

# District 48 Newsletter

March 2014

## Neuroscience and a G.O.D.

by Bruce L.

In "The Doctor's Opinion" section of the AA Big Book, Dr. Silkworth writes about his experience in treating suffering alcoholics. As medical director of one of the oldest hospitals in the country treating alcohol and drug addiction, Silkworth admitted that most physicians believed chronic alcoholics were doomed, with very little hope for recovery outside of complete psychic change.

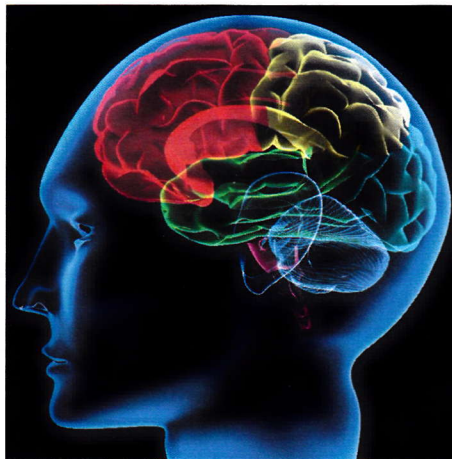
Dr. Silkworth and others identified the twofold nature of alcoholism: a craving of the mind and an allergy of the body. Once a habitual pattern of drinking is formed, alcoholics are unable to safely use alcohol in any form. One drink can trigger an uncontrollable urge for more, leading to devastating consequences, including disability or premature death.

Through advances in neuroscience and neurobiology, we now have a large body of scientific data on the brain reward mechanism, all of which validates what Dr. Silkworth and others concluded about the chronic, progressive nature of alcoholism.

All addictions start with that first drink or drug. With it comes the rush, the warmth, the clarity, the vision, the relief, and the sensation of being at the center of the universe. For a brief period, everything feels right. But soon, the amount of alcohol and drugs that once produced elation doesn't work, and users need a drink or drug just to feel normal. Without it, they feel depressed and often physically ill. At this point, control is lost, addiction sets in, and the hab-

it begins to harm the user's health, finances and personal relationships.

Neurobiologists know that the euphoria induced by alcohol and drugs arises because these chemical substances boost the activity of the brain's reward system, a complex circuitry of nerve cells, (neurons) that have evolved to make us feel good after engaging in activities (such as eating and sex) that allow us to survive and pass along our genes. Via this re-



ward system, we are all hard-wired to experience short term pleasure for doing things that benefit our long-term survival.

In the beginning, artificially boosting this reward system with alcohol or drugs makes us feel good, and encourages us to repeat whatever activity brought us this pleasure. But over time, the brain changes its structure and begins to rely on the substance to cope and survive on a day-to-day basis. These changes lessen the pleasurable effects and increase the cravings, trapping the user in a destructive cycle of habitual

use.

As dependence grows, alcoholics also lose the ability to control their behavior, because the brain's prefrontal cortex is no longer able to foresee the consequences of harmful actions. This loss of executive functions (the thoughtful ability to control impulses and urges) is no doubt a major reason why more than 90 percent of recovering alcoholics relapse at some point. The newly sober are constantly

bombarded with triggers and ideas that the brain associates with the pleasurable effects of drinking. Due to weakened executive functions, these individuals have a tough time resisting the urges created by these triggers. Any small reminder of their drinking days—the scent of stale beer, the clink of toasting glasses, the neon lights seen when they pass their favorite bar,

can each create a powerful craving to use, leading to relapse.

It is crucial for the substance abuser to realize that these brain changes can be permanent, and that chemical processes in the brain continue over time to strengthen the neuronal connections. Even after years of sobriety, this can cause an overreaction to drug and alcohol-related cues, triggering long-dormant cravings and obsessions.

New research shows that AA works because of the pro-

### Contact AA Online:

[www.district48.org](http://www.district48.org)

[www.aa.org](http://www.aa.org)

[www.area59aa.org](http://www.area59aa.org)

[www.aagrapevine.org](http://www.aagrapevine.org)

### By Phone:

### By Mail:

G.S.O.

PO Box 459

Grand Central Station

New York, NY 10163

For strength and hope for friends and families of problem drinkers:

### Al-Anon Online:

[www.al-anon.alateen.org](http://www.al-anon.alateen.org)

Articles, questions, comments and group events for the newsletter can be emailed to

[aadistrict48@gmail.com](mailto:aadistrict48@gmail.com)

## The Anonymous

People

April 7, 2014

7pm @ CAC

for a Donation



# NEUROSCIENCE AND G.O.D.

*continued from page 1*

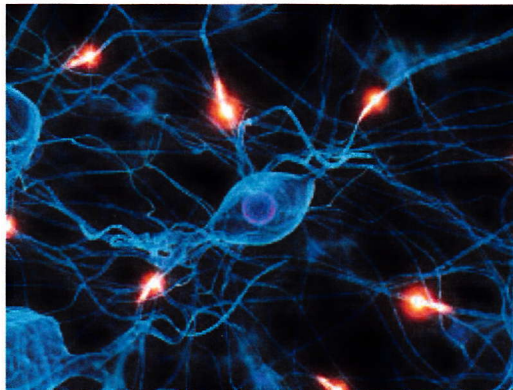
gram's emphasis on the 12 Steps: an admission of the problem, surrendering to a higher power, making amends to those the alcoholic has wronged, helping other sufferers to get sober, developing healthy relationships with others in recovery, and above all being a valued member of a compassionate group of people who share the same challenges and purpose.

Getting a sponsor, working the Steps, taking commitments, volunteering for service work, and helping other alcoholics can all help to heal the part of the brain responsible for decision-making, perception, learning, impulse control, compulsivity, and judgment. Revealing one's deepest flaws and hearing others do likewise creates a sense of belonging necessary for a person to confront the terrible consequences of alcoholism - something that is nearly impossible to do alone.

Having a group of supportive others in AA can also help reduce or manage stress, a major risk factor for relapse. Recovering alcoholics are often burdened by traumatic memories of things they did while wasted. When they run into old acquaintances they mistreated, the guilt can be overwhelming. They may also be in financial ruin, have medical conditions, and a host of unfathomable problems resulting from years of alcoholic drinking. Working the 12 Steps with a sponsor and having daily contact with other AA members can help alleviate the stress brought on by

feelings of guilt, shame, fear and remorse, all of which can undermine a new member's fragile sobriety.

The brain is designed to learn through experience. Involvement in AA can help individuals learn healthy coping



**“While the brain is healing, AA acts as a new prefrontal cortex.”**

skills needed to live without pursuing reward or relief through substance abuse and other addictive behaviors.

While the brain is healing, AA acts as a new prefrontal cortex, one made up of a group of drunks in a church basement rather than neurons and synapses.

Seventy-five years ago, medical profes-

sionals identified the chronic, hopeless nature of addiction, and concluded that Alcoholics Anonymous provided a mutual aid system that was more effective in treating alcoholism than anything modern medicine had to offer.

Bill Wilson, one of the founders of AA, didn't know the first thing about the brain reward system, neurobiological processes, or the functions of the prefrontal cortex. His only aim was to harness spirituality in the hopes of giving fellow alcoholics the strength to overcome the disease. In developing a system to lead drunks to God, he accidentally tapped into a system with the power to counteract the complex psychological and neurological processes that trap individuals in a destructive cycle of alcoholic drinking.

While AA's ability to accomplish this remarkable feat is not yet fully understood, I am forever grateful that when I needed help, a Group Of Drunks (G.O.D.) were waiting in a church basement to welcome me home.

### About the Author

Bruce L. celebrates March 27, 2010.

## Anniversaries

*Anniversaries can be emailed to [aadistrict48@gmail.com](mailto:aadistrict48@gmail.com)*

Micha	February 22, 2014	9 Months	Lowel	March 21, 2014	20 Years
Jen D.	February 23, 2014	2 Years	Greg M.	March 4, 2014	23 years
Brian S.	February 23, 2014	2 Years	Hazel S.	March 23, 2014	19 Years
Deb C.	February 23, 2014	17 Years	Pat K.	February 28, 2014	14 Years
Taryn	March 13, 2014	60 days	Bruce L.	March 27, 2010	4 Years

### The Highest Form of Meditation

Be Still and know that I am God.

Be still and know that I am.

Be still and know.

Be still.

Be.