

The Stop Smoking Study

In 1997, Dr. Terry Neher devised a theory. He had worked since the early 1970's on providing a better understanding of the functions of the hypothalamus and the hippocampus regions of the brain. These two areas of the central nervous system (CNS) relate to how we experience emotions. They are often referred to as the "emotion center of the brain." That is, when we experience an emotion, we also have a physical response. It may be pleasurable and thus induces us to continue what we are doing and to do this whenever possible in the future. Or, it may be such a negative feeling that it can become even a physical imperative to stop what we are doing and avoid such activity in the future.

The series of events takes two paths as we grow out of infancy. The first occurs when, as a baby, we have an emotional experience and the emotion center sends messages to the body which create a physical response. We soon learn to associate the emotion and the response. We may even refer to an emotional experience as a "feeling."

Some years ago Pavlov, a Russian scientist, discovered something that led to an understanding of the second path. That is, Pavlov rang a bell each day just before he fed his dog. After a period of time, the dog evidenced hunger by salivating whenever he heard the bell even though he might have just been fed. The same conditioned response can be developed in people. For example, if a person is deprived of sufficient gamma amino butyric acid (GABA), for any reason, that person will feel depressed. In some cases, this can be as extreme as a panic attack or worse.

Knowing the above, Neher closely examined the chemistries related to the smoking of cigarettes as well as the chemistries of the emotion center of the brain. He then designed a process involving the taking of certain nutrients while gradually ceasing smoking. The process was designed to make the cessation far easier and less physically uncomfortable than quitting "cold turkey."

Toward this end, Dr. Neher studied the effect of his process on 108 patients. He followed the progress of each subject for approximately a year.

The Method

In September, 1996, Dr. Neher began initiating the process with patients who had come to him for advice in handling addiction to cigarette smoking. The last of the 108 patients began the process in March, 1997. Each was given the information that follows:

The Information

In the past, the smoking "habit" has been characterized by such terms as "character defects," "personality traits," and sets of behavior identified as common to individuals of low will power.

In reality, will power and character traits have little or nothing to do with it. Instead, the necessary causal factors amount to chemical deficiencies, excesses, or imbalances in the brain. These abnormal chemistries occur as a result of genetic and environmental factors beyond the control of individuals. These altered chemical states actually become the factors necessary for a person to receive positive reinforcement through the use of tobacco.

The way we think and feel and the behaviors that result, all happen because of chemical reactions/interactions within our brains. These chemical reactions are dependent upon balanced levels of many separate chemical molecules working together with specialized brain cells to produce thoughts, feelings and actions. For every thought, feeling and behavior, there exists a neurochemical

equivalent in the brain. As a person continues to use externally sourced chemistries to gain thoughts, feeling, or behaviors deemed desirable, he or she becomes dependent. This same person does, of course, deny the dependency.

In other words, for people to become dependent upon tobacco to produce the desired thought, feeling, or behavior, there must first exist, or be developed, a deficiency of a chemical component in their brains. The first step in breaking this dependence is, necessarily, abstinence from the use of tobacco. This step, however, results in a set of dramatically uncomfortable and unacceptable thoughts, feelings and behaviors.

This is the rationale for physiological stabilization as the necessary starting point for “beating the cigarette habit.” Historically, physiological stabilization has been ignored or at best little understood. The major deterrent to gaining a usable understanding of this process, I believe, has been the lack of practical interpretation of recent research data into something understandable and useful.

Those of us who have “quit” believed ourselves to be of strong character and will. Most smokers voice the same acceptance of those “who made it” but in all honesty, wonder to a degree about the durability of the claim.

In this society, a condition that meets four criteria may be termed a disease:

1. Etiology – factors that cause the condition are identifiable.
2. Symptomology – identifiable symptoms (i.e. irritability, loss of control)
3. Morbidity – the symptoms describe a stage of time process.
4. Prognosis – in this case, “guarded” but probably fatal in the long term.

Now, if tobacco caused a smoking habit, everyone who has ever smoked would have the disease, and not nearly everyone does.

The etiologic factors being discussed, and the focus of this writing is the neurochemical and enzymatic factors, which cause the condition.

Approximately 50 substances naturally produced by the brain have been identified as neurotransmitters of thoughts, feelings and actions. Of these, several are of special interest in stopping smoking. And, very importantly, they can be identified with certain emotional states. This allows us to greatly simplify and make usable an understanding of neurochemistry.

Let us look at some of these neurochemicals and their associated thoughts, feelings and behaviors.

The opioids, endorphins and enkephalins are substances used by the brain to moderate pain. Endorphins (endogenous morphine) seem to work to moderate physical pain. Enkephalins (met-enkephalin and lue-enkephalin) appear to have a profound effect in those neural areas associated with emotional memory.

The most painful emotional feeling we suffer is low self worth. Studies reported in the March/April 1987 *Professional Counselor* consolidated important areas of information. As a result of studies, we know, for instance, that genetics and/or stress can influence opioid levels. When a person’s opioid availability is low due to genetic susceptibility or unmanaged environmental stress, that person feels incomplete, inadequate and unworthy due to decreased enkephalin availability. Inherited deficiencies of these neurochemicals are likely the cause of extreme shyness in children. They may never feel equal to their peers, regardless of the reality. They always feel “second best,” never “first” or “as good as” others. When levels of those neurochemicals are adequate, such as following nurturing by a parent for example (which increases the release and utilization of endorphins/enkephalins), a child feels internally focused and calm, and has a sense of completeness. Sustained exercise releases opioids and a person feels calm, complete and possibly euphoric. Children often learn this method of “self medication” by exercising, and the result may be viewed as being outwardly hyperactive.

Opiate drugs such as morphine and heroin, will fill these same receptor sites and produce the desired feelings of well being. Cigarette smoke contains salsoninol. This molecule will fill enkephalin receptor sites and produce increased feelings of well being.

Dopamine functions in the frontal lobe areas of the brain associated with reward, pleasure and altruism, as well as the maternal and parental feelings associated with the limbic system. Inadequate levels of dopamine cause individuals not to feel remorse about their actions, and do not experience maternal or paternal concerns. Adults, for example, when confronted with child neglect or abuse issues will typically say they should care, but just can't seem to.

Norepinephrine is produced from dopamine and is the brain's energizer/arousal neurotransmitter. When adequate norepinephrine is available, a person feels energetic, motivated and full of "drive." If norepinephrine is lacking, a person has no energy, lacks motivation and drive, and feels depressed.

Serotonin is the brain's emotional stabilizer. When adequate serotonin is available, a person has rational emotions. If serotonin levels decrease a person feels irritable, on the verge of tears for no reason, noises are more bothersome, and one can not sleep well.

GABA (gamma amino butyric acid) accounts for up to 40 percent of the brain's neurotransmitters. Think of it in functioning in stress management. When adequate GABA levels occur, a person feels calm. When insufficient levels of GABA occur, a person feels anxious (free-floating anxiety) for no identifiable reason, and can experience panic attacks. GABA depletion is a major factor in Traumatic Stress Syndrome, and GABA depletion may be associated with various phobias.

Cigarette smoking salsoninal, alcohol, barbiturates and benzodiazepines all attach to GABAergic neurons and enhance the binding of GABA producing calmness and a sense of stress reduction by reducing the normal levels of the fight-or-flight response.

Acetylcholine functions in concentration and memory. When less than adequate acetylcholine is available, a person has trouble concentrating for more than just a few seconds and experiences short-term memory problems.

Recent studies have provided enlightened insight concerning the certain enzymes and hormones. One of these enzymes, monoamine oxidase (MAO), was found to be functionally depressed or slowed down when it was in the presence of the salsoninal molecule. What does this mean? This one example answers the question, "Why do certain people feel energized and more positive by the depressant drug, nicotine?"

The monoamines affected are dopamine, norepinephrine and serotonin. MAO functions to reduce the levels of these neurotransmitters. When MAO is inhibited, the level of these monoamines will increase. The result of this is increased feelings of energy (norepinephrine), increased feelings of pleasure (dopamine), and increased feelings of stability (serotonin). People gaining this effect as the result of MAO inhibition, feel more in control, more positive and less depressed. For persons susceptible to this enzyme alteration, the quicker they get to the level of inhibiting their MAO, the sooner they feel the positive effects. MAO inhibition is also the primary factor in elevating blood pressure in susceptible individuals.

In those same studies, cortisol function was found to be lowered. The brain to monitor threatening situations uses cortisol. When susceptible individuals lower their cortisol function, they sense no threat present, no uncomfortable feelings of concern, and no reason to stop smoking. In people not experiencing this effect, the brain responds to the nicotine as a toxin and increases cortisol availability.

Using these few examples we could say that in genetically susceptible individuals, or those who have altered their neurochemistry as a result of unmanaged stress, feel more assertive, more active, less depressed, a greater sense of pleasure, more stable, more in control, and do not sense the profound health threat that smoking is. Why wouldn't they light up?

Individuals become addicted to compulsive behaviors due to changes in brain chemistries as a result of their behavior. Just as smokers, gamblers and compulsive shoppers cause norepinephrine and dopamine rush by betting, buying, or lighting up. This rewarding rush of energy will temporarily lift depression and may substitute for feelings of inadequacy.

Starvation, as in anorexia, causes increased enkephalin levels in the brain. This functions to keep individuals calm while a food source is found. Since these individuals may take in no dietary source for enkephalin, they must emaciate their own muscle tissue for protein.

Bulimics cause a rush of norepinephrine and dopamine when they purge and, consequently gain a sense of energy and pleasurable control through this behavior.

Overeaters also cause an increase of enkephalin through satiation with food, especially pleasant tasting or food high in carbohydrates. As stress increases, they realize that excessive eating will return them to a state of calmness due to enkephalin release.

People who crave chocolate may feel less than special or unloved. If they binge on chocolate, they provide the brain with the chemical phenylethylamine (PEA), which is our “lust” chemical. When PEA is available, we feel desirable, special and loveable.

The stress of codependency lowers enkephalin and GABA availability. Family members feel increasingly anxious, unworthy and helpless as a result.

Seeking to fill this void of inadequacy, they substitute the norepinephrine and dopamine rush achieved by doing more, being more, and taking charge, much as workaholics do.

To a significant degree, compulsive behaviors can be explained neurochemically. Once you come to understand and utilize this knowledge, it all begins to make sense. When the smoker lights up, they are self-medicating. **Smoking is not just a seeking of pleasure; it is the only means of abating greater discomfort.**

Cigarette Smoking

The first thing nicotine does in the brain is to facilitate the release of norepinephrine, and the person feels a lift in energy. The second thing nicotine does is fill and activate certain acetylcholine receptor sites necessary for concentration and memory. The third thing that happens is that acetaldehyde in the smoke combines with dopamine and produces salsolinol, which fills and activates enkephalin sites, and the person senses an increased sense of well being. With a chronic release of norepinephrine, we begin to lose GABA as well as enkephalin, and the person feels increased anxiety when attempting to quit smoking abruptly.

When a person attempts to stop smoking, he or she experiences: (1) a loss of the energy due to the forced release of norepinephrine by nicotine, (2) an inability to concentrate and think abstractly due to an acetylcholine deficiency produced by the replacement of acetylcholine with nicotine, and (3) anxiety and a sense of incompleteness due to limited availability of GABA and enkephalin.

To put it simply, smoking energizes you, helps you concentrate and keeps you calm. Try to quit – you have no energy, you can’t think and you feel anxious.

In conclusion, alterations in the balance of brain chemistry alter our thoughts, feelings and behaviors. People with well-balanced brain chemistry appear enviably assertive, confident, in control, concerned for others and able to think quickly. Because all systems are in concert, their survival does not appear threatened. They are able to take life as it presents itself and alter their thoughts and behaviors to feel comfortable. There is no need for external chemical input. Nicotine and other drugs present a destabilizing influence to them.

Maslow has shown us the foundation for building self-actualization must be physical stabilization. The stabilization must involve improving brain chemistry capabilities. Today nutritional supplement combinations are available that dramatically enhance neurotransmitter availability and hasten the recovery to acceptable, comfortable, positive feelings and thoughts.

In the past, we have attempted to construct the second, third and fourth levels of self esteem building without providing a sound physiological foundation. As a result, the structure often collapses.

To wage an effective war on nicotine, we need to make peace with our neurochemistry.

The Program

Check the contents of the materials accompanying this information. The box should include the following:

- 3 bottles of Neu-Becalm'd™
- 1 bottle of Neu-Replenish
- 1 bottle of Neu-Slim
- *My Plan* calendar

Select a 30 day period, which will be as stress free as possible. Look at this very carefully. If you are going have a particularly stressful work period, or long family holiday, please consider you might not be far enough along in the program to be able to handle that urge to light up.

STEP 1. Dosage Times

Select 3 dosage taking times for each day. These times must be when you will have an empty stomach (30 minutes before or 2 hours after eating). For example: when you get up in the morning, before lunch and before bedtime.

STEP 2. My Plan

Fill out the enclosed *My Plan* calendar with all the correct dates. On the day you plan to begin the program, write in **START**. Count 30 days and write in **STOP**. This will be the day you stop smoking! Refer to the appendix for an example Plan Calendar.

STEP 3. 10/10 Day

On your calendar, count back 10 days from your **STOP** date. Write the number “10” on this date. This indicates the day you will down to only smoking 10 cigarettes per day.

STEP 4. Step Down

Calculate how many cigarettes you must give up each day to get down to your 10 cigarettes per day, 10 days before you **STOP**. Be honest and fill out your chart below. An example of a 2 pack a day smoker is shown to help you develop your *Step Down* plan.

Example: 2 packs/day (40 cigarettes)

Number of cigarettes per day: 40 - 10 =

30

Divide your answer (the number in the box) by 20 $\frac{30}{20} = 1.5$

This means you will decrease 1.5 cigarettes per day. It may not be practical to smoke ½ of a cigarette or even cut a cigarette in half before you smoke it. Work out a systematic decrease such as the following:

Day	1	2	3	4	5	6	7	8	9	10
# Cigarettes	39	37	36	34	33	31	30	28	27	25
Day	11	12	13	14	15	16	17	18	19	20
# Cigarettes	24	22	21	19	18	16	15	13	12	10

Your Plan:

Number of cigarettes per day: _____ - 10 =

Divide your answer (the number in the box) by 20: $\frac{\text{input}}{20} = \text{_____}$ Your *Step Down* Number

Fill your *Step Down* chart:

Day	1	2	3	4	5	6	7	8	9	10
# Cigarettes										
Day	11	12	13	14	15	16	17	18	18	20
# Cigarettes										

Enter the number of cigarettes on the **My Plan** calendar, beginning with your **START** date as day 1. Continue filling in your numbers all the way to your 10/10 date. Follow your reduction plan all the way to your 10 cigarettes, 10 days before you **STOP** smoking date.

STEP 5. Day 10 the Supplementation Begins

You are now on a 10 day countdown to **STOP** smoking! Keep up the great work. Keep focused on your goal. Work your plan one-day at a time. In **STEP 5** you will begin decreasing one cigarette per day and begin taking one of each supplement three times per day.

Do you remember your dosage times?

- **Dosage Time One:** take 1 capsule of Neu-Becalm'd™ and 1 capsule of Neu-Replenish
- **Dosage Time Two:** take 1 capsule of Neu-Becalm'd™
- **Dosage Time Three:** take 1 capsule of Neu-Becalm'd™ and 1 capsule of Neu-Slim

Continue to decrease one cigarette per day and take your nutritional supplements according to **STEP 5** for days 9, 8, 7, 6, 5, and 4.

STEP 6. Double Down

Day 3 prior to your **STOP** day double all of the supplements.

- **Dosage Time One:** take 2 capsules of Neu-Becalm'd™ and 2 capsules of Neu-Replenish
- **Dosage Time Two:** take 2 capsules of Neu-Becalm'd™
- **Dosage Time Three:** take 2 capsules of Neu-Becalm'd™ and 2 capsules of Neu-Slim

Continue reducing the number of cigarettes by one per day.

STEP 7. *Your STOP DAY Congratulations!* NO MORE CIGARETTES

- **Dosage Time One:** take 2 Neu-Becalm'd™, 3 Neu-Replenish, 2 Neu-Slim
- **Dosage Time Two:** take 2 Neu-Becalm'd™, 3 Neu-Replenish, 2 Neu-Slim
- **Dosage Time Three:** take 2 Neu-Becalm'd™, 3 Neu-Replenish, 2 Neu-Slim

STEP 8. *STOP DAY + Days 1 – 4*

Same dosages as your **STOP** day:

- **Dosage Time One:** take 2 Neu-Becalm'd™, 3 Neu-Replenish, 2 Neu-Slim
- **Dosage Time Two:** take 2 Neu-Becalm'd™, 3 Neu-Replenish, 2 Neu-Slim
- **Dosage Time Three:** take 2 Neu-Becalm'd™, 3 Neu-Replenish, 2 Neu-Slim

STEP 9. *STOP DAY + Days 5 – 11*

- **Dosage Time One:** take 2 Neu-Becalm'd™, 2 Neu-Replenish, 2 Neu-Slim
- **Dosage Time Two:** take 2 Neu-Becalm'd™, 2 Neu-Replenish, 2 Neu-Slim
- **Dosage Time Three:** take 2 Neu-Becalm'd™, 2 Neu-Replenish, 2 Neu-Slim

STEP 10. *STOP DAY + Days 12 and the rest of your smoke-free life*

- **Dosage Time One:** take 1 Neu-Becalm'd™, 1 Neu-Replenish, 1 Neu-Slim
- **Dosage Time Two:** take 1 Neu-Becalm'd™, 1 Neu-Replenish, 1 Neu-Slim
- **Dosage Time Three:** take 1 Neu-Becalm'd™, 1 Neu-Replenish, 1 Neu-Slim

Continue these dosages until you run out of both Neu-Replenish and Neu-Slim; continue taking Neu-Becalm'd™. As you progress further and further from your **STOP DAY**, you will learn how many Neu-Becalm'd™ you will need each day (from 0 – 6). This is your final step, **STEP 11. *The Rest of Your Life.***

STEP 11. *The Rest of Your Life*

Let others know you have quit smoking – most people will admire you and be supportive. Many of your smoking friends may want to know how you quit. It's good to talk to others about your quitting. Consider all the positive things about quitting, such as how much you like yourself as a non-smoker, health benefits for you and your family and the example you set for others around you. A positive attitude will help you through the tough times.

Remember that nicotine acts to energize, help you focus and calm you down. When circumstances call for these actions, your brain will try to remind you that a cigarette would be helpful. If this happens, ask yourself, "What can I do instead of smoking?" Then take action. Do not fall into the trap of replacing cigarettes with food. Remember if you increase your food intake, you must increase your level of exercise.

Most importantly, remember that once your brain learns new methods for reward, it will stop telling you to pick up a cigarette.

The Results

Eleven of the subjects dropped out of the program before the year was up. Of the ninety-seven (97) who stayed in the program, fourteen (14) reported they had smoked one to four cigarettes. All others (83) reported they had not smoked any cigarettes during to past year. All ninety-seven who stayed in the program have reported, as of July 1998, they are still nonsmokers.

Conclusion

The Neher Cease Smoking Program has proven to be more effective than most programs and is one of only a very few that addresses the factors, which frequently cause the patient to return to his or her habit. Many times a stressful situation is the reason given for the need to light up. This program offers specific nutritional supplementation to alleviate this trigger.