

**Ten Approaches to
Back and Hip Pain:
The Use of
Complementary & Alternative
Medicine in
Patients with
Parkinson's Disease**

by Kimberly Burnham, PhD (Integrative Medicine)

1. Education, Power and Self Care
2. Strain and Counterstrain/Massage (Therapist and Self-Care)
3. Motor Imagery (Guided meditations)
4. Power Posing for better digestion, brain chemistry)
5. Color Therapy with Green Wood
6. Acupressure / Acupuncture
7. Sensational Medicine / Conscious Sensory Exercises
8. Basal Ganglia and Disgust Exercises.
9. CranioSacral Therapy for Blood Flow
10. Energy Medicine: Reiki Symbols

**Back & Hip Pain Relief, The Use of CAM in Patients with Parkinson's Disease
by Kimberly Burnham, PhD (Integrative Medicine)**

<http://ParkinsonsAlternatives.CreatingCalmNetwork.com>

2014 Spokane Pain Conference


- ▶ **Overview & Objectives:**
 - ▶ **Significant Pain in Parkinson's Disease:**
 - ▶ **Locations: Back, Knee, Shoulder**
 - ▶ **Complementary and Alternative Medicine (CAM) research;**
 - ▶ **Use of CAM in Hospitals**
- ▶ Posture and Postural Release: Body position, pain and function; Motor Imagery; Body posture and brain chemistry
- ▶ Traditional Chinese Medicine Color Therapy: Green Wood, Stiff as a Board.
- ▶ Sensational Medicine for Sleep
- ▶ Overlapping Brain Functions: Caring, Creativity and Frontal Lobe Function; Midbrain and Substantia Nigra Dopamine Production; Basal Ganglia and Disgust Exercises.
- ▶ CranioSacral Therapy, Manual Therapy and Massage: Blood flow to the brain and body.
- ▶ Energy Medicine: Reiki Symbols and The Shape of Dopamine.

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▶ Objectives

- ▶ **Objective 1: Educate medical practitioners about alternative medicine approaches. Some studies put the number of neurology out-patients using complementary and alternative medicine at 60 percent.**
 - ▶ **Objective 2: Describe what a multidisciplinary approach including Complementary medicine might look like.**
 - ▶ **Objective 3: Discuss of four specific approaches used by people with Parkinson's disease to address pain and symptoms: yoga, acupuncture, massage therapy,/manual therapy, Reiki (used in 800 US hospitals), and yoga.**
- 

Significance

“The prevalence of musculoskeletal problems was **significantly higher** in the PD group than in the control group (66.3% vs. 45.7%, $P < 0.001$). “

Locations

“Commonly involved body sites were the **low back, knee,** and **shoulder** in that order. “

— Kim, Y. E., W. W. Lee, et al. (2013). "Musculoskeletal problems in Parkinson's disease: neglected issues." Parkinsonism Relat Disord 19(7): 666–669.

Locations

“The **low back** was more frequently involved in the PD group than in the control group (44.3% vs. 24.6%, $P < 0.001$), and the **shoulder** tended to be more involved in the PD group than in the control group (15.0% vs. 8.7%, $P = 0.061$). However, the **knee** was similarly involved in both group (12.3% vs. 18.0%, $P = 0.121$).”

— Kim, Y. E., W. W. Lee, et al. (2013). "Musculoskeletal problems in Parkinson's disease: neglected issues." Parkinsonism Relat Disord 19(7): 666–669.

Associated Problems

Among the past diagnoses associated with musculoskeletal problems:

- frozen shoulder,
- low back pain,
- osteoporosis and
- fracture

were more common in the PD group than in the control group ($P < 0.05$).”

— Kim, Y. E., W. W. Lee, et al. (2013). "Musculoskeletal problems in Parkinson's disease: neglected issues." Parkinsonism Relat Disord 19(7): 666–669.

Associated Elements

- “Older age,
- female, and a
- higher score on the Unified Parkinson's Disease Rating Scale I & II

were associated with musculoskeletal problems in the PD group.”

— Kim, Y. E., W. W. Lee, et al. (2013). "Musculoskeletal problems in Parkinson's disease: neglected issues." Parkinsonism Relat Disord 19(7): 666–669.

Pain and Depression

“The intensity of **pain** was correlated with **depression** severity.”

—Letvinenko, I. V., M. M. Odinak, et al. (2008). “[Pain and depression in Parkinson's disease: new therapeutic possibilities of pramipexole].” Zh Nevrol Psikhiatr Im S S Korsakova 108(11): 36–38.

Hopefulness and Support

“Only 26.8% of the PD patients and 52.5% of the controls with musculoskeletal problems answered that their musculoskeletal problems were **recovering.**”

Attention

“Furthermore, musculoskeletal problems in the PD group tended to receive **less treatment** than that of the control group ($P = 0.052$).”

— Kim, Y. E., W. W. Lee, et al. (2013). "Musculoskeletal problems in Parkinson's disease: neglected issues." Parkinsonism Relat Disord 19(7): 666–669.

Author's Conclusion:

“Musculoskeletal problems were more common in the PD group than in the controls. Furthermore, despite PD patients having a higher prevalence, they did not receive adequate treatment.”

— Kim, Y. E., W. W. Lee, et al. (2013). "Musculoskeletal problems in Parkinson's disease: neglected issues." Parkinsonism Relat Disord 19(7): 666–669.

Prevalence

“62/104 parkinsonians and 23/100 controls reported back pain. The prevalence was 59.6% in the parkinsonian group and 23.0% in the control group ($P < 0.0001$).”

“Chronic back pain is quite common in PD. It is responsible for a substantial functional impact and needs more attention to reduce disability of such patients.”

— Etchepare, F., S. Rozenberg, et al. (2006). "Back problems in Parkinson's disease: an underestimated problem." *Joint Bone Spine* 73(3): 298–302.

“Parkinson's disease (PD) is a common and debilitating neurodegenerative disorder without a known neuroprotective cure. Currently, an increasing number of patients with PD resort to complementary and alternative medicine (CAM). Frequently utilized forms of therapy:

- **acupuncture,**
- **massage,**
- **herbs, and**
- **vitamins/health supplements, and**

These therapies were mainly used to improve the associated motor symptoms of PD.

However, only 11% to 20% of these patients were referred to use CAM by a healthcare professional.”

—Wang, Y., C. L. Xie, et al. (2013). "Epidemiology of complementary and alternative medicine use in patients with Parkinson's disease." J Clin Neurosci 20(8): 1062–1067.

“At least **40% of patients with Parkinson's disease** (PD) use one or more forms of alternative therapy (AT) to complement standard treatments. This article reviews the commonest forms of AT for PD, including

- acupuncture,
- tai chi,
- yoga,
- mindfulness,
- massage,
- herbal medicine, and
- cannabis.”

—Ghaffari, B. D. and B. Kluger (2014). "Mechanisms for alternative treatments in Parkinson's disease: acupuncture, tai chi, and other treatments." Curr Neurol Neurosci Rep 14(6): 451.

“It is likely that most ATs predominantly treat PD patients through

- **general mechanisms, including**
- **placebo effects,**
- **stress reduction, and**
- **improved mood and**
- **sleep, and AT may provide patients with a**
- **greater locus of control regarding their illness.”**

—Ghaffari, B. D. and B. Kluger (2014). "Mechanisms for alternative treatments in Parkinson's disease: acupuncture, tai chi, and other treatments." Curr Neurol Neurosci Rep 14(6): 451.

“A non-blinded pilot study of the safety, tolerability, and efficacy of acupuncture (ACUPX) for symptoms of (PD). On the patient questionnaire, **85% of patients** reported subjective improvement of individual symptoms

including

- tremor,
- walking,
- handwriting,
- slowness,
- pain,
- sleep,
- depression, and
- anxiety. “

—Shulman, L. M., X. Wen, et al. (2002). "Acupuncture therapy for the symptoms of Parkinson's disease." Mov Disord 17(4): 799–802.

- ▶ Overview & Objectives: Significant Pain in Parkinson's Disease: Back, Knee, Shoulder; Complementary and Alternative Medicine (CAM) research; Use of CAM in Hospitals

- ▶ **Posture and Postural Release:**

- ▶ **Body position, pain and function;**

- ▶ **Motor Imagery**

- ▶ **Body posture and brain chemistry**

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THE EFFECT OF INTEGRATIVE MANUAL THERAPY ON THE SYMPTOMS
OF PARKINSON'S DISEASE

Kimberly Burnham, PhD

Burnham, K. (2006). "*The Effect of Integrative Manual Therapy on the symptoms of Parkinson's disease.*" Westbrook University PhD (Integrative Medicine)


THESIS: Sixty hours of treatment with Integrative Manual Therapy (IMT) will considerably decrease signs and symptoms in people with Parkinson's disease (PD), including

- decrease in tremors,
- alleviation of pain,
- speeding up of gait and
- improvements in respiration,
- facial expression,
- speech and mood.

Mind-Body-Spirit Exercises

METHODS: Single-Subject Research Design Case Study. The neurologist's evaluations were a month apart while the physical therapy assessments took place on the day before and the day after the two week treatment protocol. The participant also completed six questionnaires.

TREATMENT: In this case study **60 hours of Integrative Manual Therapy** took place over a two week period (five hours each day on 12 days). Nutritional and self-care recommendations were made after the post testing



Neurologist's Report March 2006

The client, a 62 year old man diagnosed with Parkinson's Disease 4 years ago. He was evaluated by a neurologist February 27, 2006 and on March 31, 2006. Initially, he had a UPDRS motor score of 26 and is not on medication. The Unified Parkinson's Disease Rating Scale (UPDRS) is made up of: Mentation, Behavior, and Mood, Activities of Daily Living and Motor sections. A total of 199 points are possible. 199 represents the worst (total) disability with 0 representing no disability.

His symptoms improved in all categories. Mentation rose from 1 (less assertive than usual; more passive) to 0 (normal motivation/initiative). Activities of daily living jumped from 15 to 10 symptom points. Hoarse salivation went from 2 (Moderate) excessive saliva with some drooling to 1 (slight) but definite excess saliva in mouth. (3) Severely affected handwriting, not all words are legible to 2 (Moderately slow or slight handwriting, all words are legible. Walking from 1 (mild difficulty, may not swing arms or may tend to drag leg to 0 (Normal. Tremors went from 3 (Severe, interfere with most activities to 2 (Moderate, bothersome to patient).

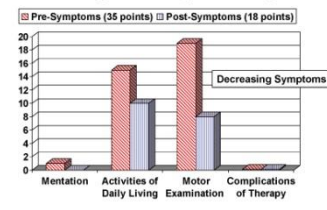
Motor Examination improved from 19 symptoms points to 8 in the post test with improvements in face expression, tremors at rest, finger flex, hand movements, hand pronation-supination movements, leg agility, sitting from a chair, posture, and gait. Most notably in this section were the improvements in tremors at rest (gait), Tremors at rest improved from 3 (Moderate in amplitude and frequent) present. Rigidity improved from 3 (Marked, but full range of motion easily achieved to 1 (Slight or detectable only when adviced by mirror or other movements).

He is in Stage 2 with bilateral disease, without impairment of balance as described by the Hoehn and Yahr Stages of Parkinson's Disease. The Hoehn and Yahr staging system has been largely supplanted by the Unified Parkinson's Disease Rating Scale, which is much more complicated. Results are described in five stages: Stage 1, Stage 2, Stage 3, Stage 4, Stage 5. This did not change categories in the post test.

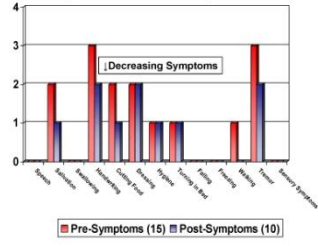
He scored 10 percent on the Schwab and England Activities of Daily Living Assessment. Severity percent is described as "Not completely independent. More difficulty some chores. Three to four times as long in some. Much more energy put in the day when doing them." The Schwab and England Activities of Daily Living was developed by Lilianham F.J., Donaldson M.C., eds. "Test Symp. of Parkinson's Disease." Edinburgh, Scotland: E.S. Livingston, 1969. pp.150-7. Rating can be assigned by patient or by patient. Results are described as a percentage up to 100.

In the post test he scored 81 percent on the Schwab and England Activities of Daily Living test. Eighty percent is described as Completely independent in most chores. Takes twice as long. Conscious of difficulty and slowness.

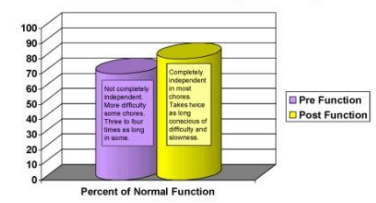
Unified Parkinson's Disease Rating Scale (UPDRS)



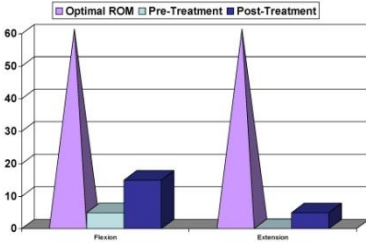
Activities of Daily Living Improvements (UPDRS)



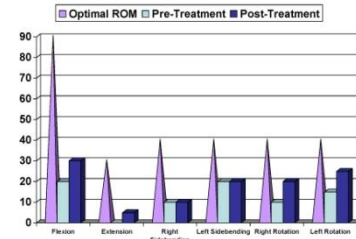
Modified Schwab and England Activities of Daily Living



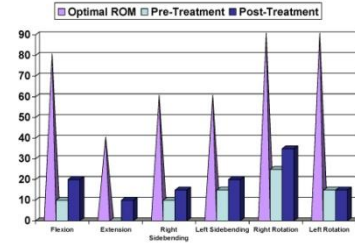
Lumbar Ranges of Motion



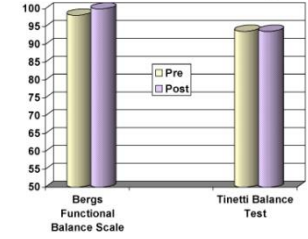
Thoracic Ranges of Motion



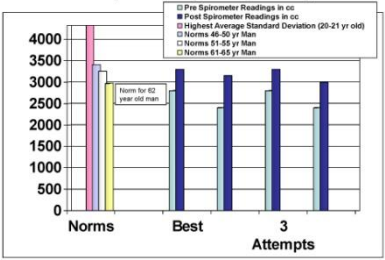
Cervical Ranges of Motion



Balance Testing



Respiratory Capacity



Spirometer

A spirometer is a completely new product. It can measure lung capacity without using water. To be a number of advantages and conventional tank type spirometers, which make a noise to handle, breathe, lightweight and small and can be used for many purposes, including sports and medical health care.

How to use

How and how to use the spirometer. The spirometer is used to measure lung capacity. The user breathes into the spirometer through the mouthpiece. The spirometer measures the volume of air inhaled and exhaled. The spirometer is used to measure lung capacity. The user breathes into the spirometer through the mouthpiece. The spirometer measures the volume of air inhaled and exhaled. The spirometer is used to measure lung capacity. The user breathes into the spirometer through the mouthpiece. The spirometer measures the volume of air inhaled and exhaled.

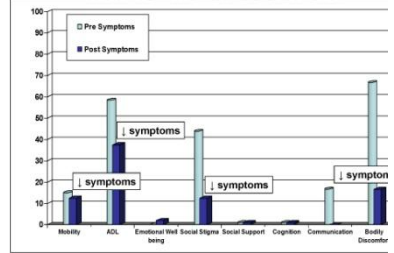
Precautions

When using the spirometer, do not use it if you are sick, pregnant, or have a respiratory condition. Do not use it if you are taking medication that affects lung function. Do not use it if you are taking medication that affects lung function. Do not use it if you are taking medication that affects lung function.

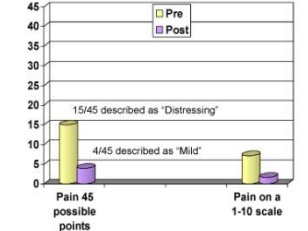
Specifications

Maximum lung volume: 10000 ml. Minimum lung volume: 0 ml. Accuracy: ± 1%. Resolution: 1 ml. Power: 1.5W. Dimensions: 100mm x 100mm x 100mm.

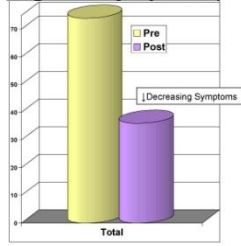
PDQ-39 Parkinson's Case Change with 60 hrs of treatment



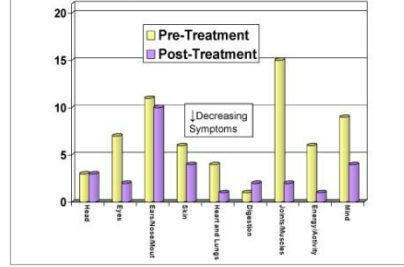
McGill Pain Questionnaire



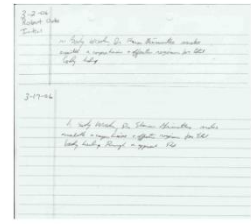
Medical Symptoms Questionnaire (Signs & Symptoms)



Medical Symptoms Questionnaire



Handwriting Sample



Parkinson's Disease Results

March 2-17, 2006

RESULTS: The 62 year old man diagnosed four years ago with PD made improvements in virtually all assessed categories. Notable gains include a **48.6% improvement in total UPDRS scores**. Schwab and England scores changed from 70% to 80% of normal function. The Up & Go Test and 10 Meter Walk showed improvements in walking speed and stride length. Lung capacity readings (a spirometer measurement) improved from 2800 cc to 3300 cc. The PDQ-39 questionnaire showed a **67% improvement in symptoms**. The Medical Symptoms Questionnaire (MSQ) score improved 51.3%.

The McGill Pain Questionnaire showed a 73.3% decrease in pain, primarily back and hip pain.

Neurologist's Report March 2006

The client, a 62 year old man diagnosed with Parkinson's Disease 4 years ago. He was evaluated by a neurologist February 27, 2006 and on March 31, 2006. Initially, he had a UPDRS total of 36 and is not on medication. The Unified Parkinson's Disease Rating Scale (UPDRS) is made up of: Mental, Behavior, and Mood, Activities of Daily Living and Motor sections. A total of 199 points are possible. 199 represents the worst (total) disability with 0 representing no disability.

His symptoms improved in all categories. Mentation rose from 1 (less assertive than usual; more passive) to 0 (normal motivation). Jointly flexion/sarclion went from 1 (definite excess saliva in mouth) to 0 (normal). Words are legible to 0 (Moderate difficulty, may not swing as smoothly). Speech is clear to 0 (Normal). Motor Examination improved in all categories. He is in Stage 2 with bilateral and mild rigidity of Parkinson supported by the Unified Parkinson's Disease Rating Scale. He is in Stage 2 with bilateral and mild rigidity of Parkinson supported by the Unified Parkinson's Disease Rating Scale. He is in Stage 2 with bilateral and mild rigidity of Parkinson supported by the Unified Parkinson's Disease Rating Scale.

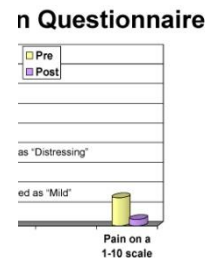
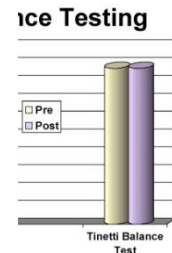
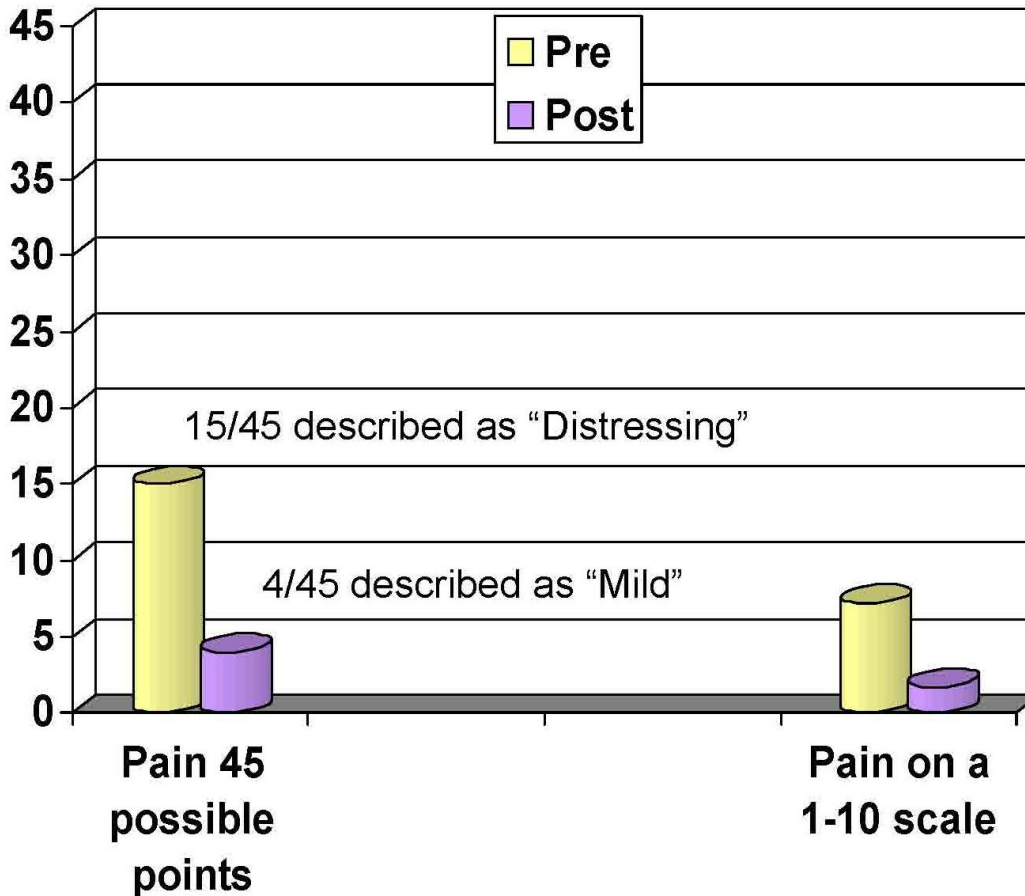
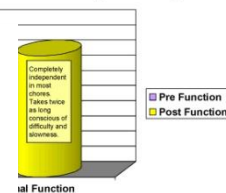
Unified Parkinson's Disease Rating Scale (UPDRS)

Pre-Symptoms (35 points) Post-Symptoms (18 points)

Activities of Daily Living Improvements (UPDRS)

Modified Schwab and England Activities of Daily Living

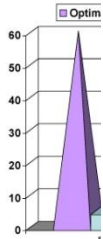
McGill Pain Questionnaire



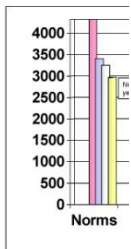
Disease Results

March 2-17, 2006

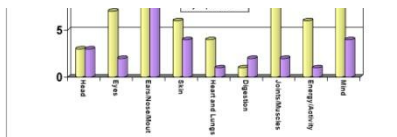
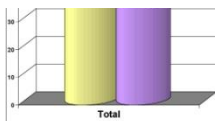
Lumb:



Resp




Mi




Handwritten note on lined paper: I really think the stress situation makes me feel like I can't breathe right now. I feel like I can't breathe right now. I feel like I can't breathe right now.

DISCUSSION: The results show important changes in function, pain, and general well-being. This is significant given the expected 3.1% annual increase in the UPDRS motor scores and a 3.2% decline in Hoehn and Yahr staging levels. This case study did not have a blinded control but results were compared to predictors of outcome in the medical literature. Even without a control, these findings are substantial enough to suggest further research into how IMT can be incorporated into treatment plans.

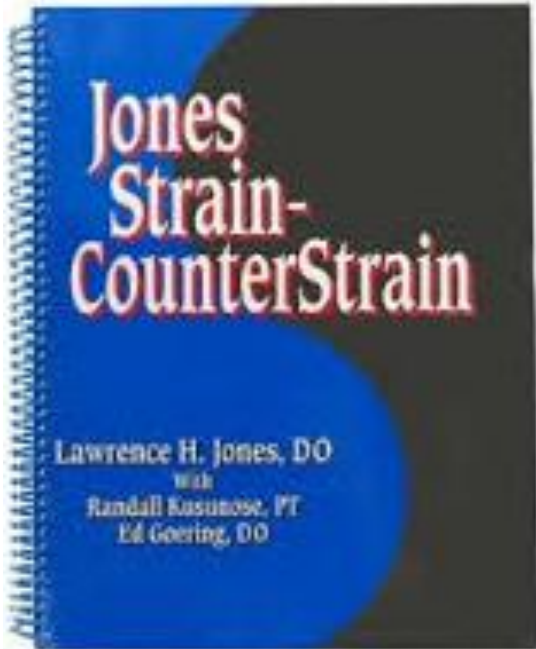


CONCLUSIONS: This is the first evidence-based study on the effects of Integrative Manual Therapy in Parkinson's disease. The improvements should serve as a stimulus to therapists to use IMT as a way to improve the client's quality of life. IMT is not a common component of rehabilitation programs, but is one that deserves more attention

Burnham, K. (2006). The Effect of Integrative Manual Therapy on the Symptoms of Parkinson's disease, PhD Dissertation in Integrative Medicine (August 2006)
Westbrook University



Strain and Counterstrain



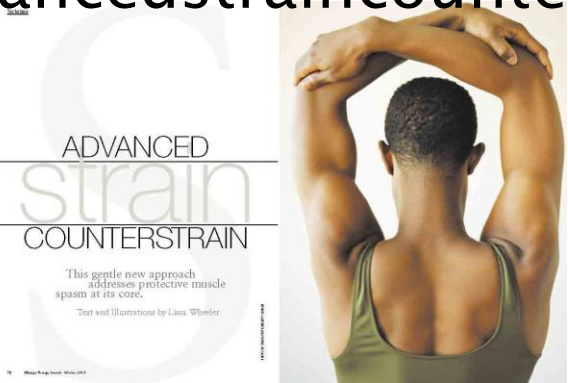
<http://gadibody.com>

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Wheeler, Lissa (2004). "Advanced Strain Counterstrain." Massage Therapy Journal 43 Winter(4): [Full Text] <http://www.amtamassage.org/uploads/cms/documents/advancedstraincounterstrain.pdf>



Hazardry Of Protection
01
The author illustrates the hazardry of protection in the neck, showing the relationship between the vertebrae and the muscles that support the head.

02
The author illustrates the hazardry of protection in the neck, showing the relationship between the vertebrae and the muscles that support the head.

03
The author illustrates the hazardry of protection in the neck, showing the relationship between the vertebrae and the muscles that support the head.

04
The author illustrates the hazardry of protection in the neck, showing the relationship between the vertebrae and the muscles that support the head.

05
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08
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09
The author illustrates the hazardry of protection in the neck, showing the relationship between the vertebrae and the muscles that support the head.

Case Study 3
The author describes a case study involving a patient with a specific condition, detailing the symptoms and the treatment approach used.

Case Study 4
The author describes another case study, focusing on a different patient and their unique presentation of symptoms.

Case Study 5
The author describes a third case study, highlighting the challenges faced during treatment and the successful outcome.

Case Study 6
The author describes a fourth case study, providing a detailed account of the patient's history and the therapeutic interventions.

Case Study 7
The author describes a fifth case study, emphasizing the importance of a thorough assessment in identifying the underlying cause.

Case Study 8
The author describes a sixth case study, illustrating the use of specific techniques to address muscle imbalances.

Case Study 9
The author describes a seventh case study, discussing the long-term effects of the treatment and the patient's satisfaction.

Case Study 10
The author describes an eighth case study, focusing on the integration of counterstrain with other modalities.

Case Study 11
The author describes a ninth case study, providing a comprehensive overview of the patient's journey from initial assessment to final resolution.

Case Study 12
The author describes a tenth case study, highlighting the role of patient education in the recovery process.

Case Study 13
The author describes an eleventh case study, discussing the importance of ongoing care and maintenance.

Case Study 14
The author describes a twelfth case study, focusing on the management of acute symptoms.

Case Study 15
The author describes a thirteenth case study, illustrating the use of counterstrain in a clinical setting.

Case Study 16
The author describes a fourteenth case study, providing a detailed account of the patient's response to treatment.

Case Study 17
The author describes a fifteenth case study, discussing the long-term stability of the patient's condition.

Implementing The Method
The author provides detailed instructions on how to implement the counterstrain technique, including assessment steps and treatment protocols.

Four Case Studies
The author presents four detailed case studies, each illustrating a different application of the counterstrain method in various clinical scenarios.

Case Study 1
The author describes the first case study, detailing the patient's symptoms and the specific counterstrain techniques used for treatment.

Case Study 2
The author describes the second case study, focusing on a patient with a different set of symptoms and the corresponding treatment plan.

Case Study 3
The author describes the third case study, highlighting the challenges of treating a complex condition and the successful outcome.

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Motor Imagery

“... the role of motor imagery in **chronic shoulder pain rehabilitation**. Design: Case report. Setting: University outpatient rehabilitation. Population: A 49-year-old female with chronic shoulder pain.

Methods: Neurocognitive approach, which involves the use of a new tool called "naval battle" to achieve chronic pain relief as assessed by the Visual Analogic Scale (VAS) and **McGill Pain Questionnaire (MPQ)**. The Shoulder Rating Questionnaire (SRQ) and Constant Scale (CS) were used to measure functional improvement.

—Zangrando, F., T. Paolucci, et al. (2014). "Chronic pain and motor imagery: a rehabilitative experience in a case report." *Eur J Phys Rehabil Med* 50(1): 67–72.

Motor Imagery

“Results: The results **indicate significant pain relief (71%) and improvement in functionality (50%)**. Conclusion: The results seem to confirm the accuracy of the hypothesis on the genesis of chronic pain as a perceptive "discoherency" and that motor imagery can remake a coherence of afferences at central level in chronic pain.

Clinical rehabilitation impact: The use of motor imagery in rehabilitation can be a **viable alternative** in chronic shoulder pain resistant to other rehabilitation protocols.”


—Zangrando, F., T. Paolucci, et al. (2014). "Chronic pain and motor imagery: a rehabilitative experience in a case report." Eur J Phys Rehabil Med 50(1): 67–72.



Amy Cuddy is an associate professor at Harvard Business School. She received the Alexander Early Career Award from the Society for the Psychological Study of Social Issues in 2008 and a Rising Star Award from the Association for Psychological Science in 2011. Cuddy spoke at TEDGlobal 2012 in Edinburgh in June.

Burnham, K. (2014). "The Power Pose of Dopamine and Movements for Brain Health <http://www.linkedin.com/today/post/article/20140517231122-39038923-the-power-pose-of-dopamine-and-movements-for-brain-health>." LinkedIn Blog.

“Don't fake it till you make it. Fake it till you become it,” says Amy Cuddy, Harvard Business School professor. In a TED Talk she notes brain and body chemistry changes in two minutes of taking a power pose—think of the way Wonder Woman or Superman would stand, feet apart hands on your hips.





Posture: Open / Closed

Decreased (Open) Cortisol – Less Stress

Increased (Open) Testosterone – More Powerful

“Our bodies change our minds and our minds can change our behavior. Our behavior can change our outcomes and even our physiology, according to Cuddy, who has shown that standing or sitting for two minutes in an open posture can significantly **increases testosterone, which is the assertiveness and dominance hormone. This open posture also **decreases cortisol**, which means you are less stressed.**

It is easy. You need your body and two minutes to significantly change your life for the better.”





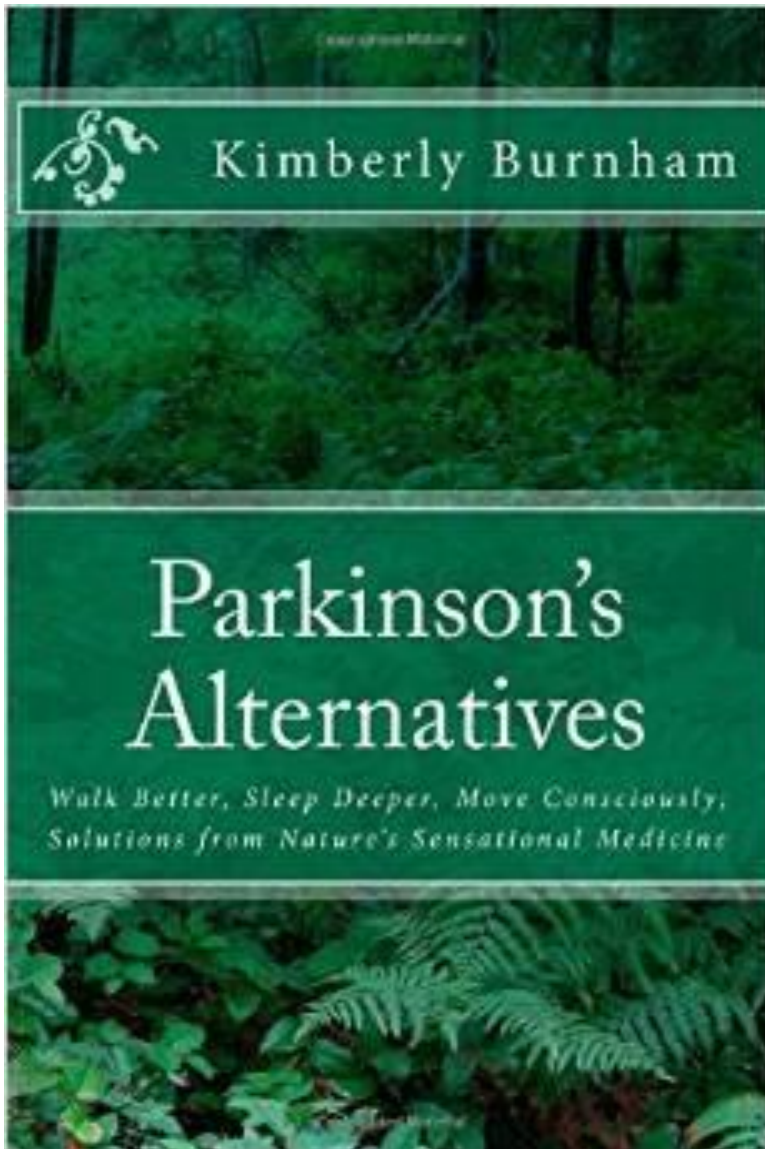
What is the Posture of Dopamine

Walking, Shuffling gait, Jack knifed at the hips
Solutions and Ideas

"Body language shapes who you are but what is surprising, when it comes to power, is that the body also shapes the mind." Dana Carney (UC–Berkeley) and Amy Cuddy, both experimental social psychologists, have conducted research showing that adopting these postures—"power posing"—actually causes people to become more powerful. "After sitting or standing, alone in a room, in a high–power pose for just two minutes, participants in our experiments resembled powerful people—emotionally, cognitively, behaviorally, and even physiologically."

"In other words—two minutes of preparatory power posing optimizes the brain to function well in high–stakes challenges."

And really what aspect of your life is not a high stake challenge? Where in your life could you benefit from more



Parkinson's Alternatives: Walk Better, Sleep Deeper and Move Consciously; Solutions from Nature's Sensational Medicine ... by Kimberly Burnham (Apr 15, 2012)

Conscious Long Walking

- ▶ Overview & Objectives: Significant Pain in Parkinson's Disease: Back, Knee, Shoulder: Complementary and Alternative Medicine (CAM) research; Use of CAM in Hospitals
- ▶ Posture and Postural Release: Body position, pain and function; Body position and brain chemistry

- ▶ **Traditional Chinese Medicine Color Therapy**
 - ▶ **Green Wood, Stiff as a Board.**
 - ▶ **Acupuncture / Acupressure / Sound Puncture / Light Puncture**

- ▶ Sensational Medicine for Sleep
- ▶ Overlapping Brain Functions: Caring, Creativity and Frontal Lobe Function; Midbrain and Substantia Nigra Dopamine Production; Basal Ganglia and Disgust Exercises.
- ▶ CranioSacral Therapy, Manual Therapy and Massage: Blood flow to the brain and body.
- ▶ Energy Medicine: Reiki Symbols and The Shape of Dopamine.

**Back & Hip Pain Relief, The Use of CAM in Patients with Parkinson's Disease
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<http://ParkinsonsAlternatives.CreatingCalmNetwork.com>

2014 Spokane Pain Conference

“We showed that acupuncture treatment is in fact a **neuroprotective therapy** that increase the release of various neuroprotective agents such as:

- brain-derived neurotrophic factor,
- glial cell line-derived neurotrophic factor, and
- cyclophilin A.

In addition, acupuncture therapy slows


- cell death process and
- **attenuates oxidative stress to dopaminergic neurons in the substantia nigra.**

—Zeng, B. Y., S. Salvage, et al. (2013). "Current development of acupuncture research in Parkinson's disease." Int Rev Neurobiol 111: 141–158.

“Further, acupuncture therapy modulates neuronal activity of the basal ganglia output structures.

These results suggest that early application of acupuncture therapy to Parkinson's patients may be helpful for the best efficacy of acupuncture treatment. It is hopeful that translation of achievement in acupuncture research in Parkinson's models will maximize the potentials of acupuncture treatment.”

—Zeng, B. Y., S. Salvage, et al. (2013). "Current development of acupuncture research in Parkinson's disease." Int Rev Neurobiol 111: 141–158.



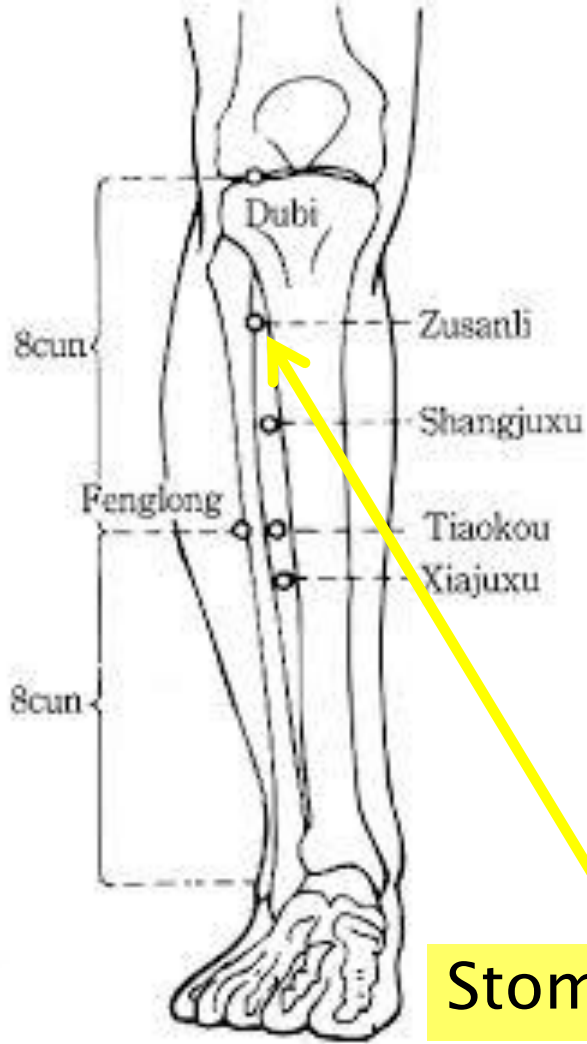
Dogs & ST 36

“The aims of this study were to investigate the interference of the brain activation during a passive movement task (PMT) by retained acupuncture at the ST 36 acupoint and to compare these effects between normal brain and Parkinson's disease (PD) brain.

The fMRI study showed that insertion of the acupuncture needle at acupoint ST 36 significantly affected the proprioceptive brain activation by decreasing blood oxygenation level–dependent signal intensity in basal ganglia, limbic system, and cerebellum.

—“Lee, S. H., G. H. Jahng, et al. (2013). "Neural pathway interference by retained acupuncture: a functional MRI study of a dog model of Parkinson's disease." CNS Neurosci Ther 19(8): 585–595.

Stomach and Spleen are
paired meridians
Yellow Earth Elements



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Acupuncture and Blood Flow

“Using a crossover study design, volunteers received standardized **Stomach 36** manual acupuncture in two experimental conditions: while undergoing a propofol-based general anesthetic, and while awake. signals between awake and anesthesia conditions.

Using blood oxygenation level-dependent (BOLD) , we found significant differences between the two experimental sessions in brain areas, including postcentral gyri, retrosplenial cingular area, left posterior insula, bilateral precuneus, **thalamus, red nuclei, and substantia nigra** (cluster 100, $P < 0.01$).

—Wang, S. M., R. T. Constable, et al. (2007).

"Acupuncture-induced blood oxygenation level-dependent signals in awake and anesthetized volunteers: a pilot study." Anesth Analg 105(2): 499–506.



Dopamine: The Wood Elements for Growth & Vitality: Gallbladder is most active/helpful from 11 pm—1 am and Liver is most active/helpful from 1–3 am; green color, anger emotion, compassion virtue. The neurotransmitter or brain chemistry correlations are Dopamine with the gallbladder meridian and Norepinephrine with the liver meridian.

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Sleep and Pain

“Difficulty falling asleep (sleep latency) and staying asleep (sleep maintenance) are common problems for persons living with pain. Research demonstrates that sleep problems are, in turn, related to exacerbation of chronic pain. This study looks at the outcome of teaching patients with musculoskeletal pain **standardized pre-bedtime hand self-Shiatsu (HSS) to reduce sleep latency.**

Data revealed **no apparent changes in the objective actigraphy data. However a trend toward improved self-reported sleep latency (time to fall asleep) and sleep duration (time spent asleep) emerged.**”

—Brown, C. A., G. Bostick, et al. (2014). "Hand self-Shiatsu for sleep problems in persons with chronic pain: a pilot study." J Integr Med 12(2): 94-101.

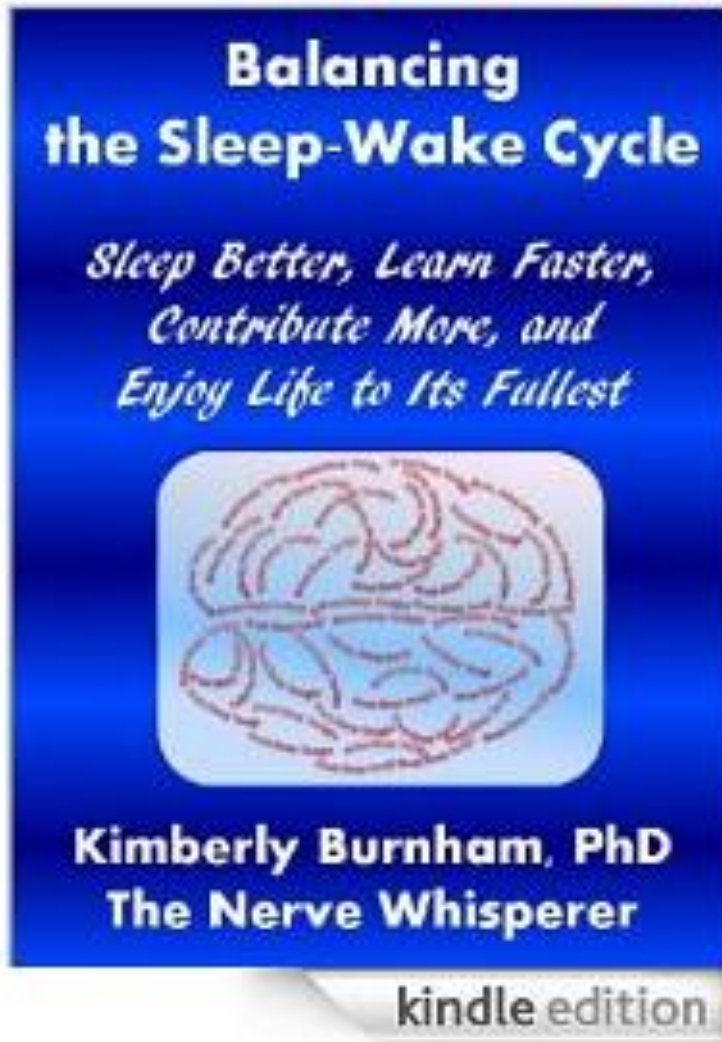
Unbroken Sleep

“A number of participants reported they were more concerned with increasing their period of **unbroken sleep** as opposed to their total sleep time and it is possible that HSS may be useful to be applied during nighttime awakenings as well as before bed. None of the participants reported adverse effects of the intervention.

These preliminary findings are promising and future studies exploring the mechanism of action and with stronger control of treatment fidelity are indicated.”

—Brown, C. A., G. Bostick, et al. (2014). "Hand self-Shiatsu for sleep problems in persons with chronic pain: a pilot study." J Integr Med 12(2): 94–101.

Look inside ↓



Balancing the Sleep–Wake Cycle: Sleep Better, Learn Faster, Contribute More, and Enjoy Life to Its Fullest ... by Kimberly Burnham (Oct 1, 2011)

Pick Up an Object Sensory Exercises

- ▶ Overview & Objectives: Significant Pain in Parkinson's Disease: Back, Knee, Shoulder
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- ▶ Posture and Postural Release: Body position, pain and function; Body position and brain chemistry
- ▶ Traditional Chinese Medicine Color Therapy: Green Wood, Stiff as a Board.
- ▶ Sensational Medicine for Sleep

▶ **Overlapping Brain Functions:**

- ▶ **Caring, Creativity and Frontal Lobe Function;**
- ▶ **Midbrain and Substantia Nigra**
- ▶ **Dopamine Production and Pain;**
- ▶ **Basal Ganglia and Disgust Exercises.**
- ▶ CranioSacral Therapy, Manual Therapy and Massage: Blood flow to the brain and body.
- ▶ Energy Medicine: Reiki Symbols and The Shape of Dopamine.

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Creativity, Caring and Frontal Lobe


“Creativity has been essential to the development of human civilization and plays a crucial role in cultural life.

We found positive correlations between regional gray matter volume and individual creativity in several regions such as the right dorsolateral prefrontal cortex, bilateral striata and in an anatomical cluster which included areas such as the substantia nigra, tegmental ventral area and periaqueductal gray.

— Takeuchi, H., Y. Taki, et al. (2010). "Regional gray matter volume of dopaminergic system associate with creativity: evidence from voxel-based morphometry." Neuroimage 51(2): 578–585.

“These findings suggest that individual creativity, as measured by the divergent thinking test, is mainly related to the regional gray matter of brain regions known to be associated with the dopaminergic system, congruent with the idea that dopaminergic physiological mechanisms are associated with individual creativity.”

— Takeuchi, H., Y. Taki, et al. (2010). "Regional gray matter volume of dopaminergic system associate with creativity: evidence from voxel-based morphometry." Neuroimage 51(2): 578–585.



Creativity

“The most frequent behavioral manifestations in Parkinson's disease (PD) are attributed to the dopaminergic dysregulation syndrome (DDS), which is considered to be secondary to the iatrogenic effects of the drugs that replace dopamine.

Over the past few years some cases of patients improving their **creative abilities** after starting treatment with dopaminergic pharmaceuticals have been reported.

These effects have not been clearly associated to DDS, but a relationship has been pointed out.

—Lopez-Pousa, S., C. Lombardia-Fernandez, et al. (2012). "Dopaminergic dysregulation, artistic expressiveness, and Parkinson's disease." Case Rep Neurol 4(3): 159–166.

Creativity

“The patient showed a compulsive increase of pictorial production after the diagnosis of PD was made. She made her best paintings when treated with cabergolide, and while painting, she reported a feeling of well-being, with loss of awareness of the disease and reduction of physical limitations. “

—Lopez-Pousa, S., C. Lombardia-Fernandez, et al. (2012). "Dopaminergic dysregulation, artistic expressiveness, and Parkinson's disease." Case Rep Neurol 4(3): 159–166.

Creativity

“Dopaminergic antagonists (DA) trigger a dopaminergic dysfunction that alters artistic creativity in patients having a predisposition for it. The development of these skills might be due to the dopaminergic overstimulation due to the therapy with DA, which causes a neurophysiological alteration that globally determines DDS.”

—Lopez-Pousa, S., C. Lombardia-Fernandez, et al. (2012). "Dopaminergic dysregulation, artistic expressiveness, and Parkinson's disease." Case Rep Neurol 4(3): 159–166.

“We present a PD patient in whom dopamine agonists awoke a hidden creativity that led to a gradual increase in painting productivity evolving to a disruptive impulsive behaviour. A dramatic change in painting style related to a more emotional experience during the process of creation developed after treatment onset. This case suggests that changes in **creativity in PD seem to be related to dopaminergic imbalance in the limbic system.**”

— Kulisevsky, J., J. Pagonabarraga, et al. (2009).

"Changes in artistic style and behaviour in Parkinson's disease: dopamine and creativity." J Neurol 256(5): 816–819.


“TIME really does seem to pass more quickly as you get older. “

Last weekend at the annual meeting of the Society for Neuroscience in Washington DC, researchers reported that elderly and young people perceive time differently. Peter Mangan, a psychologist at Clinch Valley College in Wise, Virginia, and his colleagues asked 25 young people aged between 19 and 24, and 15 older people aged between 60 and 80, to estimate a 3-minute interval by counting "seconds" using a "1, 1000, 2, 1000, ..." technique. The young adults did this almost perfectly, averaging 3 minutes 3 seconds. But an average of 3 minutes 40 seconds flew by before the older people thought that just 3 minutes had elapsed. It was not that the older adults were simply less bothered about time, the researchers found, as their volunteers were university teachers and other people who had not retired and were used to sticking to tight timetables. "I could not believe that these people, who were very concerned with the time could be consistently so far over in their estimate," says Mangan. Mangan speculates that the brain's internal clock—which is different from the circadian clock that controls daily cycles of activity—runs more slowly in elderly people.

As a result, the pace of life appears to speed up. As people age, notes Mangan, brain cells that produce the chemical messenger dopamine begin to deteriorate in the basal ganglia and substantia nigra, brain regions known to be involved in the internal clock.”

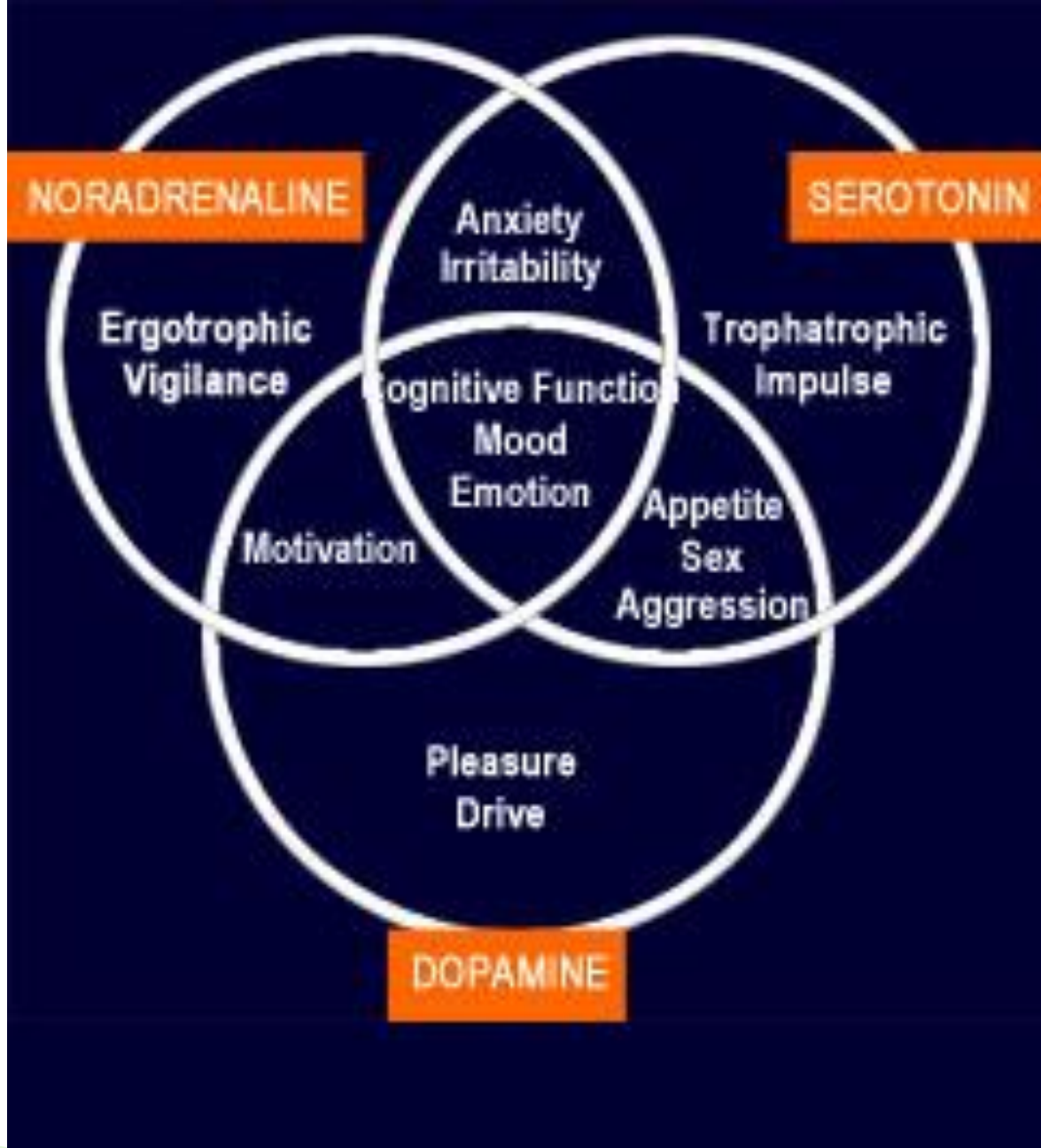
— Why time flies in old age New Scientist vol 152 issue 2057 – 23 November 96, page 14 by Bob Holmes

Substantia Nigra Associations

- ▶ Parkinson's
 - ▶ Neurodegenerative Disorders
 - ▶ Tourette's Syndrome
 - ▶ Involuntary Movement Disorders
 - ▶ Resting tremors
 - ▶ Primary source of Dopamine (also produced in Adrenal Medulla)
- 

Basal Ganglia Associations

- ▶ Movement Disorders; suppresses unwanted motor behavior
- ▶ Emotional, motivational, associative and cognitive Dysfunctions
- ▶ Parkinson's disease, Wilson's disease, progressive supranuclear palsy or Huntington's disease
- ▶ Lewy Body disorders, such as Dementia in Parkinson's
- ▶ Learning and Memory Dysfunctions; Alzheimer's
- ▶ Neuroendocrine dysfunctions
- ▶ Autonomic Nervous System dysfunctions
- ▶ Somatomotor disturbances
- ▶ Addiction
- ▶ Behaviors relative to reward and punishment integration with certain cognitive aspect of the situation as well as the emotional component.
- ▶ Irritable Bowel Syndrome; Diabetes
- ▶ Anxiety and Sadness

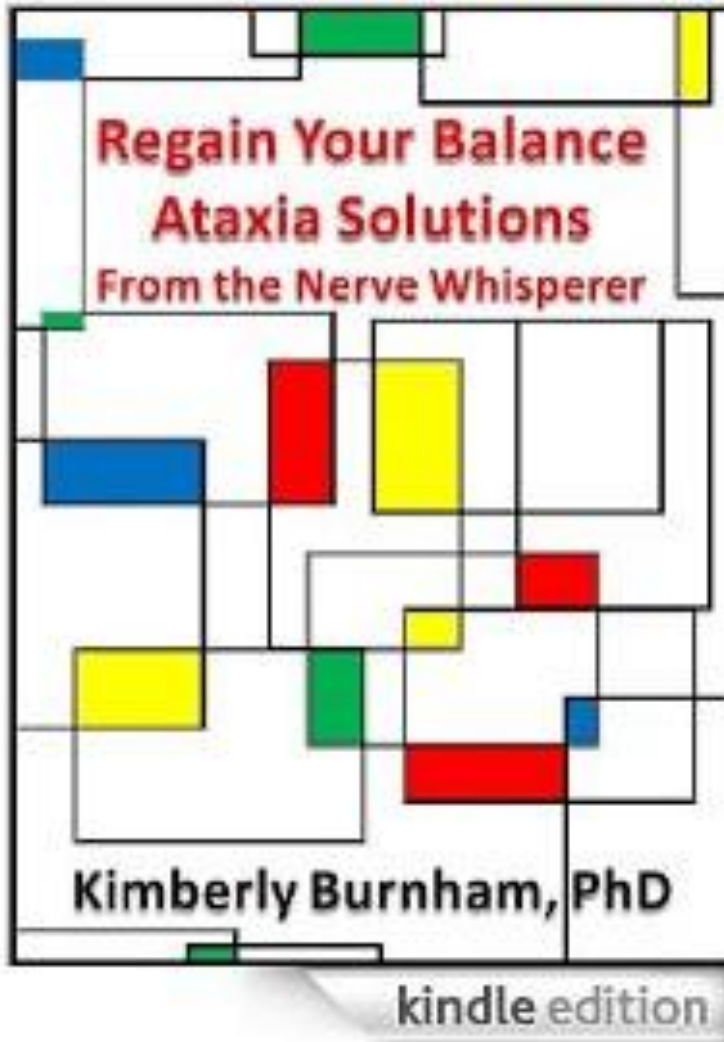


http://www.brainexplorer.org/gallery/Gallery_Neurotransmission.shtml#image

“Parkinson’s disease and schizophrenia are at opposite sides of the same spectrum. They are related in a number of ways, including dopamine levels, side effect of primary medications for each, flat affect (facial expression), zinc levels, the affect of estrogens..” — Kimberly Burnham (August, 2005) *Parkinson’s Disease and Schizophrenia The Dopamine Link (Part 1)*

<https://www.linkedin.com/today/post/article/20140731233052-39038923-alternative-medicine-parkinson-s-disease-and-schizophrenia-the-dopamine-link-part-1?published=t>

Look inside ↓



*Regain Your Balance:
Ataxia Solutions from The
Nerve Whisperer, Find
Health and Healing in Six
Complementary and
Alternative Medicine
Arenas* by
Kimberly Burnham, PhD

Disgust Exercises

- ▶ Overview & Objectives: Significant Pain in Parkinson's Disease: Back, Knee, Shoulder
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- ▶ **Blood flow to the brain and body**

- ▶ **CranioSacral Therapy,**

- ▶ **Manual Therapy and**

- ▶ **Massage**

- ▶ Energy Medicine: Reiki Symbols and The Shape of Dopamine.

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- ▶ **Energy Medicine:**
 - ▶ **Reiki Symbols (Practiced in 800 US Hospitals)**
 - ▶ **The Shape of Dopamine.**

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“The objective of this study was to calculate the **effect of Reiki therapy for pain and anxiety** in randomized clinical trials. A systematic search of PubMed, ProQuest, Cochrane, PsychInfo, CINAHL, Web of Science, Global Health, and Medline databases was conducted using the search terms pain, anxiety, and Reiki.

The **Center for Reiki Research** also was examined for articles. Studies that used randomization and a control or usual care group, used Reiki therapy in one arm of the study, were published in 2000 or later in peer-reviewed journals in English, and measured pain or anxiety were included. After removing duplicates, 49 articles were examined and 12 articles received full review. Seven studies met the inclusion criteria: four articles studied cancer patients, one examined post-surgical patients, and two analyzed community dwelling older adults.”

“Effect sizes were calculated for all studies using Cohen's d statistic. Effect sizes for within group differences ranged from $d = 0.24$ for decrease in anxiety in women undergoing breast biopsy to $d = 2.08$ for decreased pain in community dwelling adults. The between group differences ranged from $d = 0.32$ for decrease of pain in a Reiki versus rest intervention for cancer patients to $d = 4.5$ for decrease in pain in community dwelling adults. Although the number of studies is limited, based on the size Cohen's d statistics calculated in this review, **there is evidence to suggest that Reiki therapy may be effective for pain and anxiety.**

—Thrane, S. and S. M. Cohen (2014). "Effect of Reiki Therapy on Pain and Anxiety in Adults: An In-Depth Literature Review of Randomized Trials with Effect Size Calculations." Pain Manag Nurs.

Evaluate the effect of Reiki to treating community-dwelling older adults with pain, depression, anxiety.

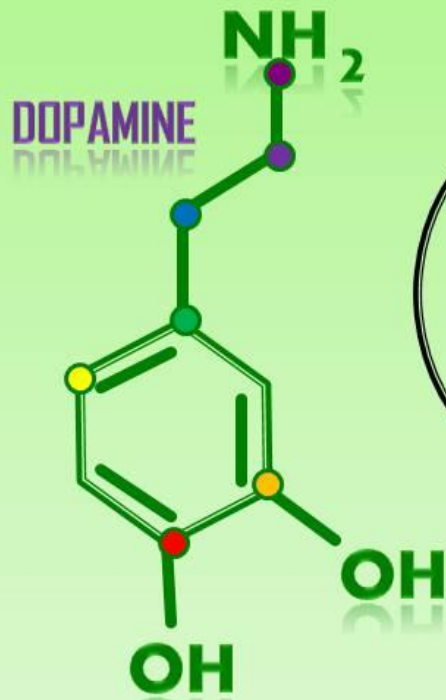
“**Significant differences** were observed between the experimental and treatment groups on measures of **pain, depression, and anxiety**; no changes in heart rate and blood pressure were noted.

—Richeson, N. E., J. A. Spross, et al. (2010). "Effects of Reiki on anxiety, depression, pain, and physiological factors in community-dwelling older adults." Res Gerontol Nurs 3(3): 187–199.

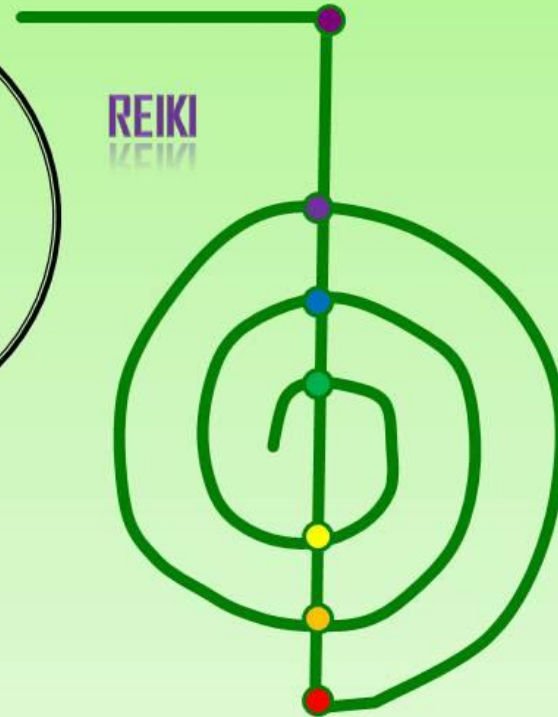
“Content analysis of treatment notes and interviews revealed five broad categories of responses:

- Relaxation;
- Improved Physical Symptoms,
- Mood, and
- Well-Being; Curiosity and
- a Desire to Learn More;
- Enhanced Self-Care; and
- Sensory and Cognitive Responses to Reiki.”

—Richeson, N. E., J. A. Spross, et al. (2010). "Effects of Reiki on anxiety, depression, pain, and physiological factors in community-dwelling older adults." Res Gerontol Nurs 3(3): 187-199.



REIKI



CHAKRAS



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**Ten Approaches to
Back and Hip Pain:
The Use of
Complementary & Alternative
Medicine in
Patients with
Parkinson's Disease**

by Kimberly Burnham, PhD (Integrative Medicine)

1. Education, Power and Self Care
2. Strain and Counterstrain/Massage (Therapist and Self-Care)
3. Motor Imagery (Guided meditations)
4. Power Posing for better digestion, brain chemistry)
5. Color Therapy with Green Wood
6. Acupressure / Acupuncture
7. Sensational Medicine / Conscious Sensory Exercises
8. Basal Ganglia and Disgust Exercises.
9. CranioSacral Therapy for Blood Flow
10. Energy Medicine: Reiki Symbols

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KIMBERLY BURNHAM, PHD
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