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THE PRI BULLETIN

A NEWSLETTER OF SCIENTIFIC RESEARCH FOR QUALITY MEDICAL CARE

How to be a Quitter (The Inside Story)

by Jon F. Heiser, M.D.



There are two ways to stop smoking. Try your very best to resist using what may be the most addicting drug there is. Or just stop and say, "What's the big deal?" The key to Plan B is blocking your desire to smoke. What is desire, anyway?

Desire is a motivational state. A motivational state is an inferred internal brain condition used to explain changes in behavior that cannot be explained by observation. We are able

to specify the physiological basis of at least some of the internal states that motivate behavior. These motivational states involve neural mechanisms that are widely distributed throughout the brain, but hypothalamic mechanisms play a particularly prominent role. Hypothalamic?

The hypothalamus is a part of the brain that controls hormones and is the pacemaker of the sleep-wake cycle, amongst other vital functions. The hypothalamus is involved in maintaining physiological balance,

such as how much we eat and drink and whether we turn on the air conditioner or put on a sweater. The hypothalamus, through its control of hormonal release and control of the involuntary nervous system – that part of the brain and nervous system that regulates automatic adjustments in pulse, blood pressure and movement of the intestines – is also involved in the regulation of behavioral states such as stress and anxiety. Is that it?

No. Some motivational behaviors are not obviously connected to maintaining physiological balance, where the credo is "the more you need, the more you get." The experience of pleasure is one very important motivation not directly connected to biological imbalance or need. Although you can live without

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Depression and Diabetes

by Daniel E. Grosz, M.D.

Depression can strike anyone, but people with diabetes, a serious disorder that afflicts an estimated 16 million Americans, may be at greater risk. In addition, individuals with depression may be at greater risk for developing diabetes. Treatment for depression helps people manage symptoms of both diseases, thus improving the quality of their lives.

Several studies suggest that diabetes doubles the risk of depression compared to those without the disorder. The chance of becoming depressed increases as complications from diabetes worsen. Research

shows that depression leads to poorer physical and mental functioning; consequently, a person is less likely to follow a required diet or medication plan. Treating depression with psychotherapy, medication, or a combination of these treatments can improve a patient's well being and ability to manage diabetes.

Causes underlying the association between depression and diabetes are unclear. Depression may develop because of stress but also may result from the metabolic effects of diabetes on the brain. Studies suggest that people with diabetes

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The Dilemma of Caregiver Stress

by Alan L. Schneider, M.D.



America is growing older by the decade. While at the turn of the century those over age 65 made up only 4% of the population, today they account for

14% and by the year 2030 20% of all Americans will be in the geriatric range. With changes in health care, it is estimated that we will have many more individuals in the >85 age group and the number of individuals afflicted with Alzheimer's disease will rise from the current 4 million to an estimated 10 million or more over the next 30 years. Who will care for these people?

Traditionally, caregivers of Alzheimer's dementia patients have been spouses or adult children. Although nursing homes and assisted living facilities seem very widespread in Los Angeles, **the majority of our older citizens live at home.** Caring for individuals with an illness such as Alzheimer's disease creates incredible burdens. Given that the average lifespan of afflicted persons can be



up to 10 years or more, being the primary caregiver can be a daunting task.

Over the last 22 years there has been much interest in the health status of family members caring for individuals with chronic illnesses such as cancers and Alzheimer's dementia. We know that almost 70% of the spouses of dementia patients experience serious health problems that increase over time, including lack of sleep, fatigue, depression, and potentially increased rates of heart disease and cancer.

What do we need to do to help the helpers?

If you are a caregiver of someone with a chronic illness the first and most important task is to identify that like everyone else, your resources are limited and you are subject to stress. Attending to the early warning signs (short temperedness, poor sleep, or the new onset of physical aches and pains) should alert you that you may be overwhelmed. Make sure that you are getting plenty of rest and that you have stable eating patterns.

If you seem to be more irritable or find yourself frequently feeling sad or blue, consult your physician immediately. Remember, there are many more resources available than you may realize (such as the Alzheimer's Association local support groups). Here at PRI we are interested in caring for not only the patient, but also those that care for them.

The Professionals at PRI

Julie Teer, R.N., M.S.N., N.P. is a member of our clinical research team at the Northridge office. She brings to the position eight years of nursing experience, which includes working as an Emergency Room Nurse. A Southern California native, Julie grew up in Mission Viejo before moving to San Diego, where she earned her bachelor's degree from San Diego State University. She continued her education at University of California, Los Angeles, obtaining a master's degree in nursing with an emphasis in neuropsychiatry and earning a family nurse practitioner license. During graduate school, Julie was exposed to the research process and became interested in being part of the development and implementation of providing patients with the most current and cutting edge treatments. Julie enjoys cooking and gardening in her spare time. She also gives back to the community by volunteering once a week as a Nurse Practitioner at the Los Angeles Union Rescue Mission homeless clinic on skid row.



Julie Teer, R.N., M.S.N., N.P

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pleasure, “the more you get, the more you want.”

The neural systems that mediate reward and pleasure use a variety of chemical messengers and nervous pathways. Dopamine pathways in particular are important for reinforcement and pleasure. One commonly addicting drug that is reinforcing is nicotine. Nicotine increases activity in dopamine neurons, which increases the experience of reward or pleasure, regardless of the status of the pleasure system. (Yes, there is an upper limit. Nothing goes on forever.) Nicotine increases the level of dopamine in an important neural pathway leading to the pleasure center. Cocaine and amphetamines do the same thing. This enhancement of pleasure by dopamine may be the reinforcement for cigarette smoking.

So what does this mean to me? Are you suggesting brain surgery to quiet my nicotine-crazed mind? Well, it might help, but an easier way is by taking a pill. PRI is currently testing several new drugs that may block the rewarding effects of nicotine on the brain and hypothalamus. One acts by mimicking nicotine and increasing activity of the dopamine system, others increase activity in the pleasure center through different chemical pathways. All are thought to cancel the ability of nicotine to enhance pleasure. Hopefully these medications will also block one “dark” side of pleasure – craving – an imbalance driven motivational state, which is both unpleasant and increases behaviors directed toward relieving the craving– “I don’t want a cigarette, I need a cigarette” – at the expense of normal motives and behaviors on the brain’s agenda, such as working, socializing, eating, planning for the future, relaxing, and caring for one’s family.

Continued from page 1. **Depression and Diabetes**

who have a history of depression are more likely to develop diabetic complications than those without depression. People who suffer from both diabetes and depression tend to have higher health care costs in primary care.

Despite the enormous advances in brain research in the past 20 years, depression often goes undiagnosed and untreated. People with diabetes, their families, friends and even their physicians may not distinguish the symptoms of depression. However, skilled health professionals will recognize these symptoms and inquire about their duration and severity, diagnose the disorder, and suggest appropriate treatment.

Depression is a serious medical condition that affects thoughts, feelings, and the ability to function in everyday life.

Depression can occur at any age. National Institute of Mental Health-sponsored studies estimate that 6 percent of 9- to 17-year-olds in the U.S. and almost 10 percent of American adults, or about 19 million people age 18 and older, experience some form of depression every year. Although available therapies alleviate symptoms in over 80 percent of those treated, less than half of people with depression get the help they need.

Depression results from abnormal functioning of the brain. The causes of depression are currently a matter of intense research. An interaction between genetic predis-

position and life history appears to determine a person's level of risk. Stress, difficult life events, side effects of medications, or other environmental factors may then trigger episodes of depression. Whatever its origin, depression can limit the energy needed to keep focused on treatment for other disorders, such as diabetes.

PRI is conducting a placebo-controlled study testing the efficacy of the antidepressant escitalopram (Lexapro) in the treatment of clinical depression in diabetic patients. In order to be eligible for the study, patients must be between 18 and 65 years of age, must meet criteria for a Major Depressive Disorder of at least 4 months duration and must be suffering from type 1 or 2 diabetes mellitus for at least a year and for less than 10 years. The study will last 12

weeks. Participants will receive a physical examination, laboratory tests and study medication all at no charge.

If you or somebody you know are diabetic and suffer from a clinical depression, you are welcome to call PRI for a confidential phone screening. Remember that depression is a treatable disorder of the brain.

Depression can be treated in addition to whatever other illnesses a person might have, including diabetes. If you think you may be depressed or know someone who is, don't lose hope. Seek help for depression.



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What's New at PRI?

Depression and Diabetes

Approximately 20 million American adults suffer from diabetes and it is estimated that patients with diabetes have an incidence of depression that is nearly twice that of the general population. Studies have indicated that treatment of depression in diabetics improves blood sugar control and, consequently, may improve one's long-term health. All four PRI offices are very pleased to be involved in a new study specifically designed for diabetic patients experiencing depression.

Smoking Cessation

Smoking cigarettes is a difficult habit to break because nicotine is so physically and emotionally addictive. If you are at least 18 years of age and really want to stop smoking, for good, please call us. We have ongoing and/or forthcoming new smoking cessation studies at all four locations. Whether you choose to stop for your own personal reasons, or out of concern for those people closest to you, if your motivation to quit is strong, we encourage you to call PRI.

Adjunctive Treatment for Depression

There have been several major advancements in the treatment of depression over the past 20 years; however, even the most

recently marketed antidepressant medications are not 100% effective for each and every person for whom they are prescribed. Clearly, many patients only partially respond to any one medicine and the addition of an "adjunctive" [or additive] treatment often times assists people in more fully eliminating their symptoms of depression. PRI's Northridge and Riverside offices have been selected for a new study evaluating the effectiveness of a potential adjunctive treatment for depression. All four offices have new depression studies.

Alzheimer's Disease

Forgetting names and dates, and losing track of time are examples of small, yet persistent, warning signs that a loved one is experiencing some of the earliest signs of Alzheimer's Disease. The importance of early diagnosis and assistance is essential. Calling PRI can be the first step toward possibly slowing down the progression of the disease. Since the 1970s our research team has been very intensively involved in the quest for newer and more effective medications to combat Alzheimer's. We have both new and ongoing studies for patients [age 50 and above] at all four locations. If someone you know is experiencing some early signs of memory loss, we may be able to help!

For a confidential and supportive [no cost] evaluation or information on any of these programs, please call the nearest office.

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