# A Study Investigating the Effectiveness and Safety of the Baby Brain Score/Craniosacral Fascial Therapy/Infant Driven Movement (BBS/CFT/IDM) Model for Infants

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## Abstract

Although birth is a natural and wondrous event, physical and emotional traumas occur during fetal development, labor, and delivery. This research addresses whether these traumas cause specific infant conditions, and if so, whether a specialized approach permanently corrects them.

We studied 332 infants with breastfeeding issues, colic, gas, reflux/gagging/vomiting, constipation, arching, strabismus, stridor, and pyloric stenosis for the effectiveness and safety of the Baby Brain Score/craniosacral fascial therapy/infant driven movement model. We longitudinally examined the permanency of the results and neurologic development, happiness, and health into toddlerhood by checking 125 infants 12-18 months later.

The findings indicate that this model was safe and effective for a significant number of afflicted infants. This approach permanently corrected these conditions for the majority of these babies and resulted in their positive neurologic development as happy and healthy toddlers.

We believe that we have created a platform that will dramatically transform global health care. Since birth trauma causes specific infant conditions, we postulate that this model will not only prevent them at birth, but will also optimize neurological function resulting in happy and healthy toddlers. We believe that people do not necessarily have to endure a lifetime of suffering because they had a difficult birth.

We believe that this approach will redefine the global "normal and healthy" standard of infant care. We strongly encourage all hospital researchers to investigate the benefits that this model has to offer the newborns of the world.

# Introduction

Since 1980 craniosacral fascial therapy (CFT) has effectively corrected children with asthma, earache, and some learning disorders.[1-6] Having experienced positive therapeutic results for infants with colic, reflux, and breastfeeding issues in the 1980s, 1990s, and 2000s, Dr. Barry Gillespie questioned whether the seeds of these and other conditions were sown at birth.

Can physical and emotional traumas in utero, during labor, and/or at delivery cause strain in the fetal craniosacral fascial system? Can this strain result in breastfeeding issues, colic, gas, reflux/gagging/vomiting, constipation, strabismus, and arching in infancy and manifest as allergy, asthma, earache, headache, learning disorders, and other conditions in childhood?

Gillespie introduced the evaluation of newborn brain function by formulating the Baby Brain Score (BBS).[7] This screening tool measures the function of the craniosacral fascial system at birth[7]. This system consists of an expanding and contracting brain pumping cerebrospinal fluid out into the fascial or connective tissue web of the body.[7] He found that this network must function well for optimal infant neurological health.[8]

As a direct function of fetal trauma, the numeric value of the BBS alerts the attending professional if the newborn is at minimal, moderate, or serious risk for contracting a future condition(s). Physical trauma to the craniosacral fascial system is much subtler than the current forceful connotation resulting in hemorrhage, fracture, or hematoma. Soft tissue strain causing disease is fresh thinking that may question ingrained conventional wisdom, challenge widespread medical assumptions, and confront entrenched vested interests.

Fetal craniosacral fascial strain can result from prolonged sustained pressure in an uncomfortable position, a tight or bicornuate uterus compressing the growing fetus, a uterine fibroma(s) challenging normal growth, multiple births in a confined uterus, a wrapped/tight umbilical cord, a long labor, a difficult delivery, shoulder dystocia, and the use of forceps or vacuum suction. If the BBS is compromised, craniosacral fascial therapy/infant driven movement (CFT/IDM) mitigates the strain to normalize the function of the craniosacral fascial system.

CFT/IDM is gentle and non-invasive.[7] The provider softly feels for connective tissue or fascial restrictions without manipulating the newborn. No force is applied to adjust the infant. The newborn drives his/her own movement by stretching, bending, flexing, extending (arching), or twisting while the practitioner gently allows, supports, follows, and feels the soft tissues of the body release.

The newborn can beautifully let go of his/her emotional and physical traumas with complete freedom without any adult social filters. Like a tight spring gently unwinding, s(he) can relax and heal. The goal

of the BBS/CFT/IDM model is to create a strain-free, thriving, and happy baby.

We pursued these thoughts with a pilot study centered on these questions:

1. Can the BBS/CFT/IDM model safely and effectively resolve specific conditions for a significant number of infants?
2. Can this model permanently correct a significant number of infants with these conditions?
3. Can this model result in positive neurologic development for happy and healthy toddlers?
4. If fetal trauma sows the seeds of specific infant conditions, can this model at birth prevent them for infants, optimize their neurological function, and result in happy and healthy toddlers?
5. Do people necessarily have to endure a lifetime of suffering because they had a difficult birth?

We evaluated 332 infants in phase one for the resolution of their conditions after the completion of this model. We reevaluated 125 (38%) 12-18 months later in phase two to check the permanency of their correction and their neurological development, happiness, and health.

A second research project will investigate these same 125 children at grade school age to address the initial question of the correlation to asthma, allergy, headaches, some learning disorders, and other childhood conditions.

# Literature Review

No published clinical or basic scientific research in the newborn or infant craniosacral fascial field exists. For historical background a few osteopathic articles discussed infant craniosacral work without investigating the function of the entire craniosacral fascial system.

In 1948 Beryl Arbuckle D.O. reported on the general negative effects of trauma to the heads of infants born in emergency situations.[9] In 1954 she described the general negative effects of uterine forces during labor on the craniosacral systems of newborns.[10]

In a study of 1250 newborns Viola Frymann D.O. found in 1966 that about 90% of the neonates had craniosacral restrictions; only about 10% had normal craniosacral motion.[11] She found a strong relationship between conditions in newborns and anatomic-physiologic disturbances of the craniosacral mechanism. This important finding showed that the cultural groupthink of "normal" birth trauma as being inconsequential to infant health was erroneous.[11]

In 1973 Rachel Woods D.O. stressed the importance of osteopathic manipulation to mitigate the effects of birth trauma for newborns and mothers.[12] She discussed in three case histories methods of examining the newborn infant.[12] She also discussed the critical need of structural normalization in older infants. She postulated that treatment starts with the maternal pelvis before delivery.[12]

In 1976 Dr. Frymann recommended osteopathic treatment in infancy for the prevention of learning difficulties.[13] She did an informal study in her private practice of 209 children with common pediatric conditions. She postulated that skeletal distortion due to trauma at birth played an important role in learning issues.[13]

Since the first two years of life are the most vulnerable for the brain, she postulated that cranial osteopathy was the best method to prevent problems at birth. If not done at birth, treatment needed to be completed as early as possible to maximize the function of the central nervous system.[13]

# Research Methodology

We did not evaluate and treat infants directly at birth for logistical reasons. We all could not be present at each home birth minutes after the delivery. Through our parental interviews, no physical or emotional traumas occurred during their short lives.

We saw no physical evidence of abuse during the research for any of the infants. The mothers were caring, nurturing, and concerned about the welfare of their babies by conscientiously bringing them in every week for therapy.

Originally, we thought that fetal trauma occurred only during labor and delivery; we assumed that the in utero time was calm and peaceful. But after seeing many cesarean babies with twisted heads, bodies, and severe craniosacral fascial strain patterns, we realized that these months were an important consideration in our research.

Connecting all the dots, we reasoned that in utero, labor, and/or delivery traumas must have caused each infant's craniosacral fascial strain schemes. We found that most infants had multiple traumas and concomitant strain patterns. This logical process critically supported the fact that our investigation of the effects of birth trauma was valid with this infant population.

In 2008, Barry Gillespie, Michael Myers, and Kristen Myers clinically tested the Baby Brain Score (BBS) for consistency and ease of use within the group.[7] Our testing began with 20-30 babies ranging in age from 2-weeks-old to 6-months-old. Each practitioner assessed each baby with the BBS for reliability and reproducibility. Then we did CFT/IDM for each baby and rechecked the BBS.

Our preliminary work to standardize the BBS model within our research group was clinically successful. When each practitioner

evaluated every baby privately with no other outside factors to influence the outcome, the BBS model was reliable since all of the scores were the same.

We consistently reproduced the BBS over the next several more months with the same dependable outcomes. Clinically standardizing this assessment procedure within our group gave us confidence to continue researching the effectiveness and safety of the BBS/CFT/IDM model.

In early spring of 2009 we set up a weekly program for babies to help standardize the entire BBS/CFT/IDM model. We created a newborn intake form to gather prenatal information, birth information, current conditions, and contact information. Since our practices were located in Lancaster County, Pennsylvania, our research population was primarily based in the Amish community.

## The Sample Population

The Amish are a conservative group who live a simplistic lifestyle. They do not use electricity, and they travel with horse and buggy instead of cars. They live off their land, make their own clothing, and use little technology. Since a large number of Amish are dairy farmers who make their own cheeses and yogurt, dairy products are a dietary staple.

The Amish prefer natural methods of healthcare and use mainstream medicine only when absolutely necessary. Family size averages seven children with older siblings actively involved in childcare. They are a close-knit community where three generations can live in one household.

Most Amish babies are born at home with a midwife attending; they use hospitals only for emergency deliveries. An Amish woman's life after marriage is focused on motherhood and operating the family business or farm.

Medical doctors diagnosed some of the infants in this study, but midwives diagnosed the majority of the conditions. The Amish community looks to them as their primary care providers. Midwives handle routine medical situations and refer out to local medical professionals for advanced conditions. Most Amish prefer to build their baby's immune systems naturally rather than with vaccines.

We did not diagnose any disease for any baby or portray ourselves as medical doctors. Not a week would go by when an Amish mother would ask us a pediatric medical question; we would always defer to the wisdom of their doctor or midwife.

We performed this research in our clinical practices located in three different towns in Lancaster County. We did not advertise for participation, and no family was paid to be in the research. We received no funding from any outside sources and paid our own expenses. There were no commercial conflicts of interest.

Since the Amish communicate primarily by word of mouth, the popularity of CFT/IDM grew when the community saw the benefits and safety of this work. They realized that they would have a happy baby at the completion of therapy with no charge for our services. Some parents would thank us with produce from their farms or baked goods from their kitchens.

We had a minor percentage of non-Amish babies, who were born in either a hospital, a birthing center, or at home. These parents were attracted to our work because they wanted a natural method of helping their babies become happier and healthier.

Every baby started the study before 12 weeks of age; most were younger than 6 weeks of age. As stated previously, since their parents related no physical or emotional traumas after their births, we postulated that fetal trauma caused their craniosacral fascial strain patterns.

Their conditions consisted of any number of the following: colic, reflux, breastfeeding issues, arching, constipation, gas, or strabismus.

With our initial BBS and CFT/IDM research, we felt that all of these conditions could be correctable with the BBS/CFT/IDM model

Many unhappy babies had multiple problems. Since there was no fee for our services, we encouraged the parents to bring their babies until completion of therapy when they were strain-free and happy. We removed the small percentage (less than 18%) of babies from the study who did not complete therapy. Most of these parents did not have the time for all of the visits, or they felt that their babies were not getting better fast enough.

## The Numbers

Three hundred and thirty-two babies completed the first phase of the research. One hundred and sixty of the babies were female and 172 were male. Two hundred and eighty-nine of the babies were Amish and 43 of the babies were non-Amish.

Three hundred and twelve of the babies had not received any vaccines before or during the course of the research and 20 of the babies had received vaccines before or during our research. Of the vaccinated babies, 11 babies were Amish and nine babies were not Amish.

Two hundred and thirty-three babies were born at home and 97 were hospital births. Two babies were born in a birthing center. Out of the 97 hospital births, 29 mothers received pitocin, 25 mothers received epidural anesthesia, and 25 mothers received a caesarean section. Three babies were delivered with vacuum suction, one baby was delivered with forceps, and three babies spent time in the NICU.

Our documented conditions at the beginning of the research were:

1. Breastfeeding Issues…….143 babies
2. Colic……126 babies
3. Gas……173 babies
4. Constipation ……...53 babies

5. Reflux/Gagging/Vomiting…207 babies
6. Arching…….174 babies
7. Strabismus……..55 babies

## The Phase One Process

The parents completed the newborn intake form at our office. We did the BBS with the clothed baby lying supine on the treatment table or in the mother or father's arms. We discussed the results of the BBS with the parents. We also described to them what their child would be feeling and experiencing during CFT/IDM.

CFT/IDM began with three practitioners working together on the baby. The sessions were originally 30 minutes in duration per baby with rest periods in between. One practitioner supported the head, oral, and cervical areas, the second practitioner supported the mid-section/thorax areas, and the third practitioner supported the sacrum, pelvis, and leg areas. This approach effectively connected the dots of craniosacral fascial strain patterns from one area of the body to another.

We identified and gently followed the strain patterns in the baby's body and guided and supported him/her until the craniosacral fascial system released. At that point, we gave the baby a relaxing break allowing mom or dad to hold their child. These important rest periods minimized separation anxiety and supported quiet, bonding time.

We repeated the same format several times in the 30-minute appointment. By rotating treatment position on the baby's body, we confirmed with each other the presenting craniosacral fascial strain patterns. We revisited the tight areas from the first rotation and treated those areas until the infant was strain-free.

We found that the shoulder and pelvic girdle structures needed release before some of the cranial, oral, and neck structures could be fully addressed and cleared. We checked every baby for oral/pharyngeal strain. These areas included the hard palate, temporomandibular joints

(TMJs), soft palate, middle of the tongue, base of the tongue, and mylohyoid tissues.

Several months later we discovered that if we rotated three to four babies in a one-hour appointment, they responded better to CFT/IDM. Even though the BBS/CFT/IDM model was the same, the longer breaks prevented overstimulation. The mothers also reported calmer babies after therapy.

At the end of that day's treatments, we shared with the parents how the craniosacral fascial strains were relating to their baby's condition(s). We discussed what they could expect their baby to feel and encouraged them to contact us with any concerns or questions. We scheduled all of the therapy appointments 1-2 weeks apart until their baby was strain-free.

Every baby received as many sessions as needed to complete this goal. The majority of babies had 5-8 visits; the tightest baby needed 13 visits. We released each baby from the research program on a visit-by-visit basis. When these babies were strain-free on their final visit, their original conditions were almost all cleared.

The few babies with unresolved conditions had other factors, which will be discussed in a later section. We described to the parents future traumas that could negatively affect their baby's craniosacral fascial system. We encouraged them to schedule a checkup visit if they had any concerns.

At the completion of the first phase of our research, we discussed with the parents a checkup visit for their baby at least one year later at no fee to see if the original conditions returned and how well he/she was progressing. Every parent agreed to these terms. We sent a reminder letter later to encourage them to set up that appointment. This checkup visit became the basis of the second phase of our research.

## The Mexican Medical Research

As an adjunct to our Pennsylvania research, our work expanded internationally in March 2010 when we taught 16 medical professionals, who evaluated and treated about 80 babies in Culiacan, Mexico. This group, consisting of obstetricians, pediatricians, neurosurgeons, delivery nurses, and doulas, applied CFT/IDM to newborns in their practices.

The parents of these babies were from the middle class, and the infants' ages ranged from three to six months old. At least 80% were born via caesarean section, and they had all received standard vaccines. The last two factors were different than our Pennsylvania group of babies.

These important considerations determined if a different culture or birthing method altered the effectiveness of the BBS/CFT/IDM model. We found that they did present with the same common conditions as the infants in Pennsylvania: colic, reflux/gagging/vomiting, arching, breastfeeding issues, and constipation.

The student professionals, under our close supervision, examined the babies with the BBS, and then treated them with CFT/IDM daily for five days. These babies began with BBSs ranging from 0-5. After five days of CFT/IDM, their BBSs increased to 5-8. The brain and sacral cycles were triple digits in all but one baby, who was at 70 seconds. Since the average increase of the BBS was over two points, we felt that four years of BBS research validated its effectiveness and safety aspects.

Upon reassessment, we found that the large majority of the babies corrected their initial problem(s) while the remaining infants made a significant improvement. They still had some craniosacral fascial strain left in their bodies, but were on their way to total resolution with continued CFT/IDM from our students. The complete approval of the medical professionals and families in Mexico validated the safety and effectiveness of the BBS/CFT/IDM model.

While in Mexico, we also tested the BBS/CFT/IDM model on a group of hospital newborns, ranging from one-minute-old to 24-hours-old. We examined a group of babies who had difficulty with latching and gave them CFT/IDM in the post partum unit. Some babies immediately latched and breastfed comfortably; the remaining babies were breastfeeding well the next morning.

One of the babies, who had difficulty latching, had severe cranial distortion. We treated him in his mother's arms. The attending medical doctor said that he was breastfeeding well by the next morning with his cranial distortion showing considerable improvement.

We treated another newborn in the NICU with CFT/IDM. Her respiratory condition improved by the next morning as well. We evaluated another 24-hour-old baby who presented with stridor. Her condition improved immediately with CFT/IDM. By the next morning, her stridor had completely resolved.

Another factor is that initially we wondered if vaccines could tighten the craniosacral fascial system. We found this was not the case since all of the vaccinated Mexican babies released their craniosacral fascial strain well. Our professional students were pleased with the final baby outcomes. The BBS/CFT/IDM model created very happy and content babies and families.

Although the babies evaluated and treated in Mexico were not a part of this study group, the experience was extremely valuable in determining the effectiveness and safety of this model for different cultures and birth methods. We also found the work was safe and effective for infants in Delaware, Wisconsin, Montana, California, and Ontario, Canada. We also heard positive results from our students in Europe and Africa. By all accounts, fetal trauma and these concomitant infant conditions were a global issue.

## The Phase Two Process

For the second phase of our research in Pennsylvania, we wanted to evaluate the permanency of the corrections and if the BBS/CFT/IDM model in the early months of life created healthy, happy, and cognitively alert toddlers. We encouraged all of the families to return with their babies from 12-18 months after their last CFT/IDM treatment.

We prepared a five-page questionnaire form for each family upon arrival at their checkup visit. It consisted of questions reevaluating the child's overall health and breastfeeding issues, colic, gas, constipation, reflux/gagging/vomiting, arching, strabismus, earaches, chronic sinus problems, and chronic breathing issues.

We presented developmental questions concerning each child's gross and fine motor skills and asked the parents to rate the child's progress with criteria of "no progress" to "excellent progress" (1-5 scale). We wanted to monitor the BBS, happiness, and health status of the children. We also wanted to know if there were any major accidents since the last visit and if they affected their craniosacral fascial systems.

A precise definition of happiness is subjective; happiness for one person may be something else for another person. Our and the parents' perception of happiness was the same - babies smiling and laughing spontaneously. They are comfortable most of the time and only cry for specific reasons (hungry or needing a diaper change). A happy baby can also relax by going to sleep in mom's arms.

A senior clinical developmental scientist from a large Philadelphia pharmaceutical company reviewed our initial form and suggested appropriate changes in the format. She approved the final questionnaire, which we used in this phase of the research.

In August of 2010, we officially began the checkup visits. Upon arrival, all the families filled out the five-page questionnaire. We reviewed and discussed their information. We followed with evaluating the child's current BBS and compared it to the original score from the

first visit. We checked the entire body for any areas of craniosacral fascial strain. If strain was present, we provided treatment.

We found that all of the families were extremely happy with the results of the original CFT/IDM treatments. Some were so happy that they returned with their next baby. By the summer of 2012 we had 125 toddlers of the original 332 babies (38%) at random in phase two, completing the clinical aspect of the research.

# Results

## Phase 1

We wanted to investigate our first question in this phase. Is the BBS/CFT/IDM model safe and effective for the resolution of specific common conditions in a significant number of infants?

To answer that question, we evaluated, treated and completed work on 332 babies, most of whom were very fussy, in regards to safety and effectiveness of the BBS/CFT/IDM model. A fussy baby was restless, unhappy, easily agitated, and presented with one or more of the following conditions: breastfeeding issues, colic, gas, constipation, reflux/gagging/vomiting, arching, and strabismus.

We needed to establish successful results in this phase before proceeding to the second follow-up phase of the research. We must note that three of the babies in the program passed away due to issues unrelated to the BBS/CFT/IDM model. The families reported that one baby died from SIDS, another baby had complications from microcephaly, and the third baby died from surgical complications.

Prior to the BBS/CFT/IDM model, 143 babies (43%) had breastfeeding issues, 126 babies (38%) dealt with colic, 173 babies

(52%) suffered with gas, 53 babies (16%) came to us with constipation, 207 babies (62%) suffered from reflux/gagging/vomiting, 174 babies (52%) had arching, and 55 babies (17%) dealt with strabismus (Table 1).

**TABLE #1, PHASE 1 OF RESEARCH STUDY FOR INVESTIGATNG THE EFFECTIVENESS OF THE BBS/CFT/IDM MODEL FOR INFANTS**

Total Babies: 332

| | Initial Number of Babies | Condition 100% Resolved | Condition Partially Resolved | Condition Unchanged |
|---|---|---|---|---|
| Breastfeeding Issues | 143 | 143 | 0 | 0 |
| Colic | 126 | 126 | 0 | 0 |
| Gas | 173 | 159 | 14 | 0 |
| Constipation | 53 | 23 | 30 | 0 |
| Reflux/Gagging/Vomiting | 207 | 175 | 32 | 0 |
| Arching | 174 | 174 | 0 | 0 |
| Strabismus | 55 | 53 | 2 | 0 |

Upon completion of the BBS/CFT/IDM model, all 143 babies (100%) had their breastfeeding issues resolved. They breastfed comfortably and most improved their weight gain immediately. We discovered that almost all had temporomandibular joint (TMJ) dysfunction. If a newborn had jaw pain, breastfeeding would naturally be difficult.

All 126 colicky babies (100%) no longer had symptoms. Their screaming fits of discomfort dissipated, as their relaxed bodies were no longer rigid. Many families also noted improvement with the infants' sleep habits.

There were 173 babies who dealt with gas issues prior to the BBS/CFT/IDM model. Afterwards 159 babies (92%) no longer struggled with gas. The remaining 14 babies (8%) still had a small percentage of discomfort from gas pain. We postulated this was due to the effects of the mothers eating foods containing dairy products.

Since a large percentage of the research families were dairy farmers, they found it difficult to follow the doctor's/midwife's recommendation to eliminate dairy foods. Therefore, we could provide some relief to these infants, but not the full 100 percent through the BBS/CFT/IDM model alone. We found that the mothers who made dietary changes with their babies had either additional improvement or a total recovery.

The results for the 53 babies who suffered from constipation were 23 babies (43%) improved completely after receiving the BBS/CFT/IDM model and the remaining 30 babies (57%) made partial improvement. We postulated the dairy dietary issue was a factor for these babies.

The results of the 207 reflux/gagging/vomiting babies varied. One hundred and seventy-five of the 207 babies (85%) healed completely by the end of the BBS/CFT/IDM model and were free of all reflux, gagging, or vomiting. The remaining 32 babies (15%) made considerable improvement, but they still suffered from some symptoms. Of these babies, we found that they were either medically diagnosed or suspected of having intolerance to dairy products.

We worked with 174 babies who we called “archers” because they threw their heads back and arched backwards into extension when held. Some arched on their sides while lying down, and many were uncomfortable lying on their backs. After completing the BBS/CFT/IDM model, all of these babies (100%) no longer arched while any member of the family held their more relaxed bodies.

There were 55 babies with strabismus. After the BBS/CFT/IDM model, 53 babies (96%) were cleared of all structural strain causing their eye misalignment. The two remaining babies (4%) had some improvement. These babies may have had a genetic issue and/or possible brain injury preventing this model from completely resolving their strabismus.

To summarize the effectiveness and safety questions of Phase 1, every child's condition either partially or completely resolved. Three hundred and thirty-two babies, each with a varied combination of seven conditions, were on average totally corrected 92 percent of the time (853 conditions resolved/931 original conditions). The BBS/CFT/IDM model was partially correctable 8 percent of the time (78 conditions partially resolved/931 original conditions). None of the children remained the same or worsened with this model.

We also found that the BBS/CFT/IDM model was safe since the parents reported no infant injuries to us at any time during the research. The parents were extremely happy with the results of this model. The community totally embraced the work's safety and effectiveness.

To answer the first question in this phase of the research, we postulated that with this high 92 percent success rate, the BBS/CFT/IDM model could be safe and effective for the resolution of specific common conditions in a significant number of infants. We were ready to start the next phase of the research.

## Phase 2

We wanted to investigate our second and third original questions. Would the infant's original conditions return 12-18 months after the completion of the BBS/CFT/IDM model? What would the overall neurological development, health, and happiness factors of the child be 12-18 months after the completion of this model?

To answer those questions we reexamined 125 of the original 332 babies (38%) at random and revisited their original conditions of breastfeeding issues, colic, gas, constipation, reflux/gagging/vomiting, arching, and strabismus (Table 2).

| TABLE #2, PHASE 2 OF RESEARCH STUDY FOR INVESTIGATING THE EFFECTIVENESS OF THE BBS/CFT/IDM MODEL FOR INFANTS | | | | | |
|---|---|---|---|---|---|
| Re-Evaluation Of Original Conditions | | | | | |
| Total Babies: 125 | | | | | |
| | Initial Number Of Babies With Original Condition | Condition Did Not Return | Condition Returned As a Mild Problem | Condition Returned As a Moderate Problem | Condition Returned As a Severe Problem |
| Breastfeeding Issues | 43 | 26 | 11 | 1 | 5 |
| Colic | 36 | 20 | 9 | 4 | 3 |
| Gas | 49 | 39 | 3 | 4 | 3 |
| Constipation | 16 | 9 | 4 | 2 | 1 |
| Reflux/Gagging /Vomiting | 57 | 30 | 10 | 10 | 7 |
| Arching | 52 | 40 | 7 | 3 | 2 |
| Strabismus | 17 | 11 | 1 | 1 | 4 |

In the group of 125 babies that returned for their one-year checkup visit, there were 43 babies who originally had breastfeeding issues (Table 2). After the completion of the BBS/CFT/IDM model, 26 babies (60%) no longer had any breastfeeding problems. Eleven of the babies (26%) had a minor problem breastfeeding during the year and one baby (2%) returned with a moderate problem. There were five babies (12%) who redeveloped breastfeeding issues that the mothers stated were a serious issue.

There was a return of 36 babies of the original 126 who suffered from colic (Table 2). We found that 20 of the babies (56%) were completely free of colic after this model. There were nine babies (25%) whose colic returned as a minor issue, four babies (12%) whose colic returned as a moderate issue, and three babies (8%) whose colic condition returned as a more serious problem.

In the return group of gassy babies there were 49 who originally dealt with painful gas problems (Table 2). In this group, 39 of the babies (80%) no longer suffered from pain from gas. Three (6%) who had a minor problem after their release from the program, four (8%) who had a moderate problem, and three babies (6%) who had a more serious issue with gas over the year.

There was a return of 16 babies who originally suffered from constipation (Table 2). Nine of the 16 babies (56%) no longer suffered from any constipation. four (25%) babies had a minor problem over the year, two babies (13%) returned with a moderate issue, and one baby's (6%) constipation returned as a more serious issue.

There were 57 babies that returned who originally suffered from reflux/gagging/vomiting issues (Table 2). Thirty (53%) were completely free of these issues a year later. There were 10 (18%) babies whose issue returned as a mild problem. Ten (18%) other babies had a moderate problem and seven babies (12%) had a serious problem with this condition during the year after treatment.

There was a return group of 52 babies who originally had arching (Table 2). Forty babies (77%) were completely free of arching a year later. There were seven babies (13%) who had a mild return of arching while three babies (6%) had a moderate return. Only two babies (4%) had a serious return during the year after treatment.

At the one-year check up there were 17 babies who returned that originally had strabismus (Table 2). Of those 17 babies, 11 (65%) returned with no evidence of any strabismus. There was one (6%) baby who had a mild problem with strabismus a year later and one (6%) baby who had a moderate problem. Finally, there were four babies (24%) who returned with a more severe case of strabismus.

To answer our second original question, we found that on average for the seven conditions we studied, the BBS/CFT/IDM model permanently corrected 65 percent of the cases (175 non-returned conditions/270 total original conditions). The conditions returned at least to some extent in 35 percent of the cases (95 returned conditions/270 total original conditions). This model permanently corrected the conditions for the majority of the children.

We also wanted to check three other common conditions that can present within the first year of life - earaches, chronic sinus problems, and breathing issues. We did not include these three conditions on the

original intake since they would not appear until the infants were a little older. However, we still questioned if the BBS/CFT/IDM model could eliminate or at least significantly reduce these three conditions (Table 3).

**TABLE #3, PHASE 2 OF RESEARCH STUDY FOR INVESTIGATING THE EFFECTIVENESS OF THE BBS/CFT/IDM MODEL FOR INFANTS**

Evaluation Of Other Common Childhood Conditions

Total Babies: 125

| | Condition Not Present To Date | Condition Presented As a Mild Problem | Condition Presented As a Moderate Problem | Condition Presented As a Severe Problem |
|---|---|---|---|---|
| Earaches | 97 | 15 | 6 | 7 |
| Chronic Sinus Problems | 117 | 3 | 4 | 1 |
| Chronic Breathing Issues | 125 | 0 | 0 | 0 |

Of the 125 babies who returned for checkups, 97 (78%) had not had any earaches at all during that year (Table 3). There were 15 babies (12%) who had a mild problem, and there were six babies (5%) who had a moderate problem. The remaining seven babies (6%) had a more serious problem with earaches.

One hundred and seventeen babies (94%) were free of any chronic sinus problems (Table 3). There were three babies (2%) who had a mild problem with their sinuses, four babies (3%) with a more moderate problem, and one baby (1%) with a more serious problem.

We found all 125 (100%) free of any chronic breathing issues (Table 3).

We also gathered neurological developmental milestone information as each child went from the infant to toddler stage. Each of the 16 questions had a rating based on no progress (1), slow progress (2), fair progress (3), good progress (4), and excellent progress (5) (Table 4).

**TABLE #4, PHASE 2 OF RESEARCH FOR INVESTIGATING THE EFFECTIVENESS OF THE BBS/CFT/IDM MODEL FOR INFANTS**

Child Development

Total Babies: 125

| | No Progress (1) | Slow Progress (2) | Fair Progress (3) | Good Progress (4) | Excellent Progress (5) | Client Did Not Complete Answer |
|---|---|---|---|---|---|---|
| **As An Infant:** | | | | | | |
| Calm Response To Loud Noise | 2 | 6 | 25 | 37 | 51 | 4 |
| Strong Grip In Both Hands | 0 | 0 | 7 | 35 | 81 | 2 |
| Tracked People And Objects Well | 0 | 0 | 11 | 33 | 80 | 1 |
| Crawled Without Help | 8 | 9 | 10 | 28 | 69 | 1 |
| Sat Without Help | 0 | 3 | 8 | 44 | 69 | 1 |
| Focused On An Object | 0 | 0 | 7 | 40 | 78 | 0 |
| Heard Sounds (Ex. Voices, Etc.) | 0 | 0 | 8 | 33 | 84 | 0 |
| Felt Sensations (Ex. Tickling, Kissing, Etc.) | 0 | 0 | 8 | 35 | 82 | 0 |
| Crept On Both Hands And Knees | 11 | 8 | 10 | 28 | 68 | 0 |
| Created Sounds To Express Emotions | 0 | 1 | 8 | 40 | 75 | 1 |
| Makes Eye Contact While Communicating | 0 | 0 | 4 | 32 | 87 | 2 |
| Expresses a Wide Range Of Healthy Emotions | 1 | 1 | 6 | 39 | 75 | 3 |
| Engages In Activities With Parents | 1 | 0 | 5 | 30 | 88 | 1 |
| **As a Toddler** | | | | | | |
| Speaks Words | 5 | 11 | 17 | 41 | 42 | 9 |
| Walks Well | 7 | 4 | 4 | 27 | 75 | 8 |
| Runs Well | 12 | 7 | 10 | 24 | 45 | 27 |

First, we wanted to know if the infants had a calm response to loud noises. There were 51 babies (41%) out of 125 who made excellent progress. There were 37 babies (30%) who made good progress, 25 babies (20%) who made fair progress, six babies (5%) who made slow progress, and two babies (2%) who scored the lowest with no progress. We had four parents (3%) who did not answer that question with an N/A or no response (Table 4).

Second, we were looking to see if the babies developed a strong grip in both hands. There were 81 babies (65%) out of 125 babies who made excellent progress. We documented 35 babies (28%) who made good progress, seven babies (6%) who made fair progress and zero babies who had slow or no progress at all. There were two families (2%)

who did not answer that question. This was documented with an N/A or no response (Table 4).

The third developmental skill was the ability to track objects and people. There were 80 babies (64%) of the 125 who made excellent progress. We documented 33 babies (26%) who made good progress, 11 babies (9%) who made fair progress, and zero babies who made slow or no progress at all. There was one family (1%) who did not answer that question. We documented it as a N/A or no response (Table 4).

We then asked if their child was able to crawl without help. There were 69 babies (55%) out of 125 who made excellent progress with this development. There were 28 babies (22%) who made good progress, 10 babies (8%) who made fair progress, nine babies (7%) who made slow progress, and eight babies (6%) who made no progress at all. One family (2%) did not answer this question and it is noted as a N/A or no response (Table 4).

The fifth developmental skill was if their child was able to sit up without help. There were 69 babies (55%) who made excellent progress and 44 babies (35%) who made good progress with this skill. We documented eight babies (6%) who made fair progress and three babies (2%) who made slow progress. There were zero babies who made no progress in sitting up without help and we had one family (1%) who did not answer this question (Table 4).

Another developmental skill was if the children were able to focus on objects. There were 78 babies (62%) who made excellent progress and 40 babies (32%) who made good progress. The remaining seven babies (6%) noted fair progress with focusing on an object (Table 4).

The seventh developmental skill was the child's ability to hear sounds properly. There were 84 babies (67%) who made excellent progress, 33 babies (26%) who made good progress, and eight babies (6%) who made fair progress. None of the families noted anything lower than fair progress with this skill (Table 4).

We checked the infants' ability to feel various sensations. There were 82 babies (66%) who made excellent process and 35 babies (28%) made good progress. The remaining eight babies (6%) made fair progress with zero babies making slow or no progress (Table 4).

The ninth developmental skill was the infants' ability to crawl on their hands and knees. There were 68 babies (54%) who made excellent progress and 28 babies (22%) who made good progress. Ten of the babies (8%) made fair progress, eight of the babies (6%) made slow progress and 11 babies (9%) made no progress (Table 4).

We checked the children's ability to express emotions through sounds. There were 75 babies (60%) who made excellent progress and 40 babies (32%) who made good progress with this skill. We found eight babies (6%) made fair progress, and one baby (1%) made slow progress. There were zero babies who made no progress at all, and there was one family (1%) who did not answer this question (Table 4).

The eleventh developmental skill was the child's ability to make eye contact while communicating. There were 87 babies (70%) who noted excellent progress and 32 babies (26%) who made good progress. There were four babies (3%) who made fair progress making this the lowest score for this skill. There were two families (2%) who did not answer this question (Table 4).

Another skill was the ability to express a wide range of healthy emotions. There were 75 babies (60%) who made excellent progress and 39 babies (31%) who made good progress with this skill. We documented six babies (5%) who made fair progress, one baby (1%) who made slow progress, and one baby (1%) who made no progress. There were three families (2%) who did not answer this question (Table 4).

We checked the children's ability to engage in activities with family members. There were 88 babies (70%) who made excellent progress and 30 babies (24%) who made good progress. Five babies (4%) made fair progress and one baby (1%) made no progress with this

particular skill. There was one family (1%) who did not answer this question (Table 4).

The fourteenth skill that we checked was the children's ability to speak words. There were 42 children (34%) who made excellent progress and 41 children (33%) who made good progress. There were 17 children (14%) who made fair progress, 11 children (9%) who made slow progress, and five children (4%) who made no progress and were not speaking words at the time of the checkup. Finally there were nine families (7%) who did not answer this question (Table 4).

We checked the children's ability to walk well. There were 75 children (60%) who made excellent progress, 27 children (22%) who made good progress, four children (3%) who made fair progress, four children (3%) who made slow progress, and seven children (6%) who made no progress. Also, there were eight families (6%) who did not answer this question (Table 4). Since the average age of the children we were checking varied, we found that this question was not applicable to some of the children since they were not developmentally ready to walk. We found this to be the reason that there were more families who did not answer this question.

The sixteenth and last developmental skill we asked was their child's ability to run well. Again, since the children coming in for the one-year checkups had varying ages, we found this particular question to be not applicable to some, since some of the toddlers were not walking at the time of the visit. We documented 27 families (22%) who did not answer this question for this reason. There were 45 children (36%) who made excellent progress and 24 children (19%) who made good progress with the ability to run well. Ten families (8%) noted fair progress, seven families (6%) noted poor progress, and 12 families (9%) noted no progress (Table 4).

As part of our research, we wanted to investigate if CFT/IDM therapy could improve the Baby Brain Score (BBS) value of each child, as well as sustain the value after a period of 12-18 months (Table 5). We designed the BBS as a screening tool to quickly measure

neurophysiology at birth; we used this extra longitudinal dimension to further solidify the value of the BBS/CFT/IDM model (Table 5).

Similar to the Apgar score, the BBS has four neurological components with its scoring from zero (red flag), one (a moderate problem) to two (good neurological function) for each one[7]. The brain and sacral cycles indicate how well the brain and spinal cord are moving. The symmetry of the head and the cord wrapped around the body complete the components[7].

A perfect BBS is eight (four components X a two score for each representing good function), and the worst BBS is zero (four components X a zero score for each denoting poor function). Most of our newborns scored in the three to five range (moderate issues). An infant with a score less than a perfect eight required CFT/IDM (Table 5).

**TABLE #5, PHASE 2 OF RESEARCH STUDY FOR INVESTIGATING THE EFFECTIVENESS OF THE BBS/CFT/IDM MODEL FOR INFANTS**

| BBS Values Before And After CFT/IDM | | |
|---|---|---|
| Total Babies: 125 | | |
| Baby Brain (BBS) Score Total | BBS Before CFT/IDM Treatments | BBS 12-18 months After CFT/IDM Treatments |
| 0 | 3 | 0 |
| 1 | 7 | 0 |
| 2 | 11 | 0 |
| 3 | 54 | 0 |
| 4 | 19 | 0 |
| 5 | 19 | 2 |
| 6 | 6 | 12 |
| 7 | 3 | 25 |
| 8 | 3 | 86 |

In looking at the 125 children who returned for their one-year checkup visit, we had three babies (2%) who scored a “0” in the BBS at the original evaluation prior to any CFT/IDM treatment. Since this is the lowest value on the BBS, it indicated a serious risk of certain conditions for these children.

Moving through the serious risk part of the scale, there were seven babies (6%) who scored a “1”on the BBS and 11 babies (9%) who

scored a “2” prior to any CFT/IDM treatment. Scoring at a moderate risk on the BBS for certain conditions were 54 babies (43%) who scored a “3”, 19 babies (15%) who scored a “4”, and 19 babies (15%) who scored a “5” prior to any treatment.

Finally, scoring with a minimal risk to certain conditions were six babies (5%) who scored a “6”, three babies (2%) who scored at a “7”, and three babies (2%) who scored a perfect “8” prior to any CFT/IDM treatment.

We reexamined the BBS on all of the children at their 12-18 month checkup visit. Every baby had an improved BBS. We found that there were no babies that had a BBS less than “5”. There were two babies (2%) who returned with a BBS of “5”, 12 babies (10%) with a score of “6”, 25 babies (20%) with a score of “7”, and 86 babies (69%) with a perfect score of “8” (Table 5).

The lower scores were primarily due to the permanent zero scoring of the umbilical cord factor. Those babies had scored a “0” since the cord had been wrapped or knotted tightly at birth. Also, a few of the head shapes had not been completely symmetrical at the check up visit, thus lowering their BBS slightly as well.

Another important question regarded the child’s overall health since their last CFT/IDM treatment. We broke the selections down into “very sickly”, “sickly”, “fair”, “good”, and “excellent” for the parents (Table 6).

**TABLE #6, PHASE 2 OF RESEARCH FOR INVESTIGATING THE EFFECTIVENESS OF THE BBS/CFT/IDM MODEL FOR INFANTS**

| Child’s Overall Health | | | | | | |
|---|---|---|---|---|---|---|
| Total Babies: 125 | | | | | | |
| | Very Sickly (1) | Sickly (2) | Fair (3) | Good (4) | Excellent (5) | Client Did Not Complete Answer |
| Child’s Overall Health | 0 | 1 | 13 | 69 | 40 | 2 |

The results showed that 40 children (32%) were of excellent health and 69 children (55%) were in good health (87%, total) (Table 6). There were 13 children (10%) who were in fair health, one child (1%) who was sickly and zero children who were noted very sickly. Two families (2%) did not answer this particular question.

The final question was about the children's overall happiness since their last CFT/IDM treatment. We broke their answers down in a similar manner to the previous question with the choices of "very unhappy", "unhappy", "neutral", "somewhat happy", and "very happy" for the parents (Table 7).

**TABLE #7, PHASE 2 OF RESEARCH FOR INVESTIGATING THE EFFECTIVENESS OF THE BBS/CFT/IDM MODEL FOR INFANTS**

| Child's Overall Happiness | | | | | |
|---|---|---|---|---|---|
| Total Babies: 125 | | | | | |
| | Very Unhappy (1) | Unhappy (2) | Neutral (3) | Somewhat Happy (4) | Very Happy (5) |
| Child's Overall Happiness | 0 | 0 | 20 | 38 | 67 |

We documented 67 children (54%) who were very happy and 38 children (30%) who were somewhat happy (84%, total). There were 20 children (16%) who were in the neutral range and zero children were unhappy or very unhappy (Table 7).

To answer our third original question, we postulated that the overall neurological developmental, health, and happiness factors have been positively reinforced from infancy to toddlerhood with the BBS/CFT/IDM model in this group of children.

# Discussion

## General Comments

The BBS/CFT/IDM model presents a new look at correcting timeless incorrigible infant conditions. If subtle physical and emotional traumas create tightness in the fetal craniosacral fascial system, the body physiology can become impaired and result in many conditions.

This model identifies a problem and loosens this system to create more normal function, allowing these conditions to fade away over time. Every parent in the research understood and accepted this tight/loose concept. As clinical proof, many mothers commented on their more relaxed babies directly after their first treatment.

The aim of this model is to correct the potential problem(s) directly at birth with assessment (BBS) and therapy (CFT/IDM) and not to overlook the clinical red flags of a traumatic birth and manage the issue(s) throughout life by chasing after symptoms with medications and/or surgeries.

Since the craniosacral fascial system can remember all of its traumas back to conception like a computer's hard disk drive, this BBS/CFT/IDM model can address the root cause(s) of the infant's problem(s).[8] The goal is to clean the slate of the effect(s) of any birth traumas to prevent a lifetime of suffering and disease management.

Our parameters for effectiveness were both objective and subjective. Every baby had a diagnosis of a condition(s). But as far as the Amish were concerned, if that condition(s) cleared with therapy, the results were self-evident, and a visit to the doctor/midwife was not needed for medical confirmation. We postulated that this same subjective observation was also true in the general American population.

The safety parameters were totally subjective. To precisely quantify an infant's safety during therapy may be impossible. But what standard of measurement is higher than a mother's love and protection of her newborn? Every mother was present for every treatment, and her safety questions and concerns were always paramount. We educated her beforehand about what to expect during the BBS/CFT/IDM model.

Every mother was in total control of her baby's therapy. Doing over 2,000 infant treatments without incident during a six-year period indicated a sterling safety record. Also if this model were ineffective and/or unsafe, word would have quickly spread through the Amish community, stopping the research cold.

This random study had no untreated control groups. Although we wanted to follow the standard medical research protocol, we believed that it was ethically and morally unacceptable to watch hundreds of babies from the local community suffer without treatment. Under the mentorship of our pharmaceutical research advisor, we instead strove for high participation numbers to validate our hypotheses.

Although not derived from a double blind study, these results provide strong evidence that the BBS/CFT/IDM model can correct a significant number of infants with these conditions in a way that has never been measured before. If this model is making a notable difference for infants and doing no harm, the scientific need for a double blind study can be greatly diminished.

We worked with scores of babies before starting the project to standardize our BBS and CFT/IDM techniques. Since we were continually breaking new treatment ground during the research, our techniques gradually improved over the years. These new findings only added to the effectiveness and safety of the BBS/CFT/IDM model.

We found that helping to release the infant's oral strains was critical for general health. We discovered that the majority of these strains started in the pelvic girdle, moved up through the trunk into the shoulder girdles, and traversed into the neck, jaw, and head. If a child or

adult in our private practice had sinus congestion, TMJ syndrome, or other head/neck issues, we knew that his/her pelvic and shoulder girdles had to be free of craniosacral fascial strain for complete resolution.

We learned that birth trauma may be the root cause of a presenting adult or child's condition(s). As stated previously, the craniosacral fascial system can remember all of its physical and emotional traumas and hold all of their strains for a lifetime.[8] To get to the root cause of that patient's issue, the CFT provider must access and help the body completely clear those birth traumas. We postulated that this model could avoid a lifetime of suffering due to a difficult birth.

As a side note, we treated six sets of twins. Each set presented as one unhappy baby with severe craniosacral fascial strain and another relatively happier baby with less strain. We postulated that space allowance and lack of mobility in the uterus were major factors. As a footnote for future research, we had positive isolated results in the correction of babies with clubfoot, torticollis, tongue-tie, and sleep apnea. Since we found CFT successful for many of our pediatric patients with anxiety, depression, and bedwetting issues, we wondered if the BBS/CFT/IDM model could also prevent these conditions at birth?

Also a few of the babies presented with severe fascial strain twisting the spine. As these strains worked out with this model, we wondered if these children would have developed torticollis, scoliosis, kyphosis, or lordosis later in life? Could this model also help to prevent progressive neurological diseases, like Alzheimer's, later in life? The research possibilities are endless.

## Our Results

The excellent results in phase one speak for themselves. While these infant conditions have been an enigma since the beginning of recorded time, our results are compelling. We postulated that their root cause was from birth trauma resulting in the impaired function of the fetal craniosacral fascial system.[7]

We welcome global groups to duplicate and advance this work. As the mysteries of the craniosacral fascial system unfold, we postulate that this approach will redefine the global "normal and healthy" standard of infant care.

For phase two we developed the checkup visit with the intention of collecting data for at least 266 toddlers (80%) of the 332 original children. We did not anticipate that only 125 toddlers (38%) would return for the free visit.

The other parents generally felt their child did not require a checkup visit since their neurological development, health, and happiness factors were exceptional. This correlates with the Amish concept of not returning to the doctor/midwife for medical confirmation after a condition(s) like colic or reflux/gagging/vomiting has corrected.

We found that not all infants were permanently corrected of their condition(s) since they returned at least to some extent in 35 percent of the cases within 12-18 months. As this work expands globally, we expect that new discoveries will significantly raise the permanent correction rate of 65 percent. Conventional pediatric wisdom states that infants generally "grow out" of these conditions. Maybe they do years later, but these results suggest otherwise because too many of these conditions resurfaced in toddlerhood.

We noted that dietary issues were involved in many cases. We would also recommend monitoring the children with continual care in a normal clinical situation for better results. They may hold deeper latent strain patterns in their bodies that for some unknown reason can surface at a latter date. The body knows best how to heal itself in space and time.[8]

We were also excited to find outstanding results for earache, sinus issues, and breathing problems. Since most American children contract earaches, the high percentage of toddlers represented here without earaches is unusual.

Considering these children lived in the middle of allergy farming country, the low percentage of sinus issues was also unusual. The fact that no children reported with breathing issues may be correlated to future low asthma rates. We plan to revisit these 125 children in a future grade school study to measure pediatric conditions.

One consideration was if a medical doctor diagnosed the child with an earache. It was difficult to know if they truly had an earache(s) or if their Amish parents just suspected it without any medical diagnosis. If herbs and oils did not correct the problem, they would then take their child to a doctor. We based our earache data solely on medical diagnosis.

Taking the critical early neurological developmental skills as a whole, we postulated the results were outstanding. Every skill had a high percentage of "excellent" and "good" responses. In the weakest skills we postulated that the lower percentage of babies who crawled on their belly and crept hands and knees was partly due to the Amish culture.

Both male and female infants and toddlers wear restrictive clothing which make independent mobility cumbersome. We observed that many of these children became entangled in their clothing learning to crawl and creep, making it difficult for them to accomplish this skill. Many infants found other ways to be more mobile, such as rolling, scooting on their hindquarters, and being carried by siblings.

Without sufficient motor opportunity at these critical early stages, an overall lack of neurological development can occur. Crawling on the belly (birth to 6 month) organizes the pons. This part of the brain is responsible for sensory roles in hearing, equilibrium, and taste.

More pons functions are facial sensations such as touch and pain, as well as motor roles in eye movement, facial expressions, chewing, swallowing, sleep, arousal, bowel and bladder control, and the secretion of saliva and tears.[14, 15]

Creeping on hands and knees (7 months to 12 months) organizes the midbrain, which houses the thalamus (the relay station for all sensory data), basal ganglion, and the dopaminergic system.[16] The midbrain also supports the ability to develop coordinated movement, attention, sleep and awake cycles, and the convergence of vision.[16] We encouraged parents to give their children as much time as possible to crawl and creep to support the BBS/CFT/IDM sessions.[17]

We postulated that a correlation could be made with this model and optimal neurological function. As the craniosacral fascial system functions well in infancy, each child can have the best opportunity for her/his optimal neurological development. In a future grade school study we will also revisit the neurological development of this group.

The BBS results were excellent. We and other CFT/IDM practitioners took two years to completely develop this screening tool. We found that the Mexican experience reconfirmed its validity, and the results in this research only reinforced our positive conviction. We postulated that the BBS is an effective global screening tool for neonatal neurophysiology function.

Upon initial evaluation, we observed that the babies who scored a "7" or an "8" on the BBS were generally content and healthy babies. Their families brought them in for a checkup visit upon hearing that the BBS/CFT/IDM model would be a "good thing" to give their healthy child.

On the other hand, the babies who scored in the "0-3" range were visibly unhappy with one or more conditions present at the initial examination. Many were in extreme discomfort and screamed from the moment they arrived at our office.

The great majority of the fussy infants presented with zero-second brain and sacral cycles. When their cycles reached triple digits, they became significantly happier. The few happy babies in the research presented with high BBSs and brain and sacral cycles over 100 seconds.

This explains the benchmark 100-second brain and sacral cycles as optimal scores in the BBS. We postulated that the baby happiness factor was directly proportional to the BBS, the cycle measurements, and the function of the craniosacral fascial system.

In the last two sections of the phase two results we were pleased with the high percentage of happy and healthy babies. Some of the parents noted that their BBS/CFT/IDM model child was their healthiest and happiest child. We believe the percentage would have been higher if we counted the 207 mostly happy and healthy toddlers who did not return for the reevaluation visit.

## "Structural Immunity"

Of the 125 children who returned for their checkup visit, twenty-two specifically presented because of a major fall or trauma during the time after their last CFT/IDM treatment. The parents did not observe any specific resulting condition but were just eager if we could find any structural imbalances.

These checkup visits provided vital information about the effectiveness of the BBS/CFT/IDM model and how significant trauma affected the body's craniosacral fascial system. Could an infant body free of craniosacral fascial strain grow and withstand a significant trauma with little or no effects?

One child was struck with a baseball bat the evening before his checkup visit and developed a large goose egg on his left frontal bone. His mother noted that he barely cried after the incident and "bounced back" immediately as if nothing happened to him.

He presented to us the next day with a large bruise on his left forehead and darkness around a completely shut left eye. The child was happy and calm, and his BBS was an amazing perfect score of "8". He only had a little fascial strain directly at the injury site. We were astounded since this experience was totally unexpected. We wondered

whether having the BBS/CFT/IDM model as an infant or newborn could give a child “structural immunity”?

Further support came with another returning child who had a major accident three months prior. She sustained a fractured cranium and concussion with blood coming out of her ear after falling out of a barn onto a concrete floor. She was immediately evaluated and treated in a local hospital.

She remained overnight for observation and was released the next morning. The parents noted that she never had any symptoms. They could not keep her “quiet and inactive” as the medical team instructed during post-care instructions. “She simply felt good and wanted to play”, the parents stated.

On reevaluation we found her BBS was a perfect “8” with no negative effect on the motion of her brain and sacrum. In disbelief we expected to find significant strain from the trauma but only found a little at the fracture site and in the cervical area. Those patterns released quickly with CFT/IDM.

Twenty other children suffered from significant traumas with similar results at our checkup visit. Parents shared their stories noting how quickly they healed with no apparent lasting effects. When we reevaluated the rest of the 125 children, we were surprised to find after all of normal childhood bumps and falls, the great majority had no craniosacral fascial strain and all had maintained their triple-digit brain and sacral cycles from our original work.

We postulated that having the BBS/CFT/IDM model as soon as possible after birth to mitigate any craniosacral fascial strain could provide a form of “structural immunity” for children. They recovered from serious traumas with little or none of the side effects that may usually accompany an injury. Like vaccines provide bacterial or viral immunity from certain diseases, this model may provide “structural immunity” from the effects of many early childhood traumas.

We were at a total loss for a clear scientific explanation of this phenomenon. Maximizing the function of the craniosacral fascial system at the beginning of life may activate some internal structural integrity factor(s). We also do not know how long this "structural immunity" phenomenon lasts. Although the stories of twenty-two children do not make a scientific proof, we encourage further scientific research to study this fascinating effect.

## Infant Emotional Issues

As our research progressed over the years, we asked these two questions: Can the seeds of a lifetime of psychological despair possibly be sown from a difficult birth? Is it possible for a newborn to start his/her life with a clean slate of psychological health by removing the emotional effects of birth trauma? We explored the possibility of fetuses storing a lifetime of emotional pain in their craniosacral fascial systems.

EEG studies show well-developed fetal electrical activity in both cerebral hemispheres at 26 weeks.[18] The fetal nerve tracts carrying pain signals from the spinal cord to the lower center of the brain are almost fully developed at 35 to 37 weeks of gestation.[18] We often overlook that babies can experience emotional and physical pain during labor and delivery. The mothers' epidural anesthesia for vaginal deliveries or cesarean sections does not prevent fetal pain.

We postulated that some infants cried and screamed because of separation from their mothers (or fathers). Dr. James McKenna explains that infants are biologically designed to sense danger, such as being separated from their caregivers.[19] They can react by crying since they feel abandonment.[19] Their survival depends upon being in contact with their mothers' skin, smell, and protection.[19]

At the beginning of the research many infants cried the moment their mothers placed them on the treatment table prior to a practitioner even touching them. The babies instantly stopped crying the moment they returned to their mothers' arms. We later supported the infants'

emotional needs better by having the mothers hold their heads during CFT/IDM.

The babies then experienced four maternal sensations at once: feeling her hands and protection, seeing her face, smelling her scent, and hearing her voice. We also had frequent breaks to minimize separation time and maximize bonding time with the parents. They accepted that some crying/screaming from releasing physical and emotional strains was normal and safe.

Dr. Laura Markham states that crying, while in the presence of a parent's loving attention, releases cortisol, adrenaline, and other pent-up stress hormones.[20] This creates new connections to allow the prefrontal cortex (the beginnings of the thinking brain) to counteract alarms in the amygdala (a part of the emotional brain).[20] Newborns must develop this aspect of their nervous systems to more easily manage the stresses of life.[20]

Dr. Arthur Janov shows that every cell can hold the memory of fetal trauma.[21] A fetus or newborn can experience pain with a wide-open sensory window. S(he) cannot call a friend and talk, but can only internalize it or cry. The number of receptors, their synaptic strength, levels of neurotransmitters, and genetic structure of the central nervous system can permanently change from fear.[21] Reliving the memory can return the cells to normal function.[21]

Unwinding physically and venting emotions through crying and screaming can serve many positive roles during CFT/IDM. While the work supports the physical development of healthy nervous and immune systems, these releases may mitigate potentially long-lasting emotional issues.

Some of the infants expressed emotions during CFT/IDM from feeling pain/discomfort in their bodies. Colicky infants were already in chronic pain with tight abdominal and pelvic areas. The natural

expectation was that these infants expressed their discomfort during therapy by continuing to cry and scream.

While hearing their babies' cry was difficult for some parents, it was their infants' only way to communicate their emotions. Since they did not possess adult social filters, they let everyone know what was truly happening inside of them. Parents saw that these releases were brief but healing. We postulated that since all of the babies were so happy at the end of our care, this model must have released many, if not all, of their emotional issues.

If done minutes after birth, this model may minimize the drama. Many newborns have an incredibly gentle and peaceful experience. Some sleep through it, while others stretch fluidly as if still floating in the womb. This hypnotic-like state may be a result of transitioning from a fluid to an atmospheric environment. We believe that birth is the perfect window of opportunity to provide and receive this work.

Since this model can be done on the mothers' chest at birth, the fear of separation may be lessened. The frequency of CFT/IDM sessions in the first days of life varies with each baby. Since they experienced their own unique physical and emotional traumas, they tell the carefully "listening" providers their stories as to when they need therapy and when they need to process and rest. By driving their own movement to free their bodies, they control their own healing.

A crying newborn may also just be over stimulated and need to release the stresses of being alive in an overwhelming world. By giving him/her the safety to express these emotions, we are allowing him/her to be heard. A mother's support offers what is really needed the most in distress: a compassionate witness.

Fetal craniosacral fascial strains can release quicker at birth before they lock into the body's tissues. As the body compensates, adapts, and ages with the strain patterns, more CFT/IDM sessions may be required.

We postulated that our research results would have been even more effective if this model had been done at birth rather than during infancy.

Educating families and providers about the emotional issues around birth is a critical factor in patient care. We postulate that future research will show that the BBS/CFT/IDM model can be an effective modality to help alleviate emotional birth trauma.

## Breastfeeding Issues

We found that breastfeeding issues varied with each baby. Some babies had difficulty latching on or staying latched on, and others had difficulty in one or more phases of the sucking/breathing/swallowing mechanism. A baby must have complete control of this mechanism to thrive.

Some babies had clamping and/or too strong of suck conditions, which caused nipple pain for the mother. Some babies had a weak latch, which created inconsistent breastfeeding and trouble gaining weight.

A few mothers used nipple shields for their baby to breastfeed. Some professionals told them that they had nipple incompatibility with their babies and encouraged them to use the nipple shields to correct the problem. After the BBS/CFT/IDM model work, these babies breastfed comfortably without them.

Other babies had more involved structural problems. Since a baby's face crosses the inside of the mother's sacrum and coccyx during delivery, fascial strain can occur in the face, temporomandibular joints (TMJs), mandible, hyoid, and other areas of the throat. We postulated that the trauma/strain was greater if the mother's restricted fascia did not naturally extend her coccyx during delivery.

We found that our specialized oral and throat techniques were effective in resolving these problems. The intraoral ones included the TMJs, hard palate, soft palate, base of the tongue, floor of the mouth,

and middle of the tongue. The throat techniques included the larynx, hyoid, and the area between the mastoid process and mandible.

We also helped release pelvic and cervical craniosacral fascial strain to relax the baby during breastfeeding. We found that strain caused imbalances in the sacrum, spine, shoulder girdle, and cranial bones, as well causing muscular spasms in the cervical tissues. We found that birth strain can also impair swallowing by causing pressure on cranial nerves IX, X, XI, and XII. When these areas started to release, some babies immediately breastfed more comfortably.

We found that about half of the research babies had a TMJ issue. We postulated that jaw pain was a major factor in difficult breastfeeding. Barry Gillespie started his career as a TMJ/periodontist in 1975. Little did he know that 40 years later he would discover that the roots of his original TMJ specialty are found at birth.

We also discovered that the infant maxillary bones could surprisingly spread within minutes from a narrow, V-shape palate to a wider, flatter palate. We postulated that these findings would have a large impact on the orthodontic and speech professions.

At birth the cranial plates are soft and easily moveable cartilaginous and intramembraneous tissues. By one year of age the cranium almost completely ossifies and becomes more difficult to reshape. At five years of age the smooth rounded edges of the bones start to form the defining saw-tooth sutures of adulthood. At this point the cranium becomes more unchangeable in shape.

Thus, birth truly offers a unique corrective window of structural opportunity with the BBS/CFT/IDM model. The medical golden hour concept applies directly where the birth traumas are identified and mitigated with corrective work as soon as possible.

These techniques also corrected the sucking/breathing/swallowing mechanism. Although some babies required three or more treatments to fully resolve their breastfeeding issues, most nursed comfortably within

minutes after their first session. We followed the strain patterns down into the pelvis for most of the babies during the later sessions. All babies who received this model were completely relieved of their breastfeeding difficulties.

These convincing results strongly suggested that the baby's and not the mother's physical structures caused the breastfeeding issues. This model not only corrected the infant's physical breastfeeding problems but also emotionally freed the mothers of the stress of feeling inadequate to feed their babies. We postulated that these findings would be monumental for the lactation profession.

At the one-year checkup visit, we noted that 17 babies had a recurrence of breastfeeding related issues. After discussing the symptoms with the parents, we noted that the return of the problems showed up at around four to six months of age, when most infants began the teething process. We correlated that those breastfeeding issues were probably not linked to any structural imbalances. Most breastfed through the teething process and continued successfully until weaned.

## Colic

Colic is crying in a baby that lasts for longer than three hours a day and is not caused by a medical problem.[22]

We found that the BBS/CFT/IDM model was completely effective in correcting infants with colic. We encouraged parents to bring in their infants weekly since colic required many treatments to fully resolve. Each colicky baby had similar patterns of fascial strain in her/his sacrum, pelvic girdle, psoas muscles, and intestinal fascial web.

Sometimes the fascial strain was located in the umbilicus and spread throughout the abdominal cavity. We postulated that these babies had a short umbilical cord or a stretched cord wrapped around the neck or body. Because fascial tightness can cause twisting and pulling on any structure, we postulated that restriction directly affected the intestinal

fascia, the mesentery, and the fascial matrix holding the intestines in three-dimensional space.

We found that the healing process of colic was an “up and down” progression. The infant had times of improvement followed by times of regression. In most cases for unknown reason(s), a complete resolution of colicky symptoms occurred immediately after an episode of difficult regression.

Parents were encouraged to remain patient through this process and commit to ongoing treatment. We found that all babies were completely relieved of colic with an average of four treatments. Those babies who had a return of colicky symptoms seemed to have a dietary sensitivity with the introduction of solid foods. Since no strain was present in any areas of the body, any colicky symptoms had to be coming from another source.

## Gas

Gas is common in infancy and generally caused by swallowing air, feeding from the breast or bottle, sucking a pacifier, and/or crying.[23]

In our approach we found many factors caused gas. Many babies had craniosacral fascial strain throughout their abdominal cavity, twisting or compressing the stomach. Other babies had strain located under the diaphragm or around the esophageal sphincter, which trapped air and created pressure.

We also found that an improper latch while nursing could create gas. We postulated that the infant swallowed more air, resulting in excess gas. After we helped to release the causative strain, the parents noted that the gas dissipated.

The babies who continued to struggle with gas after therapy found further relief with dietary modifications. Since dairy farming was prevalent within our research families, many infants consumed large quantities of dairy products from mother’s milk. We observed continued

improvement from the mothers who chose to eliminate all dairy foods from their diet.

## Constipation

No medical harm occurs if stools stay in the body for a long time.[24] How often a baby has bowel movements does not really define true constipation. If a baby has soft, easy-to-pass stools every 4-5 days, he/she is probably in good health. If he/she has a hard time making bowel movements, has hard stools, has bloody or black stools, seems uncomfortable, or doesn't have a movement at least once every five days, you should talk to your doctor.[24]

We found that those babies who struggled with constipation also had fascial strain patterns interwoven throughout the pelvis, intestines, and umbilicus. Upon release of these strains, we found that all babies made improvement.

In theory, craniosacral fascial strain may inhibit the normal peristaltic movement of the gastrointestinal tract. We heard a wide variety of professional opinions about the “normal” frequency of infant bowel movements. Even once a week was considered normal. We found that our successfully treated infants had at least one bowel movement per day.

The remaining constipated babies seemed to have a dietary sensitivity. We observed that when a few mothers chose to remove all dairy products from their own diet, the infant’s constipation disappeared completely.

## Reflux/Gagging/Vomiting

Any factor that causes the muscular valve between the stomach and esophagus (the lower esophageal sphincter or LES) to relax, or any factor that increases the pressure below the LES, can cause gastroesophageal reflux disease.[25]

We found that reflux/gagging/vomiting was a correctable problem with the BBS/CFT/IDM model. Since the craniosacral fascial strain was throughout the entire digestive tract, this issue was almost always the last condition to resolve in therapy. In most cases we traced the strain from the pelvis into the stomach, up through the diaphragm, into the esophagus and throat, and finally ending in the soft and hard palates.

After a trauma, fascia can twist and spread strain like a sweater-pull through the entire digestive tract. We discovered that treatment was most effective if we started with the pelvis and abdominal areas. We found that fascia needed to release in the larger pelvic structures before it effectively released in the smaller throat and oral structures.

Later in the research project, we discovered a technique that released craniosacral fascial strain effectively in the shoulder girdles. This eliminated the need to do any oral/neck techniques on the majority of infants. We found that in many cases strain started in the shoulders and traced into the throat and ascended into the oral cavity. At other times the strain would start in the pelvis, pull through the trunk into the shoulders, and continue into the neck, jaw, and head.

Since a CFT/IDM treatment can take the body two weeks to process, we followed up the babies after the elimination of the soft and hard palatal strain a few weeks later. Two hundred and seven babies had completely resolved their reflux/gagging/vomiting issues while the remaining babies improving considerably.

These other children seemed to be symptomatic due to dietary sensitivities as their doctor/midwife suggested. Those mothers who chose to make modifications in dairy consumption saw complete resolution.

## Arching

We found that arching is abnormal physiologic behavior. This extension craniosacral fascial strain pattern usually pulled between the occiput and the sacrum, causing the babies to bend their bodies into a

backbend or “arch”. This strain was an extremely dominant pattern in the infant’s body. As an important clinical note, we needed to help the body fully release this arching pattern before we could address the strain patterns causing the other conditions.

Arching babies were extremely unhappy because they could not relax their bodies to be held or lay down flat. Almost all had colic, reflux, gas, and breastfeeding difficulties, which added to their discomfort. We found the BBS/CFT/IDM model was successful with completely eliminating back arching. We noted 29 babies (17%) needed follow-up treatments for the return of mild arching.

These babies may have been more susceptible to tightening in their cervical and back areas from normal “bumps and falls”. Also more fetal craniosacral fascial strain patterns from the occiput to the sacrum may have been presenting.

We discovered that many traumas over the fetal experience created an onion-like effect for many infants. We could not correct all of the layers at once. We postulated that each trauma released as an onion layer in its own space and time during the healing process.[3]

When we extrapolated this arching knowledge to adults/children, many patients appeared to retrace into their infant arching patterns. This observation implies that people do not “outgrow” their craniosacral fascial strain patterns. The philosophy that “the arching happened so long ago that it does not matter now” does not seem to hold truth.

We also postulated that the craniosacral fascial system could hold its strain patterns from conception. For complete healing the craniosacral fascial strain onion needs to be peeled and released back to that time.

Interestingly, we noted from some mothers that several of their other children displayed the same arching problem as infants. We wondered if a structural tightness generating within the mother’s pelvis caused this particular arching strain pattern. We postulated that we could

possibly prevent this problem by treating mothers with CFT prior to conception.

## Strabismus

Strabismus, also known as crossed eyes or walleyes, is a condition in which the eyes are not aligned or they don't look towards an object together. One of the eyes may look in or out, or turn up or down. The eye turning away can occur all of the time or only sometimes, such as during stressful situations or illness.[26]

We found the BBS/CFT/IDM model was effective in resolving strabismus. The parents related that their babies' eyes were more aligned, focused, and brighter.

During the course of treatment, most babies with strabismus had strain starting in the shoulder girdle, extending up into the cervical area, intertwining through the cranium, and ending in the musculature around the eyes. The superior, inferior, medial, and lateral rectus and superior and inferior oblique muscles that move each eye exist in an intertwined fascial matrix. Upon release of this general craniosacral fascial strain pattern, we postulated that all of these eye muscles relaxed, and the eyeball(s) returned to a normally aligned position.

We noted that 65 percent of the children were still free of strabismus at their checkup visit. This model was successful at minimizing the severity of the condition for the remaining infants. Some may also have had a genetic issue or brain injury unrelated to any structural problems.

For future research we questioned if this model could prevent myopia in childhood? Could it also help to prevent glaucoma as an adult?

## A Pleasant Surprise

Prior to the start of our research, we identified the most common infant conditions in the general population that could possibly be correctable with the BBS/CFT/IDM model. During our investigation, we discovered that smaller but significant groups of infants with stridor and pyloric stenosis also corrected with this model.

Since these patients may require non-emergency surgery, the medical standard of care dictates that the most conservative therapy be used first. If this model is not successful for these patients, then surgery may be the next best option. Larger groups of stridor and pyloric stenosis patients are needed for future research.

## Stridor

Stridor is an abnormal, high-pitched, musical breathing sound caused by a blockage in the throat or voice box (larynx). It is usually heard when taking in a breath.[27]

We became aware of stridor after a medical doctor diagnosed one of our infants. As an archer, he was a discontented baby. We noted the high-pitched crowing sound during his first treatment.

After helping to eliminate his arching strain pattern, we investigated the craniosacral fascial strain deeper in his throat. When we helped release the fascial tightness in and around his trachea, larynx, and hyoid structures, his breathing returned to normal.

We observed and documented four other stridor infants with the same fascial tightness in the larynx, trachea, and hyoid structures. These infants responded to the BBS/CFT/IDM model with complete healing. All five were permanently corrected of stridor.

## Pyloric Stenosis

Normally, food passes easily from the stomach into the first part of the small intestine through the pyloric sphincter. With pyloric stenosis, the muscles of this sphincter are thickened, preventing the stomach from emptying into the small intestine.[28]

Doctors discussed the need for surgery with the parents for our first infant with pyloric stenosis. She had projectile vomiting many times a day and was obviously distressed. The parents decided to try the BBS/CFT/IDM model before surgery.

During the first treatment, we immediately noticed extreme fascial tightness throughout her stomach, along with hard knots of abdominal tissue. When we helped loosen the fascia in the abdominal cavity, the family noted some improvement with the baby's comfort level and a slight improvement with the amount of projectile vomiting.

At the second treatment visit, we palpated a distinctly softer strain in the stomach. We focused on the craniosacral fascial strain pulling directly around the pyloric sphincter. When the infant returned two weeks later, the parents reported that the vomiting was only two times a week in a non-projectile manner. We continued to help release the strain in the stomach and pyloric areas.

We also found a strain pattern traversing from the stomach up into the upper neck where the vagus (X) nerves descended from the jugular foramens. Because pressure on the vagus nerves can cause digestive system disorders, we postulated that CFT/IDM was extremely significant for the healing of this baby.

At the infant's fourth treatment the parents reported that the vomiting had completely disappeared. The family was extremely happy and thankful that this model eliminated the pyloric stenosis with safe, gentle, and noninvasive techniques. They were especially grateful to avoid surgery for their infant.

During the research, we saw five more cases of infants with pyloric stenosis. Each one exhibited the same symptoms, and we discovered the same areas of craniosacral fascial tightness in every one. Some had a brief aggravation of symptoms during the course of treatment just prior to complete resolution.

The parents understood that this temporary situation was a normal part of the healing process. All six cases resolved completely with the elimination of all symptoms with this model. All six infants had permanent pyloric stenosis correction.

## Final Comments

When the word spread in the community about the effectiveness and safety of the BBS/CFT/IDM model, many families were eager to have their other children receive this work. Some were so pleased with the results that they brought their next born child in immediately after birth. The research was extremely successful because the entire community embraced the safety and effectiveness of this model.

Because the work involved gentle hands-on treatment and close proximity between provider, mother, and baby, we built a strong network of trust within the Amish community. Initially, families wondered if the work would be effective for their fussy babies. As the positive results unfolded, every family expected a “happy baby” at the end of our care. They knew us simply as “the happy baby people”.

We discovered that if a baby is happy, mom and the rest of the family are happy too. We postulated that the results in this microcosm could be extrapolated to the global community. Our primary goal is to free newborns from a lifetime of suffering due to birth trauma. Let’s have a happier and more peaceful planet.

# Summary

This pilot study explores the safety and effectiveness of the BBS/CFT/IDM model for infants with specific conditions.

We found that this model was safe and effective in correcting a significant number of infants with colic, reflux/gagging/vomiting, breastfeeding issues, arching, gas, constipation, strabismus, stridor, and pyloric stenosis. We discovered that it permanently corrected these conditions for the majority of children and resulted in their positive neurological development as happy and healthy toddlers.

We believe that we have created a platform that will dramatically transform global health care. Since birth trauma causes specific infant conditions, we postulate that this model will not only prevent them at birth, but will also optimize neurological function resulting in happy and healthy toddlers. We believe that people do not necessarily have to endure a lifetime of suffering because they had a difficult birth.

We believe that this approach will redefine the global "normal and healthy" standard of infant care. We strongly encourage hospital researchers to investigate all the possibilities that this model has to offer the newborns of the world. More sophisticated clinical research methods and statistical analyses can demonstrate a clearer correlation between this model and infant healing.

We will follow-up our group of 125 children at school age to check for asthma, allergy, headache, learning disorders, bedwetting, and other specific childhood conditions. We thank all of the people associated with this research. Without your trust and support, none of this would have been possible. We are extremely grateful.

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