Carrick Institute - Brain-Based Adjusting I 2023

What Is the Adjusting Techniques in Functional Neurology?

The Adjusting Techniques in Functional Neurology series consists of 2 modules designed to teach Chiropractors & Manual Therapists how to use joint manipulation to treat brain dysfunction.

The series represents 45 years of clinical work combining the principles of functional neurology with joint manipulative techniques to treat neurological dysfunction and promote nervous system optimization.

Why Include Functional Neurology in your manual therapies?

The short answer is that joint manipulation applied in a setting of not understanding its effect on brain activity and not understanding how brain dysfunction influences joint mechanics can have a detrimental effect on the overall function of the CNS. The negative impact can be significant enough to interfere with a patient's care leading to poorer patient outcomes.

Brain optimization relies on balanced proprioceptive input and symmetrical hemispheric activation.

Disturbances in brain activity, most often of the decreased variety, can contribute to many complaints patients experience. Thus, differentiating the patient's complaint as brain-based can significantly alter their care.

Asymmetrical brain activity produces compensatory patterns of joint dysfunction as the brain attempts to alter proprioceptive feedback to reduce asymmetry. Inappropriately addressing these patterns will further the negative impact on the brain.

Dysfunctional joints classified as fixations, joint position errors, and subluxations can reduce the amount of proprioceptive feedback to the brain.

Chiropractic adjustments, joint manipulations, and joint mobilizations can either increase or decrease proprioceptive feedback, thus producing either a positive or negative effect on the brain.

Examination procedures confirming the anatomical localization of CNS dysfunction

Understanding how to change the variables that alter the net central effect of an adjustment to complement brain activity will produce better patient outcomes

Treatment applications addressing the anatomical site of CNS dysfunction

Applying the ten principles of plasticity to any treatment plan

How to implement Functional Neurology into your practice

Different management approaches in Functional Neurology. How to decide the best one for you and your patient

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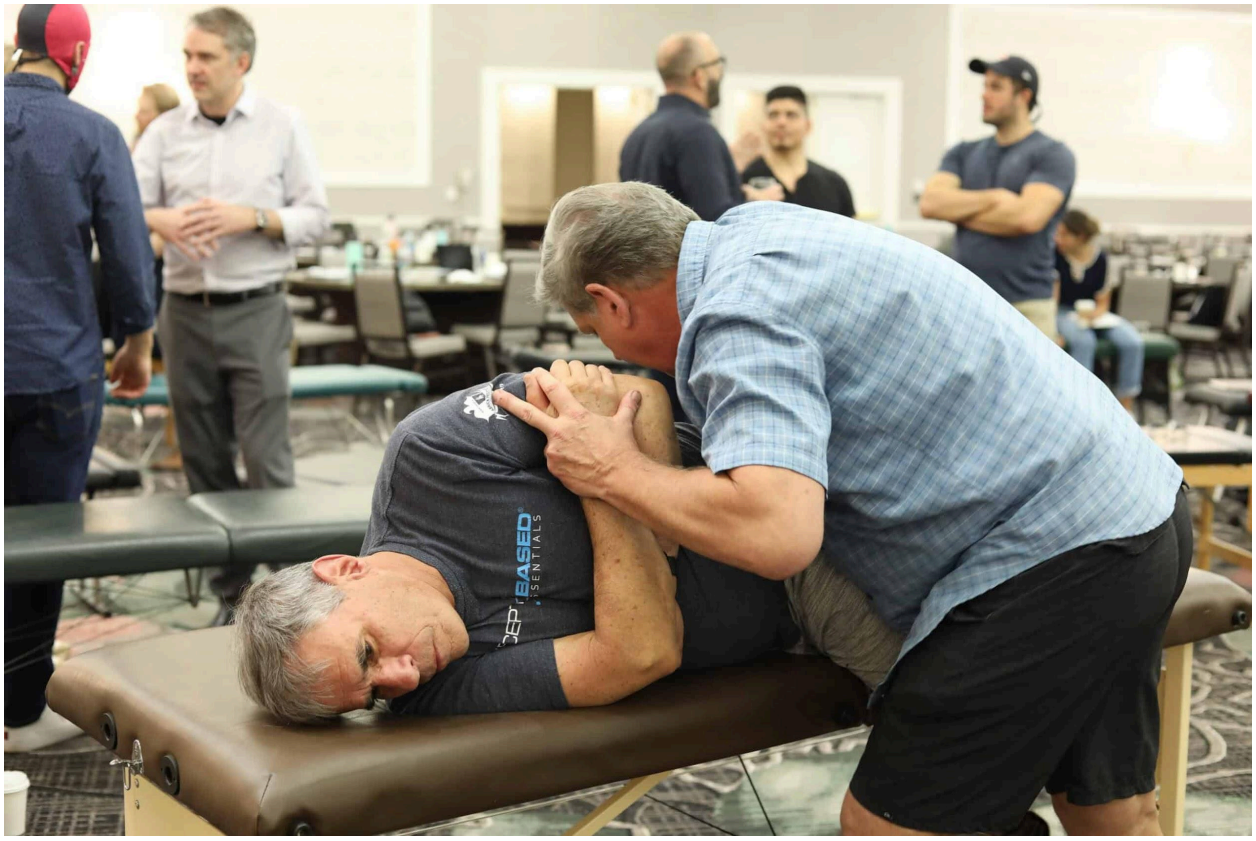

Adjusting Techniques in Functional Neurology Series

What expected outcomes or skill sets would a learner obtain after completing the series?

The ability to correctly identify and treat Hemisphericity using joint manipulation.

The correct application of coupled manipulations to specific regions of the body

The ability to determine the central impact of your manipulations and how to modify them to achieve the desired results

The ability to identify & treat the top brain-based postural compensations and dysfunctional joint patterns.

The ability to identify and treat Asymmetrical Overload Syndrome (AOS)

The ability to identify and treat Frontal Plane Asymmetry (FPA) and the anteriorly rotated ilium

The ability to apply various combinations of joint manipulations to address Hemisphericity and other functional lesions in the CNS.

The ability to determine the influences of gaze preference of the eyes on postural compensations and how to correct them

The ability to look at a specific musculoskeletal disorder and determine the following:

a. How Hemisphericity contributes to the cause of the disorder and its maintenance
b. Neurological influences from other dysfunctional brain areas
c. The dysfunctional joint patterns that occur in tandem with various musculoskeletal disorders.
d. The pattern of joint manipulations to correct for the influencing brain dysfunction and contributing proximal/distal and opposing joints.
e. The use of adjunctive procedures to facilitate recovery

How to modify your manipulative technique to adapt to doctor-patient pairing

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What Are the Differences Between the Modules?

Each module teaches concepts and applications with time devoted to practice. Each module in the progression builds on the material of the previous one. The idea here is to create a smooth and logical progression by first teaching foundational concepts and applications and then adding to them.

1. **Level 1 (The Fundamentals):** Teaches foundational theory and the basics of applying joint manipulation within the hemispheric and brain lateralization models while at the same time leveraging biomechanical coupling.

2. **Level 2 (The Patterns):** Builds on the essentials taught in BBA-1 to integrate them into identifying and treating joint dysfunction patterns associated with specific deficits in the brain

Adjusting Techniques in Functional Neurology Level 1 (The Fundamentals)

Level 1 introduces the fundamental concepts of treating Hemisphericity using joint manipulation and muscle spindle resynchronization techniques.

These fundamentals are applied in a specific manner allowing practitioners more success in treating common neuromuscular and brain-based conditions.

Learners taking this program will quickly realize that sidedness, speed, amplitude, and line of drive all matter in the central consequences of joint manipulation.

Practitioners who understand the relationship between these different qualities to brain activation will be better equipped to deliver joint manipulations with higher accuracy and specificity.

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Adjusting Techniques in Functional Neurology I - Fundamental Concepts

Hemisphericity & Brain Lateralization

Impact of impaired proprioception on brain function

Structure and function of joint mechanoreceptors

Neurological benefits of couple joint manipulation & its central effects

Joint manipulation: Central neurological effects

Muscle spindle physiology: Impact on brain function and how to leverage spindle activation Vs. GTO activation

Soft Pyramidal Weakness: From theory to application

Respiration: Importance of adequate ventilation

Hypoxia: Central and peripheral influences

Examining for Hemisphericity/Brain Lateralization

Regional-specific joint assessments

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Adjusting Techniques in Functional Neurology I - Joint Manipulations

Coupled Cervical

Cervical Rotation

Coupled Rib & Related Supportive Breathing Exercises

a. Upper Rib

b. Lower Rib

Fast Stretch: Qaudratus Lumborum & Iliocostalis

Coupled Lumbar (Rotation & Lateral Flexion)

Coupled Si Flexion to Ipsilateral L5/S1 Lateral Flexion

Hemisphericity Coupled SIJ Manipulations

Soft Pyramidal Based Manipulations (Addressing Hemisphericity)

a. Shoulder
b. Elbow
c. Wrist
d. Hip
e. Knee
f. Foot

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Adjusting Techniques in Functional Neurology II (The Patterns)

Level 2 builds on the fundamental concepts taught in Level 1 while introducing the concept of centrally mediated motor patterning and postural compensatory change.

It is well-known that central nervous system lesions produce characteristic postural alterations and motor changes. For instance, it is common for individuals with cerebellar deficits to orient themselves to the same side of their lesions. While individuals with Parkinson's disease often have a characteristic camptocormic posturing.

The concept of motor patterning suggests that any movement, regardless of how minor, does not occur in isolation but rather in precisely choreographed patterns linked to precise patterns of brain activity. Even a simple movement of your eyes to look in a particular direction involves linking many motor and sensory areas of the brain to the choreographed proprioceptive input from the body.

Level 2 focuses on defining the motor/postural compensatory patterns associated with specific functional brain deficits. Level 2 also leverages the concept of "Choreographed Proprioceptive Input" by applying patterns of joint manipulations that balance, restore and optimize network activity in the brain.

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