



Maximum Achievement Program



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WELCOME

Welcome to the Maximum Achievement Program (MAP) and office of Chiropractic Neurology. You have taken a big step in addressing the cause of your child's disorder—not just the symptoms. You are not alone. An estimated eight million children are labeled with attention deficit hyperactivity disorder or ADHD.

ADHD is not always easy to diagnose. It belongs to a spectrum of neurological disorders with no known physiological basis. The spectrum includes, ADD (Attention Deficit Disorder), ADHD (Attention Deficit Hyperactivity Disorder), PDD (Pervasive Developmental Disorder), OCD (Obsessive-Compulsive Disorder), Tourette's Syndrome and Autism. ADHD is not a learning disability, but it can affect the ability to progress in society and the ability to learn.

In the MAP Program we support the approach that balancing brain function restores neurological health, which allows the child to perform at full potential.

Fortunately, public preference for the non-pharmacological and holistic approach is growing. Society is well aware of the adverse side effects of medications and other chemicals used with conventional therapies. Medication controls symptoms without getting to the root of the problem. If the brain has reduced metabolic rates, the medication will increase them, but if you take away the medication, the problem will come back. By far, the majority of children and adults do very well without a stimulant medication if the patient is under the care of a chiropractic neurologist trained to treat conditions like ADD/ADHD.

Through the MAP program, the patient's individual problems are addressed. The symptoms your child has associated with their learning disorder *do* have a cause. The true cause of the symptoms leads us to the most effective treatment. Research shows the link is the brain.

The unique approach of chiropractic neurology and the MAP Program is that we believe that ADD/ADHD is caused by a problem with the attention center of the brain. With these patients, certain areas of the brain are under-functioning. Some children have difficulty gathering and/or processing the information from the environment, some have biochemical problems and some have both.

Learning disabilities are manifestations of symptoms that can be traceable to irritation or malfunction of the central nervous system. In many patients, the disorder may result from the lack of brain stimulation. When balance is restored to this system, the symptoms improve. There are a variety of ways to accomplish this balance.

Brains are not static entities. The brain grows—it has plasticity, which is the basis of the ability to learn. If you stimulate the brain, it will cause plastic changes. Chiropractic Neurologists are trained to identify the hypo-functioning part of the brain and apply correct treatment modalities to stimulate more brain connections through plasticity. The identification of the under-functioning hemisphere and the monitoring of the patient's response to the stimuli are especially important. Detecting which hemisphere is not developing quickly enough is the key. For example, the right-brain areas are responsible for the ability to focus attention, visual-spatial orientation, reading comprehension, and social non-verbal communication. The left hemisphere controls verbal communication. If the tests show that one side of the brain is less efficient than the other, the doctor stimulates the hemisphere by evoking environmental potential: light, sound, heat, cold or mechanical stimulation such as exercise or adjustment of certain body regions. Research has shown that the side that is most problematic in children is usually the side that has decreased activity.

How will the Maximum Achievement Program benefit your child?

Each child is unique. As part of MAP we will focus closely on the individual functional difficulties your child may have. We will administer the appropriate therapies in a degree necessary to address each individual's level of symptoms.

The goal of the MAP program is to improve the function of the brain that controls all aspects of health. This allows us to help combat the symptoms of ADD/ADHD and other learning disorders and ultimately achieve maximum health results. Overall well being is key to achieving one's maximum potential.

THE PROGRAM

MAP is a four-month program consisting of 2-3 treatments per week as clinically needed. Each visit will include a variety of therapies specifically tailored toward your child's deficit. Prescribed therapies may be adjusted and new therapies introduced to address different areas of focus as the child's capabilities evolve throughout the program. This interactive approach to your child's overall health is indicative of our commitment to your child's progress.

INITIAL VISIT

The initial visit will consist of a review of your child's overall health history. Completion of a health history questionnaire alerts the doctor to any past problems and current issues. This report will serve as a reference and is beneficial in understanding the patient's health background.

EXAMINATIONS

Case History

The health history questionnaire will be reviewed for clarification and evaluation.

Chiropractic Examination

Chiropractic addresses structural and neurological function. This exam will assess the mobility and function of all joints and muscles, especially of the spine. Muscle tone and overall neurological function of the brain, spinal cord and nerves are noted.

Neurological Examination

Specific functioning of the cognitive, emotional and motor skills will be assessed. The muscular system will be assessed for strength and overall tone. The neurological functioning will be determined through a cranial nerve examination, motor testing, myotactic stretch reflexes, and sensory, balance and coordination exams. Electronystagography testing will be performed. The doctor will look at the child's eyes and evaluate reflexes such as optokinetics, VOR and light responses. The eyes and the spine are homologously linked. In other words, they influence each other constantly. Reflexes of the eyes allow us a window into the brain. Differences in dominance between left and right hemispheres are apparent when looking at the eyes. Various symptoms signify a decrease or imbalance in brain activity; therefore, comprehensive neurological testing is essential.

Academic/Cognitive Testing

Standardized academic testing will be administered by a certified special education teacher. Depending upon the diagnosis of your child, one or more of the following academic programs may be prescribed.

Brown Attention Deficit Disorder Scales for Children

The Browns ADD Scales is an individually administered rating scale used to assess the essential aspects that affect the attention of children. Several factors can be determined from the results of these scales. Memory, organization, self-monitoring, frustration level, attention span, and transition between tasks can all be measured. The impact of the behaviors on both social and academic functioning can also be determined. An evaluation and recommendations can be made for both at home and school remediation.

Wechsler Individual Achievement Test II (WIAT II)

WIAT II is a comprehensive test that is individually administered and used to assess the achievement of children from ages pre-K through high school. The revised WIAT II includes items that reflect the new current academic standards. Four individual composites are given: reading, math, written language, and oral language. These tests are used to assess a broad range of academic skills or skills in a particular area. Specific sections may be given depending on each child's individual needs.

Test of Variables of Attention (TOVA)

TOVA is a computer-based test used to diagnose and determine treatment for children with attention deficit disorder or attention deficit hyperactivity disorder (ADD/ADHD). The test features a "target" in which children use a microswitch to click on a square when it appears in the appropriate location. It requires attention and concentration on the part of the child. Correct responses are recorded as well as omissions, which indicate inattention and/or impulsiveness. TOVA also measures inattention due to neurological disorders and injuries. This test has also been used to effectively monitor the effects of medication over time.

Interactive Metronome® (IM)



Interactive Metronome is a computer-based training program shown to improve attention coordination and timing and provides a non-invasive way to stimulate learning and development. Backed by nearly a decade of research and development, the IM strengthens mind/muscle connections. Once those connections are improved, it allows those trained to plan better and be more organized. The Interactive Metronome is used for assessment and as a tool for treatment. The IM objectively measures a person's ability to stay on the "beat". Based on this measurement, timing deficiencies and their severity can be identified. The training exercises are physically interactive so participants stay engaged and challenged.

A double blind, placebo controlled study found those undergoing IM training showed significant improvements in the following areas:

- Attention/Focus
- Motor Control/Coordination
- Language Processing
- Reading Fluency
- Control of Aggression

Other studies have shown significant correlation between Interactive Metronome and academic achievement in mathematics, language and reading.

Behavioral Assessment

In the beginning of the program and periodically during the course of treatment, you as the parent/guardian will be asked to fill out a basic checklist regarding your child's behavior. We may also ask to have your child's teacher fill out a similar form.

Blood Work-up (BodyBio Reports) – In the event the doctor requests a blood analysis, the work up will be done at a local recommended laboratory.

Diagnostic and prescriptive reports will be generated that will provide an assessment of a patient's body systems and assist in developing an effective treatment plan. Recommendations may be made for needed changes in diet or supplementation. Early warning signs of potential serious disorders may be identified, and recommendations may be made for best foods based on a patient's current chemistry. These reports will also assist the doctor in quickly diagnosing and correcting clinical imbalances associated with conditions such as cardiovascular disease, pregnancy, hyperactivity, rheumatoid arthritis, depression and more.

Blind Spot Mapping and Visual Testing

Blind Spot Mapping assesses brain function. Although we are not consciously aware of it, everyone has a blind spot. This test allows us to measure blind spots and compare them from right to left and top to bottom. Often we will find one blind spot to be much larger than the other. This is an essential piece of our examination. For example, a large left blind spot is indicative of the right brain hypo-functioning. Research has proven that Chiropractic manipulation can reduce blind spots and increase brain function.

Range of Motion – Muscle Testing/Radiographs

Our motor system consists of the musculoskeletal system and the brain. Information from our motor system drives our brain. Upon examination, the doctor will test the strength, tone and flexibility of muscles. This allows us to determine how the brain is functioning. Radiographs may be taken to determine musculoskeletal problems. Motor dysfunction can lead to brain hypo-functioning. Therefore, improving motor function can improve the brain's ability to focus and learn.

THERAPIES

Interactive Metronome (IM)

The Interactive Metronome is used as an assessment tool and also for treatment. The object of the IM training is to help your child improve their ability to selectively plan and sequence, without interruption by internal thoughts or external distractions, over extended periods of time. Your child will use an arm or leg to tap in time with the Interactive Metronome's beat that is heard through headphones. The trigger attached to the limb sends a signal to the computer. The computer will then analyze when the tap occurred in relation to the beat. Interactive Metronome training is used to improve your child's ability to:

- Recognize that rhythmic patterns or cycles exist in our surroundings
- Focus our attention long enough to recognize individual patterns that exist within groups of simultaneously-occurring patterns in the surroundings
- Create patterns (our actions and thoughts) that are in sync with other patterns
- Adjust or stop our own patterns so they do not interfere with the patterns of others
- Improve our ability to learn from experiences

Chiropractic Manipulation

Chiropractic treatment is prescribed, and directed at restoring the normal structural balance, muscle tone, as well as neurological balance and is ultimately geared towards increasing and balancing brain functions. This is done primarily using spinal manipulation and joint mobilization.

Academic Therapy

Children diagnosed with ADD/ADHD may benefit from one-on-one tutoring by a certified special education teacher. Dr. Chiappino can provide you with a referral.

Electrical Stimulations/CES

Physical therapy modalities may be utilized to balance brain function and improve circulation around joints to promote spinal stability. Using a sub-threshold stimulus (patient cannot feel it), applied to one side of the body can increase the functioning of the opposite side of the brain.

Tactile Stimulation/Massage Therapy

Sensation from the left side of the body is perceived in the right brain. Using massage therapy, vibrational modalities and brushing techniques on the appropriate side can increase plasticity in the hypo-functioning brain. Home therapies may also be prescribed.

Olfactory Stimulation

The sense of smell is a powerful tool for rehabilitation. Certain scents evoke certain responses—both physical and emotional. For example, how do you feel when you smell Grandma's apple pie baking? How do you feel when you smell the fowl odor of a putrid rotten egg? We use certain scents to promote desired responses. Aromatherapy is based on this concept. Peppermint oil improves the brain's ability to understand, process and retain information. Other scents such as lavender oil promotes a sense of calmness and eucalyptus improves respiratory function.

Music Therapy/Auditory Stimulation

The brain processes different sounds in different ways. When you listen to an audio book on tape versus a tape of music with nature sounds, the brain processes each one in a different way. The left brain processes words and the right brain processes more abstract pieces of music. Therapy can consist of listening to foreign language tapes, nature sounds, or Mozart. In fact Mozart's music has been clinically proven to improve intelligence and brain functions. Also, we direct the stimulus to specifically the left or right brain by isolating the sound to one ear. The left ear is linked with the right brain and the right ear is linked with the left brain. Home therapy may also be prescribed.

Light Stimulation

Light is an excitatory stimulus to the brain. At night, we turn off the lights to reduce the activation to our brain so we can sleep. Light stimulation is used in many different ways. Hemifield stimulation is a computer-based program tailored to your child's specific needs. The program is designed to blink alternating squares in a particular location on the screen. The doctor determines the color of the squares and they're blinking frequency. Another form of light stimulation is "eye-lights". Your child will wear glasses that blink soft red light either in the left or right field of vision depending upon the side of the hypo-functioning brain. Different colored lenses may also be prescribed to slow down or speed up the amount of visual stimuli your child receives everyday.

Spinal Stability

Postural tone is dependent upon spinal stability and neurological function. Very often children with ADD/ADHD/PDD, etc. have poor posture. The muscles that allow us to have good posture are involuntary. In other words, telling your child to "sit up straight" will not correct the problem. To restore normal posture, we must retrain the brain and muscle connections to have proper neurological control. These muscles allow us to defy gravity. Gravity is the only environmental stimulus that is constant. Light, sound, smell, touch vary during different times of the day. If we make the connection between muscles and the brain more efficient, your child will stimulate their own brain everyday as they walk in our world of gravitational forces. Spinal stability exercises improve tone, coordination and strength.

Vestibular Exercises

The vestibular system is what allows us to know where we are in space. It allows us to be steady, coordinated and balanced. Patients that suffer with problems in their vestibular system report symptoms of vertigo (spinning, nausea), motion sickness, or poor balance. The vestibular system is comprised of your inner ear, eyes and brain. Vestibular therapy allows us to strengthen the connections among them. Exercises will include, spinning, applying different head positions and eye exercises.

Joint Mobility and Flexibility Exercises

We live in an age of high technology and rely heavily on computer electronics for our entertainment. With the advent of computer games and digital toys comes lack of physical exercise. Due to increased inactivity, your child may have shortened muscles. Muscles that have become shortened may also produce some stiffness of the joints over time. Sometimes the pain and stiffness is attributed to "growing pains". Flexibility exercises will be specifically geared toward lengthening muscles. Slow stretches, including yoga postures can restore normal tone. This allows normal communication between the muscles and the brain.

Breathing Exercises

Breath is life. If we do not breathe properly, our body does not have the fuel delivery needed to think, digest our food or move properly. Poor posture is also attributed to inefficient, poor breathing habits. During breathing exercises, oxygen saturation will be monitored to ensure proper oxygenation is achieved.

Balance and Coordination Exercises

Balance therapies include working on rocker boards and wobble boards of varying levels of difficulty. As your child learns to balance, we begin coordination exercises, such as catching a ball with their non-dominant hand. In recent studies it has been found that improving motor skills has had a major influence on brain function.

*For more information regarding Interactive Metronome therapy and other chiropractic neurological therapies for disorders such as ADD (Attention Deficit Disorder), ADHD (Attention Deficit Hyperactivity Disorder), PDD (Pervasive Developmental Disorder), OCD (Obsessive-Compulsive Disorder), Tourette's Syndrome and Autism, please call **631-265-1223** or visit: www.drchiappino.com*