

# Lærebog i Kranio-Sakral Terapi

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# More babies are having deformed head.

## KAPITEL 29

More babies are having deformed head because they're lying on their backs.

This is a serious problem affecting a large percentage of children, born after 1993.

In august 2010 there was an interesting report on television in the news on DR, TV-Avisen. It was told that an increasing number of parents are taking their child to the hospital, because they noticed, that the child had a flat back of the head. The Univercity Hospital in Århus confirms the increasing number and explains that a baby must change its position to avoid a flat back of the head. They claims that it's only a cosmetic problem and that it isn't a problem for this group of children.

(You can see the clip if you go into this link: <http://www.dr.dk/nettv/update/?video=%7B3c9b3ee5-02f4-4f97-9c88-f656fed9a51b%7D>)

But a scientific study tells about the negative effect of having babies lying on their backs. The consequences can be serious. But the most important is that the soft treatment of Cranio-Sacral-Therapy can give good results.



*Normal head shapes have changed with the transition to supine sleep positioning. Positional plagiocephaly (flat back of the head) has increased 5- to 6-fold with an associated increase in torticollis as well. (Torticollis is a condition caused by tension in the neck where the head turns to one side).*



*Developmental delay in school-aged children was evaluated by a craniofacial center using a retrospective medical record review in infants who presented with deformational plagiocephaly without obvious signs of developmental delay. Families reported that 39.7% of subjects with persistent plagiocephaly had development and learning problems and received special help in primary school as compared to 7.7% of siblings.*

(You can read the entire scientific article in full if you sign into <http://www.medscape.com/viewarticle/520047>). Medscape is a service that published peer-reviewed scientific articles. Medscape is a free service.)

## The consequences

In 1991, The Health Board in Denmark advised parents to make sure that babies slept on their back in order to reduce the risks of crib death. This same suggestion was made at the same time in many other countries as well.

At first glance, we can say that it was a success. In Denmark with the number of crib deaths fell from 160 a year to twenty. However, as an unexpected consequence of this practice, many babies developed a deformed head – a flat back of the head. The flat back of the head does not get better for many of these children. One consequence of this is that the group of children with a flat back of the head, has a much higher need for special help in school. This was noted over the last few years by some of the hospitals and a few physical therapists in Denmark.

There has also been a large, well documented scientific study of the negative effects of having babies lying on their backs. And their conclusion was that it is a serious problem. The survey reported that;

Sometimes, the back of the head is pushed forward and the back of the head is pushed up as we see in the picture.



Until now, there has been no linking of any of these developmental, learning and behavioral problems to the physical structure of the body. Therefore, there are no treatments for these issues within the regular medical community.

In Denmark, we wonder why there are so many children needing special education for learning disabilities and behavioral problems. We also wonder about the explosion of the number of children with a diagnosis of autism, ADHD,

and other conditions of the autistic spectrum. Could it be that there are 5-6 times the number of children with flat backs of the head? These children have 6 times as much learning and developmental problems as with children with normally shaped heads. There are also more and more children on the waiting lists to be treated by a psychologist.

There is a huge economic cost for educating children with learning difficulties. The results are not good compared with normal children. The parents worry. What will become of these children when they cannot qualify for good jobs in a country where there are fewer and fewer jobs for unskilled workers?

### **My experiences treating babies with flat back of the head**

It is possible to reshape the head with special techniques from manual therapy. I work with a form of manual therapy, biomechanical kranio-sacral terapi, which makes it possible to reshape the backs of the head for many of these children. I usually have 3-4 babies a week as part of my general practice.

I get more and more parents bringing their children in because of the deformation of the back of their heads. In our school in our course KST III+, we learn how to analyze the shape of the head and then exactly which sutures to work on.

Some of us working with biomechanical cranio-sacral therapy have been getting good results from improving the shape of the head of children. We believe that when the cranium has a better shape outside, it can help the flow of blood to and from the brain. The cranial sutures are the joints between the cranial bones. In many cases, improving the shape of the head and freeing up tensions in the alignment of the vertebrae of the neck has resulted in a major improvement in behavior, learning ability and social behavior.

“Biomechanical Cranio-Sacral Therapy is one of several different forms of Cranio-Sacral. What is unique about biomechanical Cranio-Sacral Therapy is that the therapist focuses on releasing the individual sutures of the cranium. A suture is the meeting place between two bones of the cranium. To be effective in improving the shape of the heads, my experience is that the work to release the sutures is the quickest, most effective way of getting the job done.



On the drawing, you can see the bones of the cranium of a baby. You can see that there is apace between the individual

bones. There is a tough connective tissue that holds the bones together in relation to each other.

We can liken the head of the baby to a water balloon. Inside, it is filled with cerebrospinal fluid. The brain floats in this fluid. The surface of this balloon has some plates of soft bone that can move in relationship to each other.

It is easy to deform the shape of the infant's head. In fact, this possibility to deform the shape of the baby's head made it possible for the baby's large head to fold somewhat together so that it could be smaller to make it easier to come through the narrow, twisting birth canal.

Many parents notice right after birth, that their baby's head looks strange. Usually, after a few days, these deformities from birth are smoothed out. The “water balloon” tends to exert equal pressure on all surfaces. The best way to keep this natural, round shape would be if the baby was in different positions, for example lying on its stomach when it was awake and was carried in the arms of a parent or in a sling which is done traditionally in many poor countries.

However, if the baby lies on their back too much of the time, the water balloon is in the same shape. The back of the head becomes more flat and the head as a whole takes on a wider shape. After a period of time, what should have been a short term deformity becomes the pattern. The cranium deforms, the connective tissue between the bones stiffens, and the bones grow to their new shape as the cranium develops. What started out as a short term deformation becomes fixed. The bones themselves grow into the shapes of the deformity.

On the right is an extreme case.



The problem with the children with flat backs of the head is that their deformity is extreme. In the study of Cranio-Sacral Osteopathy, we believe that of the shape of the head is important to the circulation of fluids to bring nourishment to the cells of the brain and the spinal cord and to carry away waste products.

The bones of the cranium have an intimate connection to the circulation of blood to and from the brain. The veins (called sinuses) return the blood from the head back to the heart. These veins are embedded in the connective tissue that is connected to the inside surfaces of the bones of the cranium. The jugular veins return 90% of the blood from the brain to the heart. These veins pass through a small opening between

two bones of the cranium: the temporal bones and the occiput. We believe that a misshapen head can reduce the flow of blood in these veins.

Also a deformation of the bones of the head can put a pressure on the arteries that supply blood to the brain as well as to a deformation of the cranium can be likened putting a bend in a garden hose cutting down on the flow of water. All of the nerves from the brain exit through holes in the bones. Although some of the holes are in a single bone, most of these passages for the nerves are in openings in a suture, in other words in an opening between two cranial bones.

Many of the bones of the cranium have muscle attachments from muscles of the neck. Bone tissue develops where there is space to grow and also where there is muscle tension pulling on the bone and stimulating the thickening of the bone.

When we send an astronaut out into space, the calcium goes out of their bones because of a lack of usual earthly physical strain of working against the force of gravity and the muscle tension pulling on the bones. Astronauts returning from space suffer from osteoporosis, bone density loss, in their entire skeletal system.

When we use our bodies, our bones and muscles become stronger. I recently looked at a scanning of a friend of mine from a medical examination. He had been a frogman in the Navy in his younger days. As an adult, he worked some of the time as a bricklayer. The bones of his spine and hip were significantly stronger than the average person of his age.

The worst that we can do for our skeletal system is to be immobilized, for example to sit. We have more and more become a sitting culture – we sit in school, we sit in the car, train or bus, we sit at the dinner table, we sit in front of the television, we sit at a desk in front of a computer. The calcium goes out of our bones from the lack of tension from the muscles. This inactivity is one of the reasons that so many women develop osteoporosis at a relatively early age.

To have not only strong bones of the cranium, but also to have the proper bone growth and to have optimal shape of the individual bones, it is important for the baby to be able to move its head as freely as possible and as much as possible. Although I do my best with these babies with flat back of the heads and can make progress with them, it is heart breaking for me to see a young child that is behind in its motor development or does not have the strength to stand on its own legs or to hold its head up, or to coordinate the movements of its eyes and head.

Recently, I have also been inspired by Tom Myers. He wrote a book, "Anatomy Trains". He presents an interesting interpretation of the way that muscles of the body are organized into "lines" where one muscle. Two of these lines of muscles go from the tips of the toes all the way to the bones of the cranium.

In my sessions, I ask the parents to move the toes and foot of the baby in specific directions. This allows me to free up the connective tissue which had become stuck to the bones of the skull. Moving the feet or legs makes my work with the sutures even more effective.

We treat children and babies in our clinics in Silkeborg and in Copenhagen and we are training our anbefalede Cranio-Sacral Therapists in the same form of treatment which combines KST and connective tissue release. So as a therapy form, Cranio-Sacral Therapy is not "evidence based", but for the parents who have been to our clinic and tell other parents, it is "success-based".

Given the amount of money spent by the government on special education and children in the autistic spectrum, it might be interesting to go from the anecdotal report of our success in individual cases to a more complete research study in an evidence based investigation of the positive effects of bio-mechanical Cranio-Sacral Therapy on improving the shape of the head and its positive effects on developmental problems. It could save the society lots of money – and save the children from a life that is less than optimal quality and save the parents from the anguish for the future of their child.

There has not been the interest or financial resources to test the positive effects of biomechanical Cranio-Sacral Therapy on helping children with flat backs of the head or with learning disabilities. There are many parents who try Cranio-Sacral Therapy and have had good results for their children.

In Denmark, Medical doctors are not generally aware of the possibilities in cranio-sacral therapy. It is generally unknown that Cranio-Sacral Therapy has its origins in the American medical tradition of osteopathy.

## Prevention

Since posterior plagiocephaly is caused by there being too much pressure being put on one part of your infant's head, you can often prevent it from occurring by alternating the positions that your stays in. This does not mean that you should stop putting your child to sleep on their backs when they sleep. You can alternate your child's head position from one side to the other for a period of time as he/she sleeps.

Spending more time on his stomach (prone position) in 'tummy time' when he is awake and being supervised is also a good idea. Try to avoid letting your infant spend a lot of time in the same position on his back when he is awake. This means not leaving your infant lying on its back in a car seat because this is more convenient for you allowing you to do other things. An infant sling or wrap can be a better alternative. They put less pressure on the back of your child's head and its head to make it easy to look around.

In addition to avoiding a flat back of the head, it also helps the baby in its psychomotor development. The first and most

important movement for a baby is to lie on its stomach and to lift its head. Then the next movement is to use its arms to lift its shoulder to make it easy to turn the head to look around. The development of movement is necessary for the development of the intellect. A baby lying on its back cannot easily lift its head and orient its gaze in space.

Improvement in the shape of the child's head can occur over a 2-3 month period, especially if the child had biomechanical cranio-sacral therapy.

## Newborn's physical development in generally

At last, there has come some official recognition of the problem linking it to the recommendation of the Health Board that babies lie on the back when sleeping to avoid crib death. I will not say that this recommendation is wrong. It states that the babies should lie on their backs when sleeping. Otherwise they should be in different positions. Unfortunately, many parents have left their baby lying on their back not only when they are sleeping but all the time. The babies have been left to lie on their backs in their cribs or in plastic car seats.

All babies thrive on close physical, bodily contact with the parent. They can feel the warmth of the parent's body, their breathing, and follow the surrounding environment. It is common in poor countries for the mother to have the baby in a cloth strapped to her chest or back.

In our modern society, we reduce this close contact. We leave the baby to sleep alone in a crib. The baby is often left to sleep in its own bed in its own room. We separate the baby from a physical contact with the parents which is important for its development, not only physically, but also emotionally. If the baby lies on its back for long periods when it is awake, problems develop. Often, lying on their backs results in a deformation of the cranium. Typically, the back of their head is flat. Usually, it slopes diagonally.

The most important movements for a baby are to learn to turn its head to look and listen to what is going on nearby. These movements are easiest if the baby can lie on its stomach and lift its head.

In primitive cultures, mothers often go with the baby tied in a piece of cloth. The baby not only has close bodily contact with the mother, but they also have their head up and supported. The baby has the maximum mobility of the head with the least physical effort. Lifting their head is also necessary for the baby to develop a strong back, to prepare it to crawl and to prepare it to learn to walk.

When the baby is lying on its back there is a tendency for it to lie passively. It does not develop the muscular strength

from lifting and turning its head. The baby does not develop the coordination which comes from moving their head and focusing their eyes.

There is a tendency for babies, who spend too much time on their back, when they are awake to be weak in their muscles, to have a hard time holding their head up. They often have a hard time focusing their attention. They fall into an introverted state with minimal contact to the world around them. For me, it is frightening to see some of these children with extremely flat backs of the head in my clinic.

Some of them lack the basic reflexes and the strength to stand on their own two legs.

## Our background and knowledge as Cranio-Sacral-Therapists

We have some very effective general techniques from our teacher, Alain Gehin from France as well as a series of specific techniques for children, that he has taught throughout the years. We have had additional work on the reshaping the head of babies on courses with Benjamin Shield from California.

The latest set of tools comes from an understanding of the muscular-fascial system described by Tom Meyers in his best-selling book, "Anatomy Trains".

An English chiropractor, John Howath, in his book, "Sacral Occipital Technique", presented an astute way of looking at the shape of the head of the baby (or adult) and indicating the specific sutures of the cranium that need to be released depending on the shape of the cranium.

In my clinical practice, I use Howath's approach for diagnosis together with specific biomechanical Cranio-Sacral techniques from Alain Gehin to free the individual sutures. Here are a series of drawings of the various forms of deformity of the cranium. Everyone has a deformity to a greater or lesser degree. No one is symmetrical or "perfect".

## Tips to other Cranio-Sakral-Therapist

It is not hard to diagnosis or recognize positional plagiocephaly, which is also called posterior or deformational plagiocephaly. It is usually first noticed when an infant is about 2-3 months old.

These children will have flattening to one side of the back of their head and they will also have a compensatory bulging of their forehead on the same side. Their ear will also likely be pushed forward on that same side of their head. Keep in mind that it is easier to see all of these changes when looking at a child's head from above.

### Evaluating Infant Head Shape

1. View the infant's passive position in the supine, prone, and supported sitting positions. Evaluate for the direction that

the head is preferentially turning. Note tilt of head to 1 side. Head tilt may be most evident when observing the infant from the back. Infants < 3 to 4 months corrected gestational age cannot developmentally maintain their head in midline; however, they should be able to move their head from side to side easily.

2. View the infant's head from above. Note the position of the ears and the shape of the forehead. In deformational asymmetric plagiocephaly, the back and front of the head shift forward to 1 side, and the ear position on the same side is shifted in the same direction. Evaluate the degree of occipital flattening.

3. Observe the "bald spot" on the occiput. If it is symmetrical and centered, a side preference is probably not present. If the bald spot is displaced to either side on the occiput, a side preference is present.

4. Test the infant's active turning range of motion in supine, prone, and supported sitting positions by moving a toy or other visually interesting object from midline to each side. Note the ease of head rotation as well as the degree of turning.

5. Test the infant's passive turning by gently rotating the head from side to side in all positions, evaluating for muscular resistance to turning. The infant may also verbally protest when you turn the head from the position of comfort.

6. Test the infant's SCM tightness by passively tilting the ear to the shoulder on each side and evaluating for muscular resistance to tilting. Again, the infant may verbally protest when you tilt the head away from the tightened SCM. Inspect and palpate the neck for thickening or tightness of the SCM. Inspect the neck folds for skin breakdown or excessive accumulation of material. Persistent SCM muscle tightness or head preference make the neck folds more difficult to clean on the affected side.

*You can see more about me and our work at [www.stanleyrosenberg.com](http://www.stanleyrosenberg.com).*

Århus, den 18.11.2010

*Beskrivelse af Majas forløb hos Stanley Rosenberg.*

*Vi har siden februar 2010 gået til behandling hos Stanley Rosenberg med min datter, Maja, der er født med det, der betegnes som en venstresidig torticollis. Allerede ved fødslen havde Maja en klar favoritside og der var stor asymmetri imellem højre og venstre side af hendes kranium. Dette formodes at være forårsaget af en skæv lejring under fostertilstanden og det, at Maja blev taget med sugekop under fødslen, har sandsynligvis yderligere forværret skævheden af hendes kranium. Majas stramme venstre halsmuskel bevirkede at hun de første måneder af sit liv næsten kun kiggede til højre. Dette gav problemer med hendes søvn og trivsel og kun i nogle tilfælde - og med stort besvær - lykkedes det at få hende til at ligge ved højre bryst, da hun her skulle have hovedet drejet mod venstre.*

*Siden Maja var ca. 1 måned gammel har vi gået til behandling med hende hos en kiropraktor og da Maja var ca. 2 måneder gammel, startede vi et forløb hos en fysioterapeut, der kunne vise os nogle øvelser, som vi sammen med Maja skulle udføre dagligt. Øvelserne gik ud på at løsne hendes stramme halsmuskel og på at stimulere hende til også at se til venstre. Begge behandlinger havde helt klart haft en positiv effekt på Maja, men vi syntes alligevel ikke, at Maja var i stand til at slappe helt af, når hun blev lagt ned, og hun skreg meget, når hun blev lagt i en kile, der skulle "tvinge" hende til at dreje hovedet til venstre. Da det var besværligt at lejre hende, var vi bange for, at hendes kranium med tiden ville blive endnu mere skævt og at det yderligere ville forværre hendes tilstand. Vi vidste også, at man i nogle tilfælde foretog operation i forbindelse med en meget stram halsmuskel og ville gøre alt i forsøg på at få smidiggjort musklen og dermed undgå en operation. Vi startede derfor i behandling hos Stanley Rosenberg, da Maja var ca. 4 måneder gammel.*

*Vi har siden været vidne til at Majas hovedform efter behandlingerne er blevet mere harmonisk. Udover at have haft en meget positiv effekt på formningen af hendes kranium, har behandlingen hos Stanley Rosenberg også haft den effekt, at hendes muskler i højere grad har kunnet være afslappede, og at hun dermed med langt mindre besvær har kunnet dreje hovedet mod venstre. Indtil videre ser Maja ud til at følge en alderssvarende udvikling og efter at hun i højere grad bevæger sig rundt og dermed får brugt sine ryg, nakke og halsmuskler, mærker hun tilsyneladende ikke længere meget til den stramme halsmuskel. Vi går dog stadig til opfølgingsbehandlinger hos Stanley for at sikre os at vi fortsætter med - på bedst mulig vis - at understøtte den positive udvikling, som Maja er i gang med. Vi er meget glade og taknemlige for at mange af Majas gener har kunnet afhjælpes gennem kranio-sakral terapi. I tillæg hertil, sætter jeg selv stor pris at nogle af de gener jeg selv har haft i ryg, lænd og bækken efter en svær fødsel også har kunnet afhjælpes gennem kranio-sakral behandling hos Stanley Rosenberg.*

*Med venlig hilsen Majas mor.*