerve bundles governing romance are those circuits rich in the pleasure neurotransmitter dopamine, a common ingredient in all the brain's love potions. Being in love can feel like having one's dopamine pump turned full on. Interestingly, the dopaminergic pathways activated when lovers are together are the very same pleasure and exhilaration circuits energized by psychostimulant drugs like cocaine and methamphetamine. The stimulant-like neurochemical response triggered by romance explains why our hearts pound and our palms sweat when we unexpectedly encounter our beloved. Understanding the dominant role exerted by dopamine in romantic love, some therapists are now advising couples who fear their love is growing stale to make lifestyle changes aimed at optimizing their brains' production of dopamine, activities like trying novel things together, engaging in regular aerobic exercise and eating freshly prepared, nutritious food.

Sweet Exhilaration

The exhilaration of love is made even more enjoyable because its passion is sweetened and mellowed by oxytocin and vasopressin, calming neurotransmitters also activated by romantic attachment. And as their love matures, partners' romance-inducing dopaminergic activity is gradually displaced by the mobilization of trust and attachment promoting oxytocin.

The discovery that oxytocin is so tied up with attachment has led some researchers to suspect that autism spectrum disorders — developmental disorders marked by difficulties in forming meaningful attachments — may be related to an imbalance of oxytocin. Infusing autism patients with oxytocin often results in a marked reduction of the disorder's characteristic repetitive behaviors.

"Women in love tend to have higher levels of testosterone while the testosterone levels of men in love appear to decline."

But love can be the source of immense hurt too. As pleasurable as it can be, love can feel miserable — like coming down with a sudden and severe case of obsessive-compulsive disorder. We do things we normally wouldn't, we ruminate about our lover, replaying past conversations over and over, wondering where he or she is. No matter how hard we try, we just can't get our lover out of our mind. The sweetest of romances can become fouled by the bitterness of obsession and jealousy. Defying every sane and rational notion, obsessive jealousy can kill our partner's love just by trying to keep it alive.

The temporary madness of love's obsession has its own neurobiological roots. Those under love's spell tend to have less available serotonin than those not in love. Serotonin is a neurotransmitter that helps to moderate mood and mediate the ability to quell impulse and compulsive thought. Serotonin levels in lovers can become dysregulated to the point where these levels approach the neurochemical profile of a patient who suffers from obsessive-compulsive disorder. And, in a few people, falling in love can create a dysregulation of serotonin sufficient to trigger an impulse control disorder like sexual addiction.

But it appears that we might need to be a little bit crazy for love to happen at all. The mood lability and happy impulsivity resulting from a slight depletion of serotonin might the neurochemical formula most conducive for feelings of romantic attachment. Medications that help to regulate serotonin (drugs like Prozac® and Paxil®) have been shown to impair some people's ability to have romantic feelings. And the long-term attachment that can grow out of romance may also be helped by the leveling effect being in love can exert on the hormonal differences between men and women. Women in love tend to have higher levels of testosterone while the testosterone levels of men in love appear to decline.

So, in brief, and according to the most recent science, the neurobiological metric of love seems composed of equal parts chemistry, physiology, and evolution — and is more a province of the limbic brain than of the heart. And while the field of brain science has done well in explaining the neurophysiological processes that give love its power to exhilarate and motivate us, it has done little to rob love of its sweet mystery.

But this is a mystery neuroscience will continue to try to solve. In coming years, new generations of electrophysiological recording devices — instruments which will allow scientists to collect data from many parts of the brain simultaneously — will likely yield new and more detailed data and perhaps a more nuanced understanding of the neurobiological bases of attraction, sex and romantic attachment.

But whatever information future research turns up, the world's poets, artists and philosophers might ultimately find it to be, at once, too much and too little. These gifted few are apt to conclude that, like two bodies toiling in the passion of love, all this science makes for a little heat but no real light. And when all the experiments are done and the data are finally tabulated and analyzed, those whose art is describe the many waters of love will likely find a neurobiological explanation of love every bit as dry as its dictionary definition. For these are people whose passion it is to plumb the mysteries of human experience, people who are willing to plunge deeply into the unknowable waters of love. And when they finally surface, they come to us with truths about love that researchers will never be able to provide. For love is not a science, but a sea of soundless depths and unknown boundaries, a sea of uncertain and varied weathers, a sea filled with waters that can buoy us up or draw us under, a sea that is by turns placid and stormy - a mystic sea in which scientists can only tread water but one in which artists and poets happily swim. But maybe that's too cold. Scientists fall in love too.

Jeffrey C. Friedman, MHS, LISAC is a primary therapist at Cottonwood Tucson, a 48-bed inpatient behavioral health treatment center located in Tucson, Arizona. He is a summa cum laude graduate of The School of Human Services of Lincoln University. Jeff's work at Cottonwood includes treating chemically dependent and disordered gambling patients, lecturing on the neurobiology of addictive and mood disorders, and presenting workshops on a range of behavioral health issues at counseling conferences throughout the Unites States, Europe and Asia. His articles have appeared in Counselor Magazine, Addiction Professional *and* Together AZ. *Jeff can be reached by email at* ***jfriedman@cottonwood-tucson.com****.*