

# The Burnham Review

## Autism and Integrative Manual Therapy Solutions

Consider Manual Therapy and Complementary and Alternative Medicine for Optimal Health

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Issue 5-22

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### How Integrative Manual Therapy Addresses Autism

Working with the underlying cause, is the way massage therapists, physical therapists, chiropractors, occupational therapists and psychologists trained in Integrative Manual Therapy (IMT) address autistic children or people with autistic-like behavior. IMT practitioners are seeing remarkable results. More importantly, we have seen children who had a label of autism, recover and thrive in their lives. The child often rejoins other children in the regular school system and interacts with their friends and family.

Children have a label of autism for a variety of reasons. Some children have dysfunctions of the tentorium or cranial diaphragm which crosses through the head at about the level of the ears. This contributes to sensitivity to auditory stimulus (sound) due to the tensions on the ear complex. It can also contribute to visual dysfunctions because the cranial nerves innervating the eye muscles and facial muscles travel

through the tentorium. They can be compressed by a torque in the tentorium. We work with hands-on techniques to normalize the balance within the connective tissues, blood vessels and neural tissue within the head.

Other children have a diagnosis of autism but what is contributing to the behavior is pain in the head or elsewhere in the body. These children see great results through IMT treatment to address and resolve that pain, where ever it may be.

Visual dysfunctions can also lead to frustration, sensitivity to visual stimulus, and aggressive behavior, typical of some autistic children.

The mother of a two year old born with a corneal ulcer, recently reported that through treatment at CenterIMT her son has significantly less tactile defensiveness.

Toxicity and immune system dysfunctions can also lead to a diagnosis of autism. Work with a wide range of immune system techniques from decompressing areas of detoxification, such as the liver or thymus to recommending

dietary changes and elimination of preservatives, additives and artificial sweeteners can be very beneficial.

A number of children are also labeled "failure to thrive". These children greatly benefit from our skill with immune system dysfunctions. The digestive system improves, the immune system improves and they start to grow, develop and function normally.

Many parents, wonder whether their autistic child will tolerate hands on treatment. We are comfortable working in a clinical setting with children and often they come to love the gentle hands-on treatment. Our experience tells us that if the therapist decreases a child's pain, they are very compliant.

We also have a range of easy to follow "homework exercises" for the parents to participate in their child's recover. We are happy to talk with parents. We would like to help you meet your goals for your child, where ever they are on their path to a healthy active life.

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**Excerpts from Autism Presentation at the Defeat Autism Now (DAN) Conference. Verona, Italy 2005 K.Burnham, PhD**

Science fiction writer, Arthur C. Clark once said, "Any sufficiently advanced technology is indistinguishable from magic."

At Integrative Manual Therapy clinics, the magic is the children who feel better and function better, the parents who expand the dreams they have for their children's future and the therapists who see positive growth and development.

The techniques used to treat children with autism and other developmental dysfunctions are not magic, they are a form of advanced technology based on clinical evidence. IMT treatment includes the use of hands-on touch, pressure and knowledge of anatomy and physiology to help children grow healthier and reach their goals.

After a couple of years of IMT treatment, the mother of a previously non-verbal severely autistic boy reported, "we are also going to change to an entirely different school this year. Carl says he is so different now than he was several years ago and he wants to go where kids don't know him. He feels that people aren't allowing for these changes."

**Biomechanics**

Integrative Manual Therapy (IMT) techniques can be placed in three categories: biomechanical approaches, work on reflex points, shifting of rhythms in the body.

IMT practitioners work with biomechanical techniques, using pressure, positioning, mobilization and movement to shift tissues for better movement of joints, muscles, blood flow and improved drainage.

Some joint problems and soft tissue dysfunctions contribute to pain and behavioral dysfunctions.<sup>1</sup> (Weiselfish-Giammatteo, 2003).

In 1992 Kohen-Rax et al. noted "the postural patterns of children with autism differed from those observed in normal children, in mentally retarded children, and in adults with vestibular disorders. In comparison to normal children the autistic subjects were less likely to exhibit age-related changes in postural performance and postures were more variable and less stable with more lateral sway. Autistic subjects also exhibited more "stressful" postures, putting excessive weight on one foot, one toe or one heel."<sup>2</sup> (Kohen-Rax, 1992).

Improvements in structure, posture, the ability to walk, run and play are the traditional realm of manual therapies. An analysis of gait indicates, the main components affected in autistic children during locomotion are "the goal of the action, the orientation towards this goal and the definition of the trajectory due probably to an impairment of movement planning."<sup>3</sup> (Vernazza-Martin, 2005).

Some of these structural problems of the pelvis and sacrum contribute to tensions on the spinal cord and brain tissue contributing to cranial dysfunctions and a lack of blood flow to the brain. IMT practitioners work to decrease muscle tensions, release joint dysfunctions and improve blood flow to the brain.<sup>4</sup> (Leger, 2004).

**Cranial Biomechanics**

Autism has been associated with microcephaly, temporal lobe dysfunction, particularly the medial aspect of the temporal lobe and the superior temporal sulcus. This is the

part of the brain closely associated with the ears, hearing and auditory sensation. Autistic like behavior has also been linked to other brain structures, such as the amygdala and hippocampus. When the container - the cranium - is dysfunctional, this contributes to brain abnormalities.

"The superior temporal sulcus areas are involved in highest level of cortical integration of both sensory and limbic information. Moreover, it is now recognized as a key cortical area of the "social brain" and is implicated in social perceptual skills that are characteristically impaired in autism."<sup>5</sup> (Boddaert, 2004).

Two independent studies described a lack of blood flow in the bilateral temporal lobes of the brain in autistic children. The studies noted that the more severe the autistic syndrome, the more cerebral blood flow is low in this region, suggesting that left superior temporal hypoperfusion is related to autistic behavior severity.<sup>6</sup> (Gendry, 2005).

Integrative Manual Therapy techniques including, Advanced Strain and Counterstrain, can improve head and neck motion, which facilitates improved blood flow, increases drainage and decreases neural tissue tension.<sup>7</sup> (Wheeler, 2004).

A 2005 study found a significant correlation was found between "parental ratings reflecting autistic symptomatology and the measure of grey matter density in the junction area involving the amygdala, hippocampus and entorhinal cortex."<sup>8</sup> (Salmond, 2005).

When a boy with attention deficient disorder and learning disabilities came in for his second IMT treatment, he was asked what he had notice after his first treatment. His father rolled his eyes as if to say,

why are you asking a 7 year old what has changed. The boy said, "my head doesn't hurt so much." The father said, "you never told me your head hurt".

Sometimes poor joint and soft tissue function is causing the child pain, which is contributing to the behavior. By using IMT to decrease pain, the child has more choices and options in interacting with the world.

Another mother pleased that her son was developing a better sense of himself re-counted this experience: "He has also started to defend himself, physically. Last Sunday we were at a birthday party. There was a moon-bouncer the kids were jumping in, but only 3 kids at a time were supposed to be in it. Greg and 2 other kids were jumping when this 5 year old boy decided he wanted to jump as well. He tried to drag Greg out by pulling his shirt. Greg whacked him! Although I don't encourage hitting, I am taking this as another positive sign!"

Another mother recounts: "I have also noticed a big change in his gait. His heels have really dropped down and he heel strikes now instead of walking on his toes. Both arms are swinging with walking. They never did before. He is developing better social skills and other interests are developing."

Noting that as her son grew healthier his behavior also improved, one mother said, "He is no longer that sickly, malnourished-looking kid that you first met. As a matter of fact he is quite husky."

### **Reflex Points**

The second way to describe Integrative Manual Therapy techniques is as a system of reflex points. IMT practitioners consider mechanical problems as well as using

a system of reflex points to improve health in children with autism. There are many treatment modalities that use reflex points. Acupuncture for example stimulates meridian points to create a shift in the tissue.

A short list of conditions recognized by the World Health Organization to benefit from acupuncture includes neurological & musculoskeletal conditions, emotional and psychological disturbances, circulatory, GI tract and respiratory conditions.

In "The Benefits of Osteopathic Treatment for the Pediatric Patient", Paul Capobianco, notes, Chapman neurolymphatic reflexes can be effectively used for a variety of pediatric conditions including autism.<sup>9</sup>(Capobianco, 2003).

The IMT reflex points used with children with autism were developed by Sharon W. Giammatteo. Stimulation of these points are clinically found to influence a child's ability to learn and develop.

### **Rhythms and Motilities**

A third way of describing IMT is in the use of techniques to address certain rhythms in the body. These motilities or rhythms are reflective of the function of the nervous system tissue and other tissues in the body.

As an example, if someone has a heart attack, CPR could be described as using a specific pressure on a specific location to normalize the rhythm of the heart. There are clothes, skin, muscles, bones and other soft tissue between the heart and the hands, and yet with CPR many people use pressure to successfully normalize the heart's rhythm.

Some people ask if we can really feel these rhythms, but is it any harder to believe that someone can

take a sip of wine and tell you the year, country and bottler of the wine.

IMT practitioners are taking sensory information (touch, visual information) and converting it into something else. Rather than a year or country our experience is used to interpret sensory information to mean a certain part of the brain is not functioning properly or the bones around the ears are not moving well.

Four years ago a non verbal 5 year old boy with severe autism started IMT treatment. Treating is perhaps the wrong word, because the first two hours were mostly a wrestling match, but the treatment made a difference. It decreased his pain, because the second time, he laid down on the table, watched a video and never caused trouble again. Today he is in a Waldorf school, reading at a second grade level and saying things like, "Momma we have to talk about the toy train from Disney."

### **Sleep Patterns, Stress & Rhythms**

Hands-on treatment focused on circadian rhythms, such as the craniosacral rhythm, can contribute to improvements in sleep patterns and improved circadian rhythms.

"Autism is a severe neurodevelopmental disorder characterized by impairment in communication, social interaction, repetitive behaviors and difficulty adapting to novel experiences.

The Hypothalamic-Pituitary-Adrenocortical (HPA) system responds consistently to perceived novel or unfamiliar situations and can serve as an important biomarker of the response to a variety of different stimuli. Previous research has suggested that children with autism may exhibit dysfunction of the HPA system, but it is not clear whether altered neuroendocrine

regulation or altered responsiveness underlies the differences between children with and without autism. In the results both groups showed expected circadian variation with higher cortisol concentration in morning than in the evening samples.

The children with autism, but not typical children, showed a more variable circadian rhythm as well as statistically significant elevations in cortisol following exposure to a novel, nonsocial stimulus." Researchers concluded, "the results suggest that children with autism process and respond idiosyncratically to novel and threatening events resulting in an exaggerated cortisol response."<sup>10</sup> (Corbett, 2005).

There are a number of manual therapy techniques focusing on biomechanics, on motilities and reflex points to address adrenal function by improving the movement of the rib cage surrounding the kidney and adrenals as well as facilitate improved movement of the spine which allows for better neural flow to the organs.

One study noted a relationship between autism, sleep and epilepsy. and present the view that "sleep is abnormal in individuals with autistic spectrum disorders. Epilepsy and sleep have reciprocal relationships, with sleep facilitating seizures and seizures adversely affecting sleep architecture. Identifying and treating sleep disorders, which are potentially caused by or contributed to by autism, may impact favorably on seizure control and on daytime behavior."<sup>11</sup> (Malow, 2004).

Rhythms in the body can also be affected by melatonin abnormalities. "An abnormal circadian pattern of melatonin was found in a group of young adults with an extreme autism syndrome. In others, a parallel was

evidenced between thyroid function and impairment in verbal communication. There appears to be a tendency for various types of neuroendocrinological abnormalities in autistics, and melatonin, as well as possibly TSH and perhaps prolactin, could serve as biochemical variables of the biological parameters of the disease."<sup>12</sup> (Nir, 1995).

Again Integrative Manual Therapists look for dysfunctions in the musculoskeletal and fascial systems that are causing a compression or a tension on the neural and endocrine organs that they protect and house. This contributes to our success both with children with autism and /or seizures.

Patzold and Richdale, in a 1998 study noted that the "aim of the study was to investigate the specificity of sleep problems in children with autism and further explore the currently unclear association between sleep problems and daytime behavior. "Results showed that children in the PDD group exhibited qualitatively and quantitatively different sleep patterns to nonautistic control children." They go on to discuss the findings in the "current literature concerning circadian rhythm dysfunction, social difficulties, and abnormal melatonin levels in children with autism."<sup>13</sup> (Patzold, 1998).

A mother reports, "when we first started with you, Carol was having a definite sleep pattern disturbance. She would wake up 3 to 4 nights per month anywhere between 3:00 and 5:00 am and could not fall back to sleep until 6:00 or 7:00 in the morning. This happened to her every month. The last time she went through that was the month before she started therapy with you."

## Speech and Swallowing

Another area of remarkable changes is in children with speech and swallowing issues.

Hands on techniques can normalize the muscles in the face and neck, allowing for normal blood flow to the soft tissue involved with speech production. Reflex points and motilities are palpated to assess the effects of the brainstem, cranial nerves as well as Broca's speech area on the lack of speech.

One mother described her daughter's progress: "her language is coming along beautifully. She is talking more and more everyday. Every argument she gives me is music to my ears. She actually told me yesterday "I love cupcakes", as we were putting them into the oven together. I always knew that she liked them because she would eat them, but to hear those words out of her mouth is a joy."

Another mother reports, "his hearing and ability to match pitch in sound has improved phenomenally. His music teacher is a bit shocked. He takes piano and voice lessons. When we started a year ago he could not match any pitch at all and they called him tone deaf. He used to speak in a monotone voice. He has been the topic of conversation at the music conservatory because they have never seen this."

We want every parent to be able to say, as one did, "it is very exciting for all of us. You have given me a positive feeling and of course positive results for our child. I thank you from the bottom of my heart."

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