

“Providing hope and a better quality of life through educating and connecting members to medical resources and emerging technologies”

<p>Thursday April 27 – Open Board meeting – everyone invited – 7:00 pm – see below</p>
<p>No meeting in April May 25, 1:00 pm – watch for your flyer in the mail Save the Dates: Thursday, August 31: Dr Allen, speaker Saturday, September 23: Dr Scott, speaker More information to follow</p>

Physical Activity

Research has shown that strengthening exercises for peripheral neuropathy moderately improve muscle strength in people with PN. In addition, exercises to help peripheral neuropathy, when done regularly, may reduce neuropathic pain and can help control blood sugar levels. A comprehensive physical activity routine includes four kinds of activities:

- Aerobic Exercise
- Flexibility Exercise
- Strength Training Exercise
- Balance Exercise

Refer to a physical or occupational therapist, or a healthcare provider, regarding an exercise program that’s right for you.

FPN Newsletter – 2-21-17

This is what the WORLD needs now!

A SPECIAL NOTE ABOUT HUGGING

It reduces stress. It’s rejuvenating. It has no unpleasant side effects unless you don’t like hugs. It is God’s miracle drug! It is all natural, it contains no chemicals, artificial ingredients, no pesticides, and no preservatives!

Hugging is practically perfect. There are no parts to break down, no monthly payments, non-taxable, non-polluting, and of course - fully returnable!

A big hug is the best gift anyone can give, and the joy is that you can be a giver and a taker at the same time!

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Would you like to learn more about MNA? On Thursday, April 27 at 7:00 pm, we will be having an Open Board meeting. Everyone is invited. It will be held at 8100 Russell Avenue South in Bloomington (Applewood Pointe). Please RSVP to Lois at 952-941-5372 if you wish to attend, and for directions. Attend with no commitments.

Thank you for your support!

The MNA thanks all of you who have so faithfully sent in your membership contribution each year. Without you, we would not be able to offer the programs, activities, monthly mailings, and newsletters that we have done in the past, and will continue to do. Remember that our Board members are all volunteers; we have no paid staff.

Look at the mailing label on the envelope in which you received this newsletter. The **yellow highlighted area** indicates when the last year you made your contribution (not when it is due). You want to see a 2017 in that highlighted area by the end of this year. Mail your contribution, payable to MNA, in the enclosed envelope to Myron Martin, 8100 Russell Avenue South, #127, Minneapolis, MN 55431. The suggested yearly contribution is \$25.00 (or more, if you can). Since we are a 501(c)(3) organization, your contribution is tax deductible. If you feel that your mailing label’s date does not reflect your most recent membership contribution, please call Myron Martin, treasurer, 952-941-5372 to verify your information.

Thank You

Our thanks to The Foundation for Peripheral Neuropathy (FPN) for permission to reprint the articles that are part of this issue of the MNA newsletter. Some are a bit technical, but still contain valuable information. There are many helpful articles from time to time on their website.

A Note from MNA

*Our newsletters contain a variety of information, and in each article we have identified the source, **but the views and opinions of the articles do not necessarily represent the views of MNA, nor do they infer an endorsement of any product or service.** They are not intended to replace medical or other professional advice and counsel.*

Updated Web site

Currently John Bishop and members of the Board are working on a new, updated web site. John has spent many hours in revamping the web site, and it should be ready for 'roll-out' soon. The web address will stay the same: www.neuropathy-mn.org.

Notes from our March Meeting

We had a great turnout -- nearly 50 people -- for the March meeting featuring the topic of cannabis. Members and friends were there out of both need and curiosity, many of them, and some became converts by the end of the 90-minute program.

Mary McLeod, MNA Board member, spoke first, about her own introduction to cannabis, the process of being certified and prescribed cannabis, and finally her own outcome. She speaks here in the first person.

Mary McLeod "I have had neuropathy for several years, and have nearly maxed out on neurontin (gabapentin). When a friend encouraged me to try cannabis, it didn't require a hard sell to win me over. The idea of taking a substance that's truly all natural appealed to me, and I hoped that by taking cannabis, I might be able to decrease or get off my other meds. So, I went to Twin Cities Pain Clinic to be screened, and I hoped to be certified for the state cannabis registry. When they heard how much neurontin I was taking it wasn't difficult to persuade them I was in chronic pain, although they did give me a checkup and asked many questions about how long I'd been in pain, what it was like, and where I felt it the most.

Once certified by them, I was then contacted online by the state registry, and filled out their forms. The

final step was to make a \$200 payment to the state. Then I had my first appointment with one of the two manufacturers/distributors in Minnesota allowed to raise cannabis and extract its active substances. I chose Leafline because I had heard of their origins, their management currently under two former emergency room doctors, and their fine reputation. (The mom of one of the two founders has been a friend for decade, so it's a good thing they were the best!)

Cannabis is actually prescribed by pharmacists at the distribution locations. They know a great deal about which pain problems are best treated by a certain part of the cannabis plant, and the substances they prescribe vary in properties and strengths. In my experience, the pharmacists listened carefully, understood what I had been experiencing, and did their best to treat my pain appropriately. Nevertheless, it is a tricky business, because humans vary in size, their diets and other habits vary, and the origins and characteristics of their pains vary. Prescribing is an art, not a science, and it can take weeks of patience to get it right. In the end, not everyone's pain can be treated effectively with cannabis: 70% of patients get moderate pain relief, and 90% get some. But those aren't bad statistics to be facing when you're feeling hopeful.

Another issue is cost. As our speaker said at the meeting, costs run from about \$200 to \$600 per month, skewed more toward the \$200 figure, and none of it is covered by insurance, with a small exception of some workers' comp patients. (Their employers discerned that it was less costly to pay for their cannabis than to have so many absences and other costs associated with the pain!) Insurance doesn't cover the rest of us because cannabis is still illegal at the federal level.

It has cost me \$1,000 total over my four-month trial so far, and I expect those costs to inch down a bit in the future because I am no longer taking the most expensive, and the one remaining is relatively inexpensive. But I'm not at optimal pain relief yet. I can tell it's helping, but I haven't been able to drop much of the other medication I'm taking yet. I will continue to increase the cannabis, but very slowly, and if I get to a level where I can have "moderate" relief, I'll let you know!"

We felt fortunate to have as our second speaker one of the founders of Leafline Labs, Dr. Gary Starr. He took us through the history of the "reefer madness" anti-marijuana stage of our history, and its attendant politics. We moved on to the chemistry of cannabis, and the discoveries

made more recently about why it works to address pain receptors. And finally, Dr. Starr outlined the process they had to follow to shepherd current state law to fruition, and to get to where they are: one of the pioneers of true state medical marijuana legalization, which many states are now following.

Since cannabis was certified for chronic pain treatment in August, the state's cannabis use has ballooned. We think that's a good thing, since many if not most of our members suffer pain through no fault of their own. Why should our members not benefit from long-term pain relief, particularly at a time when the state is struggling with opioid abuse and looking for healthy alternatives?

After Dr. Starr concluded his remarks, the meeting drew to a close, but people gathered three-deep around Dr. Starr, hoping to get his contact information, his advice, his listening ear. It took well over half an hour to clear the room.

Dr Starr will provide additional information in a future newsletter.

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Another exciting opportunity

Information was sent to you about an opportunity to help Dr Kennedy at the University of Minnesota in his, and his colleagues research project. This is phase 3 of the 'bumps' test and also a continuation of the 'sweat' test that some of our members were connected with a couple of years ago.

Test procedure:

The testing takes two hours.

There are three parts to the testing:

1. "Bumps" touch sensory testing on the finger pads. The subject locates tiny bumps on a flat surface. The smallest bump felt becomes the "threshold" value. People with neuropathy have a higher threshold than people without neuropathy.
2. Stimulated sweating is visualized, via a starch-iodine reaction, on small areas of skin with a custom-made video camera. From this video, we can determine the number of sweat pores and the rate of sweating from each pore. People with neuropathy have fewer active sweat glands that produce less sweat.
3. "Speed Bumps" sensory testing measures flutter sensation at the toes and foot and the finger pads. Like highway speed bumps, but much smaller, our "Speed Bumps" are used to determine the smallest ridge size that can be felt. When people develop neuropathy, their ability to feel the smallest ridges diminishes.

In addition, a neurologist will perform a neurological examination.

All tests are non-invasive. No blood is drawn.

Both individuals, with and without neuropathy, are needed for these tests. You go to the U of M Medical Center-East Bank Hospital, (500 Harvard St SE) where there is free valet parking and an escort will meet you to take you to the lab. Please call to make an appointment or for more information:

612-626-6148

PLEASE use this opportunity to further research!!

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What is happening with Research at the University of Minnesota with Dr Walk and Dr Allen?

Dr. Jeffrey Allen is leading a multi-center study into inflammatory neuropathy (CIDP) patients using grip strength measurements (GRIPPER, which is an acronym for the test).

The University of Minnesota has been invited to join the Inherited Neuropathy Consortium, part of the Rare Disease Network. We are the only clinical center in Minnesota with this designation. (Currently, the closest center is Iowa City.) This designation will provide annual funding to support a part-time research coordinator, and Dr. Allen is serving on the board of INC.

We currently are conducting a Phase 3 study of a gene therapy for diabetic neuropathy, working with an industry partner and multiple sites across the country.

We are participating in federally funded multi-center studies to evaluate treatments in both inherited neuropathy and idiopathic neuropathy.

Dr. Walk is currently recruiting volunteers to participate in a study to look at genetics and natural history of the disease, with whole genome sequencing.

Dr Allen will be our speaker at our August 31st meeting – Save the date to learn more about the on-going research.

Donations for continuing research at the University of Minnesota may be directed to the University of MN Foundation, and in the memo line place: Account #3456

**Mailing address: David Walk MD
420 Delaware Street SE -- MMC 295
Minneapolis, MN 55455**

The Foundation for Peripheral Neuropathy (FPN)

Mission:

Dedicated to Reversing the Irreversible

Get Involved.... Donate today!

The mission of the Foundation can only be sustained through the generosity of people who share our vision to advance research and provide and improve quality of life to those living with neuropathy. All gifts, large or small, are important.

For a donation of \$30.00 (or more) per year, you are eligible for a complimentary premium membership. Our membership options offer flexible ways to get the latest peripheral neuropathy information while supporting the cause.

You may send your donation via their website: <foundationforpn.org>, or by mail to:

The Foundation for Peripheral Neuropathy,
485 Half Day Road, Suite 350
Buffalo Grove, IL 60089

Tai Chi

A 2010 study published in the American Journal of Chinese Medicine from the Department of Kinesiology, Louisiana State University, showed that Tai Chi (also known as Taiji) practice actually increases the nerves' ability and speed of sending signals back to the brain and spinal cord. After only a few weeks of Tai Chi practice, patients with PN can improve physical function and it is a safe and effective intervention.

Tai Chi is a mind-body martial arts form that has recently gained popularity within rehabilitative settings. It is an "exercise based on slow intentional movements, often coordinated with breathing and mental imagery, which aims to strengthen and relax the physical body and mind"

Tai Chi practice, which may be tailored to specific needs of a population, has been demonstrated to safely improve balance and gait in the elderly.

Tai Chi's effectiveness in even high-risk populations makes it a promising candidate for interventions aimed at alleviating movement disturbances associated with PN. FPN 3-21-17

Presenters' notes

Periodically we receive requests for information that a speaker presents when members are unable to attend a meeting.

If a presenter uses a handout or power point that is informative, we share that with our members when we send our monthly flyer.

We also encourage our speakers to write an article for our newsletter. (see Mary's article). We do not have any way of doing a video or audio recording of our speakers.

MNA Handbooks Available

Our MNA Handbook is available for everyone who is a first-time member (i.e. makes a contribution for the first time). It has 70-80 pages of helpful information to help you in dealing with neuropathy. If you are a first-time member, and have not received your copy, please contact Lois Martin (952.941.5372), or loismemartin@gmail.com.

If you have an MNA Handbook from several years ago, and would like to have the updated pages, we have good news for you! If you bring your complete Handbook to one of our meetings, we will exchange it for a new one.

Board Members

Questions? Comments? Let your MNA Board know your thoughts and ideas! Contact information:

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When Retirement Comes With a Daily Dose of Cannabis

By WINNIE HUFEB, NEW YORK TIMES -- FEBRUARY 19, 2017

Ruth Brunn, 98, takes her medicinal marijuana with vitamin water at the Hebrew Home at Riverdale in New York City. Ruth Brunn finally said yes to marijuana. She is 98. She pops a green pill filled with cannabis oil into her mouth with a sip of vitamin water. Then Ms. Brunn, who has neuropathy, settles back in her wheelchair and waits for the jabbing pain in her shoulders, arms and hands to ebb. "I don't feel high or stoned," she said. "All I know is I feel better when I take this."

Ms. Brunn will soon have company. The nursing home in New York City where she lives, the Hebrew Home at Riverdale, is taking the unusual step of helping its residents use medical marijuana under a new program to treat various illnesses with an alternative to prescription drugs. While the staff will not store or administer pot, residents are allowed to buy it from a dispensary, keep it in locked boxes in their rooms and take it on their own.

From retirement communities to nursing homes, older Americans are increasingly turning to marijuana for relief from aches and pains. Many have embraced it as an alternative to powerful drugs like morphine, saying that marijuana is less addictive, with fewer side effects. For some people, it is a last resort when nothing else helps.

Marijuana, which is banned by federal law, has been approved for medical use in 29 states, including New York, and the District of Columbia. Accumulating scientific evidence has shown its effectiveness in treating certain medical conditions. Among them: neuropathic pain, severe muscle spasms associated with multiple sclerosis, unintentional weight loss, and vomiting and nausea from chemotherapy. There have also been reports that pot has helped people with Alzheimer's disease and other types of dementia as well as Parkinson's disease. Across the nation, the number of marijuana users who are in their later years is still relatively limited, but the increase has been significant, especially among those 65 and older, according to recent studies.

Marcia Dunetz, 80, said that she worried at first about what people would think. "It's got a stigma," she said. "People don't really believe you're not really getting high if you take it." "It's a bigger issue than we thought," said Brian Kaskie, a professor of health policy at the University of Iowa who co-wrote a study published in January, "The Increasing Use of Cannabis Among Older Americans: A Public Health Crisis or Viable Policy Alternative?" "This is an elephant we're just starting to get our hands on."

A medical marijuana education and support club started by residents of Rossmoor Walnut Creek, a

retirement community east of San Francisco, has grown to 530 members — so many that it has changed meeting rooms three times. "I would be in a lot worse shape if I wasn't using cannabis, both physically and mentally," said Anita Mataraso, 72, a grandmother of six who is the program director and takes marijuana daily for arthritis and nerve pain, among other ailments.

In the state of Washington, at least a dozen assisted living facilities have formal medical marijuana policies in response to demands from their residents, said Robin Dale, the executive director of the Washington Health Care Association. The association, an industry group, has posted a sample medical marijuana policy on its website. In March, an influential group of medical providers, AMDA — The Society for Post-Acute and Long-Term Care Medicine, will tackle the issue at its annual conference. Cari Levy, the group's vice president, will offer a "Marijuana 101" lesson on the benefits, the risks and the potential pitfalls for providers. "People are using it, and we need to know how to respond," she said.

But as older people come to represent an emerging frontier in the use of marijuana for medical purposes, questions are being raised about safety and accessibility. Even in states where medical marijuana is legal, older people who stand to benefit often cannot get it. Most nursing homes do not openly sanction its use, and many doctors are reluctant to endorse pot use, saying not enough is known about the risks in the oldest age groups.

The president and chief executive of RiverSpring Health, Daniel Reingold said he administered marijuana to his father as a painkiller shortly before his death. "This is a target demographic that may have their access limited, if not cut off altogether, simply because they reside in a facility," said Paul Armentano, deputy director of NORML, a group that advocates the legalization of marijuana. "It is a problem that may infringe on their quality of life."

While there is no shortage of research on marijuana, relatively little of it has focused explicitly on older users even as their numbers grow — and not just in the United States. In Israel, for instance, older people have been treated with medical marijuana for years. And Americans for Safe Access, an advocacy group, helped open a research center in the Czech Republic that is evaluating its impact on older people. "It's an area that's very important to look at," said Dr. Igor Grant, the director of the Center for Medicinal Cannabis Research at the University of California, San Diego, adding that older people are now one of the center's research priorities. "Older people can be more sensitive to medicine," he said. "It's possible a dose safe for a 40-year-old may not be in an 80-year-old."

Dr. Thomas Strouse, a psychiatrist and palliative care doctor at the University of California, 5

Los Angeles, said that just as sleeping and pain medications could harm older people, marijuana could possibly make them confused, dizzy or more likely to fall. “There is no evidence that it is particularly helpful to older people, and some reason that it could be harmful,” he said.

Medical marijuana is kept in a safe in Marcia Dunetz’s room at the Hebrew Home at Riverdale. Most nursing homes have also taken a cautious position, often resorting to a “don’t ask, don’t tell” approach. “If residents are taking it, they are taking it undercover without the staff knowing so it’s not part of their care plan,” said Dr. Cheryl Phillips, senior vice president for public policy and health services for LeadingAge, an industry group representing more than 2,000 nursing homes. “I think that creates a safety problem.”

Fred Miles, a Colorado lawyer who represents nursing home operators, said nursing homes — unlike assisted living facilities — were regulated by the federal government, and were fearful of jeopardizing their Medicare and Medicaid funding. Staff members who administer marijuana could also theoretically face criminal prosecution under federal law, he said, though he has never heard of that happening.

The federal Centers for Medicare and Medicaid Services said no nursing home had specifically lost financing or been penalized for permitting the use of marijuana. In New York State, which started a medical marijuana program in 2016, its use is restricted to people with designated medical conditions, including neuropathy, epilepsy, multiple sclerosis, Parkinson’s, H.I.V., AIDS and cancer.

At the Hebrew Home in the Bronx, the medical marijuana program was years in the making. Daniel Reingold, the president and chief executive of RiverSpring Health, which operates the home, said he saw its powers firsthand when his own father, Jacob, was dying from cancer in 1999. To ease his father’s pain, Mr. Reingold boiled marijuana into a murky brown tea. His father loved it, and was soon laughing and eating again. “The only relief he got in those last two weeks was the tea,” Mr. Reingold said. When Mr. Reingold requested approval from the nursing home’s board members, there were no objections or concerns, he said. Instead, they joked that they would have to increase the food budget.

Then Dr. Zachary Palace, the medical director, developed a program that seeks to offer marijuana as an option but also comply with federal regulations: Though the nursing home recommends and monitors its use, residents are responsible for buying, storing and administering it themselves. dispensary in Yonkers run by Etain, a company licensed by the state to sell medical marijuana to qualifying patients or their designated caregivers, who must live in New York. Dr. Palace said that as

the program expanded this month, as many as 50 residents could be using marijuana.

Marcia Dunetz, 80, a retired art teacher who has Parkinson’s, said she worried at first about what people would think. “It’s got a stigma,” she said. “People don’t really believe you’re not really getting high if you take it.” But she decided to try it anyway. Now, she no longer wakes up with headaches and feels less dizzy and nauseated. Her legs also do not freeze up as often.

For Ms. Brunn, the marijuana pills have worked so well that she has cut back on her other pain medication, morphine. Her daughter, Faith Holman, 61, said the pills cost \$240 a month, which is not covered by health insurance. Ms. Holman, who lives in New Jersey, also has to ask a family friend to go to the Yonkers dispensary. “Obstacles had to be overcome,” Ms. Holman said. “But I think she was meant to have it because everything has worked out.”

Five Ways to Train your Brain

Research suggests that people who stay mentally active may develop memory and thinking problems later in life than those who are not mentally active. More years of education, jobs that stimulate the brain, and intellectually challenging hobbies all build what researchers call “cognitive reserve,” which may help the brain cope with changes due to different neurologic diseases.

Mental activity can’t prevent brain disease, but it may help people experience fewer memory problems, at least at the beginning. Researchers are still trying to identify the best type of mental exercise and how — or how much — they help. In the meantime, patients are encouraged to incorporate mental exercise into their daily routine. Here are some brain training tips:

Stimulate your brain as often as possible. If mental exercise is going to help, it has to be something you do regularly.

Set reasonable goals. If you like puzzles or Sudoku, start with small, easy ones before tackling more difficult ones. Otherwise, you’ll get frustrated and give up. Pick activities that make you think, and start at a level that is challenging but doable.

Strengthen your weaknesses. If you have trouble concentrating or doing math or thinking logically, pick exercises such as completing a jigsaw puzzle that force you to work on that weakness. That’s how mental exercise can be most helpful, research suggests.

Choose activities you enjoy. If you love reading books, join a book club. If you’ve always wanted to learn a new language or a musical instrument, sign-up for a class. Find your passion and pursue it. You’re more likely to stick with it, if you’re having fun.

Stay physically active. Mental exercise is not a substitute for physical exercise. Research shows that physical exercise can also improve memory and thinking.

By Melissa Armstrong, MD, MSC, FAAN, University of Florida Health Center

Neurology Now – February/March 2017 issue

CHRONIC ILLNESS – THE FOUR PHASES

Research supports the concept that four phases of adaptation occur in chronic illnesses and trauma. These phases describe a predictable passage that patients navigate on their way to defining a new self and a new life after the onset of chronic illness. The Fennell Four-Phase Treatment (FFPT) provides a framework for understanding this critical process, as did Kubler-Ross' work regarding stages of death and dying.

- **In Phase 1, Crisis**, the individual moves from onset of illness, which may be specifically detectable or may happen gradually, to an emergency period when the patient knows that something is seriously wrong. The task of the individual, caregivers and clinicians during this phase is to cope with urgency and trauma.

- **In Phase 2, Stabilization**, the individual discovers that he or she fails, sometimes repeatedly, to return to normal regardless of interventions or behavior. The task in this phase is to initiate stabilization and life restructuring.

- **In Phase 3, Resolution**, the individual recognizes deeply that his or her old life will never return. Early in this phase, most people experience profound existential despair. The task of this phase is to begin establishing an authentic new self and start developing a supportive, meaningful philosophy.

- **In Phase 4, Integration**, the individual defines a new self in which illness may be an important factor, but it is not the primary one in his or her life. Integration of the illness into a meaningful life is the goal the individual seeks.

Within each phase, the Fennell Four-Phase Model addresses **three domains**:

**the physical/behavioral,
the psychological and
the social/interactive.**

The experience of chronic illness does not remain the same over time. The physical, emotional and social needs of a patient in the early stages of the chronic illness experience can be considerably different from the needs of the patient who has been ill for several years. In addition, changing social, medical, psychological or other circumstances that may be unrelated to the chronic illness may cause the patient to move backward or forward within the Phases multiple times over the course of his or her lifetime.

PHASE ONE: Contain the crisis

- Put together a reliable, caring health-care team, with a team leader you like & trust
- Follow your clinical instructions faithfully and reports to your team leader regularly
- Learn about the nature of chronic illness and the phases
- Observe and chart your activities, symptoms, feelings and how they are related.
- Create a “bunker”- a safe place. Reduce your activities to a level you can sustain. Keep tracking your activities, symptoms, feelings.
- Begin a personal narrative.
- Begin establishing new relationships with the other people in your life & workplace.

Learn to allow your suffering

PHASE TWO: Stabilize and begin restructuring your life

- Commit to a period of “monastic” life (paying close attention to what you do and how you do it.)
- Reassess your physical situation, your medical treatments, protocols, medications
- Identify your activities by activity group. Make sure your activities are balanced among four activity groups: ADLs (activities of daily living), personal enrichment, social, & work.
- Begin defining the boundaries of your new life, including activities from all four activity groups.
- Develop your skills of self-observation.
- Work to maintain your insights.
- Start clarifying your values and developing new norms.
- Work with significant people in your life regarding the fact that you're not going to return to “normal.”
- Make time to grieve your losses and your suffering

Learn to regard your suffering with compassion.

PHASE THREE: Maintain insight, develop meaning, construct new self.

- Begin assuming management of physical care coordination if possible.
- Actively grieve for losses & suffering.
- Commit to “time in the tunnel.” Explore existential questions and find meaning.
- Analyze what exactly you have lost and what you haven't.
- Begin constructing a new self, using your developing skills of insight, issue reframing, and creative activity.

- Assert that you are not a burden to people but simply a person with particular needs. Assess everything about your new self and your ideas about meaning for complete personal authenticity.
- Find ongoing methods with your significant others to adapt to the changing conditions of your life together
 - Rely on supporters and explore reincorporation of old friends or family members.
- Consider political action related to your illness.
- Stand with your new self without apology.

Learn to meet your suffering with respect.

PHASE FOUR: Integrate your illness in to a whole and meaningful life.

- Accept that you may only experience phase four periodically.
- Stay attuned to your illness cycle, maintain regular medical reviews, and keep abreast of developments in your illness.
- Monitor your activities to keep within your physical boundaries and to maintain a balance of activity over the four activity groups.
- Continue to explore and grow creatively & spiritually
- Maintain your new self and strive for your new “personal best.”
- Commit to your daily acts of bravery as matters of free will
- Expand your social horizons as much as your condition will permit.
- Keep in continuous touch with you family, partner and friends.
- Recruit new supporters and integrate old ones who wish to reconnect to your life
 - Engage in social action.
- Seek authentically meaningful work.
- Commit to living with the paradox and in the mystery.

Learn to integrate your suffering into a whole life.

Reprinted from

http://www.albanyhealthmanagement.com/ourfocus_ffpm.shtml

The Chronic Illness Workbook Reprinted from Patricia Fennell, MSW, LCSW

Thank you to member Andy Wilcox for sharing this information.

Nerve Cells Can be Switched on to Repair Damage

Scientists at the University of Wisconsin have found a way to coax peripheral nerve cells into repairing damaged axons. Peripheral cells extend outside the central nervous system into the arms and legs and are responsible for sensation. They contain long fibers known as axons that transmit impulses from the brain. They can be damaged in diseases such as diabetes, causing pain.

The axons are surrounded by a protective sheath called myelin, a fatty insulation that speeds electrical signals from the brain. Myelin is created by Schwann cells, but researchers have discovered that Schwann cells can also stimulate nerve regrowth.

They conducted an experiment in mice with both intact axons and axons which had been cut. Using a method for switching on genes, they saw Schwann cells become more active, but only in the injured rodents.

They went into a repair mode that stimulated nerve regrowth. This clean-up, as researchers call it, began within days of the injury.

As part of the clean-up process, the Schwann cells send signals that enlist blood cells to help in the repair. During this time, the myelin begins to dissolve to make room for the axonal repair. After the axons are on the road to recovery, a new myelin sheath begins to form over the regenerated fibers. The scientists identified a particular pathway that switches the Schwann cells on or off. They suggest drugs may some day be available to activate the repair program.

A report on axonal regeneration was published in *The Journal of Neuroscience*.

Lead researcher John Svaren, a professor of comparative biosciences at the University of Wisconsin, says it's not clear that this single on-off pathway works to regenerate all axonal nerve cell damage. But he's hopeful that it's a key repair mechanism, not only within the peripheral nervous system but for nerve damage within the brain.

Until now, Svaren says scientists have thought of the Schwann cell as a “static entity,” with only one function: producing myelin. But he is excited that the cells can be coaxed to become “first responders” in helping to repair the peripheral nervous system.

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