

# Mandatory cuddle hormones -

## MUTUAL CHILD MASSAGE IN SCHOOLS

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translated by the author ([jsmits@prize.nl](mailto:jsmits@prize.nl)) from “Verplichte knuffelhormonen” in Skepter, edition 21-2, 29 May 2009. Skepter is the magazine of Skepsis, the Dutch Foundation of Skeptics, [www.skepsis.nl](http://www.skepsis.nl). All rights reserved. Posting on websites allowed only with expressed permission.

### Summary

Thousands of children in the Netherlands are occupied at school with a method of mutual child massage developed by Touching Child Care, a company from Helmond (NL). It can be inferred:

- it is an alternative medical psychological treatment, aimed at behaviour change by means of stimulation of hormones, through massage;
- it is without apparent necessity;
- there is no (full) (ortho)pedagogue, registered psychologist, or (child) doctor is involved;
- the age at which children decide themselves about their own body is lowered to the age of 4;
- there are schools which deny parents control over participation, or intend to do so;
- group pressure plays a role, and/or coercion from the school;
- there is a chance bullying will increase;
- possibly schools, children, and staff are not insured for liability;
- experts currently advise against application of the therapy.

It is not an edge phenomenon. For example, the roman catholic school foundation Laurentius Stichting from Delft, with 23 schools and 700 employees, wants to introduce the treatment across the board. At a number of schools this already happened, even before parents were informed. Moreover, the information is faulty. Part of the information is not credible, presented by people with unclear qualifications, with the confidence-building logo of a renowned Dutch medical organisation, which denies involvement and says the information merely concerns “myths”.

**Thousands of Dutch school children age 4-12 years perform mutual massage on each other in primary schools. It is supposed to help against stress, bullying and an imbalance in the brain. It would improve learning, and the immune system. How credible is this?**

More and more primary schools introduce mutual child massage. The children massage each other a couple of times per week on the back, over the clothes. The purchase of this method is not limited to small schools with an alternative basis. The Laurentius Stichting (foundation of schools for roman catholic primary education, named after Saint Lawrence of Rome) paid attention to this subject at the “Day of the Teacher” in 2008. 700 Of their employees took part in the diverse presentations. A number of their 23 schools already implemented mutual child massage. The spokesman of the foundation, Mr. Zweekhorst, announced that more schools are going to apply the therapy. The primary school of my children implemented the program as well, even before the school organised an information meeting for parents. Mutual child massage is therefore no edge phenomenon.

The most important Dutch suppliers of the method are Touching Child Care (initially from Deventer), Brenda Pelsier Haptendo from Santpoort Zuid and the smaller company De Maan is Rond from Arnhem. Under Dutch law anybody can practice medicine. Dutch regulations distinguish between regular and alternative medicine, the former described as based on “proof and reason”. The Dutch government advises citizens to use caution when seeking medical help, especially with alternative treatments. Only

certain medical treatments and certain medical titles (physician, physiotherapist, dentist, etc.) are restricted. There are publicly accessible registers for these restricted medical professions. Laws are supposed to regulate proper information about medical treatments, and for example the position of minors.

Touching Child Care (TCC) seems to be the market leader. The website of the company stated: "The methodology is carried out by a group of enthusiastic, highly qualified professionals across the Netherlands. These professionals have been selected on the basis of their knowledge and experience and after following a specialised training as licensee linked to TCC." They boast about the multidisciplinary treatment with scientific foundation and proven effectiveness. TCC "combines the physiological effects obtained by the massage with a specific form of pedagogy and didactic actions."

Since January 2009 TCC is a trade activity of "Onderwijs Maak Je Samen Advies en Training bv" (Education is made together, advice and training, Inc.) from Helmond (NL). This was initially an interactive website of a teacher from Nuenen with ideas for lessons, but has meanwhile developed into a venture. For 325 Euros per person teachers can follow training days about mutual child massage. They receive a certificate to conclude the training. "It is expressly not intended that the teacher will train other teachers within his/her school."

Touching Child Care was set up in 2006, by Mss. Caroline Muller, Willeke Evers and Nicole Groeneveld. Muller is an officially registered physiotherapist from Deventer, who also treats different kinds of psychological problems as "child coach". In a recent interview she warned that everyone can call themselves a child coach, "but to become a member of the professional association [Adiona] you must meet strict requirements." In practice that seems less difficult. The most important requirement is that you pay 180 Euros annual contribution.

Willeke Evers worked several years in primary education. This spring she is scheduled to receive her master's degree, and can only then be considered to be a full pedagogue. According to her website Nicole Groeneveld is specialised in a lot of alternative and even paranormal treatments, among which chakra treatments, holistic pulsing, shambhala and quantum massage. She registered the website of the company ([touchingchildcare.nl](http://touchingchildcare.nl)).

TCC added José Kuijsters and the registered physiotherapist Afke Geerlings to the team. Kuijsters supplies additional pedagogical material and presents at information evenings in schools. She refers to herself as an orthopedagogue (pedagogue specialised in disabled children), but her qualifications are equal to those of pedagogical assistants. Kuijsters is member of the holistically oriented Nederlandse Federatie Gezondheidszorg ("Dutch Federation of Healthcare"). The NFG has been set up by the lower level nurse Arie Benda, who at the end of the eighties knocked together several alternative courses for higher education, academies and faculties in his home town of Westerbork. The NFG is still located there. On its website the NFG presents its vision that regular health care is "sickening" and often shows "abuse of power".

## Proven impact

Willeke Evers said in a broadcast of RTV Oost that it is not sufficient when parents cuddle their children regularly. They need more to grow up healthy. According to her, mutual child massage is not an alternative therapy, because its effectiveness has been proven scientifically. The website mentions several problems for which Touching Child Care could offer a solution: problematic contacts with other children, limited self-confidence i.e. self-esteem (frequently bullied), aggressive behaviour (bullies), restless behaviour, difficulty to concentrate, difficulty to fall asleep and poor sleep, a high degree of passivity, or a disharmonious profile (child prodigies). During an information evening which I attended as a parent,

the cause of many problems was identified as “skin hunger, stress and the influence of media and the computer era.”

On its website Touching Child Care presented a large number scientifically proven effects of its specific method. In a short clip on YouTube Willeke Evers says: “It is not a joke, but is based on scientific research. ... It is not only nice, but something physiological is really happening in the body”. Moreover, she has observed that mutual child massage “decreases bullying significantly”.

I asked director Job Christians of Onderwijs Maak Je Samen to what extent mutual child massage:

- ✓ raises a barrier against stress
- ✓ leads to better sleep behaviour
- ✓ leads to the increase of concentration capacity
- ✓ leads to better learning performances
- ✓ leads to strengthening of the immune system
- ✓ decreases the percentage of bullying terribly

Christians referred me to the book “Touch Therapy” by Tiffany Field, the founder of the Touch Research Institute in Miami. A YouTube-clip by Touching Child Care mentions Swedish professor Kerstin Uvnäs-Moberg, a physiologist at the Karolinska Institute in Stockholm and the agricultural university in Uppsala. The Laurentius Stichting refers parents to this YouTube clip. Uvnäs-Moberg did a lot of research on the hormone oxytocine, which she published in the popular scientific book “The Oxytocine Factor”.

## Infant massage

Tiffany Martini Field, who obtained a PhD in developmental psychology, published an innovative study in 1987, which showed that premature infants increased more rapidly in weight when they were massaged. In 1992, she started the first Touch Research Institute (TRI). It was linked to the University of Miami School of Medicine and was co-financed by pharmaceutical company Johnson & Johnson. The TRI specifically investigate the impact of massage in vulnerable groups, such as HIV-infected people and adopted or abused children.

According to Field healthy babies may also profit from massage. Although much sound research has not been done yet, massage seems be able reduce stress during painful treatments, such as vaccinations. It also could reduce the pain at passing the first teeth and can help to fall asleep. Moreover it can reinforce the bond between parents and children and promote the development of warm, positive relations.

However, in her book “Touch Therapy” Field writes: “The massage therapy technique used throughout all of these studies, unless otherwise specified, involved deep tissue manipulation with presumed stimulation of pressure receptors.” Even as early as page 4 she mentions that generally they used deeper massage. She describes among others a study into the impact of massage on depressed mothers and their children. A trained researcher massaged the entire body, including the face, using massage oil. The professional massage recommended by Field is not similar to where children brush each over the back during class room massages, over their clothes. Marijke Sluijter, head editor of Educare (a holistic educational illustrated magazine), called these “massage games” and “tactile stimulation”. In her book “Aanraken een Levensbehoefte” (“Touch, a necessity of life”) several of these touch games are described.

Recent meta-analyses concluded that the proof for the assumed beneficial effect of baby massage is rather weak. Vickers c.s. (2004) collected almost a hundred publications about the impact of massage on premature babies or babies who weighed less than five pounds. Only 14 studies met the elementary requirements (such as randomisation). The babies were generally stroked over their entire body three or four times a day for 15 minutes. Six studies, among which the one by Field, reported that treated babies

increased more in weight than untreated babies. But the extra weight increase amounted on average to only 5 grams per day and had therefore clinically seen little value. Moreover it was plausible that some research workers supplied no information concerning the weight of the baby because they had found no positive result. They restricted themselves to other variables.

Recently Field (2006) published research from which she concluded that light massage produces considerably less result than firmer massage. Research with babies a bit older indicated no significant weight increases (Underdown c.s., 2006). However, other positive impact was reported. Perhaps babies' sleep improves, they have less stress hormones and they cry less frequently. But it is still unclear to what extent such results are replicable, because insufficient quality studies have been carried out.

Field focussed on all kinds of possible effects of massage on strongly divergent and frequently very small research groups. For example, there was research about twenty people who tried to stop smoking. They seemed to be more successful when they massaged themselves. In other research employees of a hospital got a short massage. According to them they felt happier and more energetic than without the massage. Listening to relaxing music however had equally as much impact. Since the participants of these studies know which treatment they receive, it is possible that the results mainly can be attributed to their positive expectations.

Field also examined the effect of massage on the immune system. It would be fantastic if she could have shown that school children who massage each other twice a week for 15 minutes, less frequently catch a cold or the flue. She looked only at the immune system of premature children, babies with HIV, adults with HIV, women with breast cancer and children with asthma, autism and leukaemia. This last research group consisted of 20 children with an average age of 7. In the beginning under supervision of a therapist and later independently, children were massaged by their own parents daily for 20 minutes - with average pressure on face, neck, shoulders, back, abdomen, arms, legs, feet and hands. Result: both parents and children were less restless, and children less upset by medical treatments. Generally children improved the number of white globules, platelets, red blood cells and the haemoglobin level. Certainly an interesting research result with these extremely ill children, but not comparable to what happens in Dutch class rooms.

As general observation I think the samples are too small to draw large conclusions. Regardless, there is no reason to assume that the results are relevant for healthy school children, of whom it is unknown whether they are touch-deprived. Touch games in school classes do not resemble the massage techniques used by Field. She attaches little value to a treatment that is superficial.

## Oxytocine against bullying

The claim that mutual massage is an effective manner to push back bullying and teasing and tormenting seems to be of more importance. A recent overview of 26 studies investigating the impact of all kinds of measures and programmes to reduce bullying, showed that the problem is easily solved (Vreeman c.s., 2007). Special lessons and videos about bullying generally produced little result. Attempts to increase the social skills of the children concerned did not have much influence either. The best results were achieved with a multidisciplinary treatment in which the entire school had been involved. Important components of it were training for teachers and clear school rules and sanctions.

In the Netherlands a large research study was done after the effects of such a plural anti-bullying policy on primary schools (Fekkers e.a., 2006). Fourteen schools participated. Initially 17.7 percent of the children indicated that they were bullied. This percentage had fallen a year later to 15.5. There was also a control group of schools with no vast measures to reduce bullying. In these schools the number of bullied children rose from 14.6 to 17.3 percent. The difference between both research groups was

significant, but not very big. Moreover it had disappeared a year later. That was probably caused by the schools paying less attention to the problem in the second year of the research.

In Denmark some schools have incorporated mutual child massage ('taktil rygmassage') in a broad anti-bullying programme, which is available for free. The main individual behind the Danish method, Jørn Jørgensen, says that the number of bullies on his Lyshøjskolen in Kolding decreased from 13 in 1999, to 1 in 2008. Note that this is not a percentage, but the number of bullies. I could not find any further hard figures. Mr. Job Christians of Onderwijs Maak Je Samen could not provide more numeric data either.

The Swedish physiology professor Kerstin Uvnäs-Moberg (2003) did research after the hormone oxytocine and wrote a popular book about it. Oxytocine can reduce fear, pain and stress. It is also supposed to promote relaxation and bonding, while reducing distrust and aggression. The production of oxytocine can be stimulated, among others ways, by pleasant and intimate contact or massage. As a result it has become to be known as "cuddle hormone". Moberg bases herself especially on animal tests, but recently she and her colleagues carried out a research with four- and five-year-old children (Von Knorring, 2008).

Sixty children were massaged daily for five up to ten minutes by employees of a nursery school, who had followed a short training. The children could indicate themselves where they wanted to be touched. There were also fifty children who got no treatment. They attended different nursery schools, which did not offer massages. Using Child Behaviour Checklist (CBCL) the children were watched. They focused on aggressive behaviour, attention problems, fears and depression, social and physical problems. But no significant differences were found between both groups.

The research workers therefore limited themselves to 28 problem children with the highest scores on the CBCL (19 in the massage group and 9 in the control group). Their CBCL-scores amounted to initially 40.2 (massage) and 35.0 (control). After three months the score of the massaged children had fallen to 24.6. But the untreated group did better, because their score fell to 16.8. The research workers considered the massage to be a success, since after six months the scores were 23.9 (massage) and 27.2 (control). They aimed their statistic analysis on the period between three and six months, because that produced a significant difference in the advantage of the 19 children in the massage group.

Unfortunately this research is very debatable. The children were not randomly divided in two groups. The different results might be attributed to different circumstances in the nursery schools. Moreover the behaviour of the children was assessed by individuals who knew which treatment they had received, which makes the research insufficiently blinded. The parents of the children also got a checklist to score the behaviour of their children, but that did not produce any significant result.

Massage is not the only way to obtain the desired oxytocine. A recent experiment with fourteen males, published in an alternative trade journal (Bello e.a., 2008), showed that 20 minutes reading produced as much oxytocine as 20 minutes of massage. If that also applies to school children, extra reading time in the class room could do miracles. On the parent conference I attended, massage was presented as the only logical solution for all problems. Possible alternatives were not mentioned, because they were not for sale at the company.

## Reason and proof

Mr Job Christians of Onderwijs Maak Je Samen reacted positively to my research into his statements. After he had read my letter, the website of Touching Child Care changed considerably. The claims concerning the scientific foundations have been adapted and have weakened. The praise trumpet concerning the licensees has been put to rest, and Nicole Groeneveld has even entirely disappeared from the contact list. According to Christians "Ms Groeneveld has not been associated with TCC for a long time". The claim concerning the immune system is also gone.

Christians wrote: “We are determined to have a good look at the latest developments around and within TCC and examine the possibilities of bringing in funds for conducting specific scientific research after the methodology of TCC. I can imagine that, regarding your clear explanation, you can support us and might be willing to think about the set-up of this research.” Here are some suggestions.

By the emphasis that Touching Child Care places on physiological processes, complete with pictures of the brain, stories about hormones, imbalances, and medical effects, the method fits the description in the Dutch law on the medical treatment (Wet op de Geneeskundige Behandelingsovereenkomst – WGBO): “all treatments – examination and counselling included – pertaining directly to a person and aimed at healing him of a sickness, to guard him for the development of an illness or to assess his medical condition, or assist at a delivery.”

The Dutch public authorities inspection for health care (Inspectie voor de Gezondheidszorg – IGZ) distinguishes two types of medical treatment: regular and alternative. The mutual massage, which is taught to children without the proper foundation, is not regular (and has also little to do with a regular school programme). Research should lead to “reason and proof” concerning the method, in the wording of the IGZ. As matters are now, I would define it as “an alternative psychological medical treatment aimed at behavioural influence of children of 4-12 years by mutual massage.”

Mr. Wouter van der Horst, press officer of IGZ, told me schools must be very critical before they implement alternative treatments. The Dutch law for primary education also indicates clearly that schools must regulate the liabilities for activities other than education. Insurers supposedly are more willing to authorise proven, regular, treatments. Moreover, under the medical treatment law, parents must individually authorise before a school can treat their child. It is probable that part of the parents will not be too enthusiastic, especially on schools without an alternative mission, such as those of the Laurentius foundation.

The team of TCC can use some strengthening. Prof. Uvnäs-Moberg urged in her e-mail to me that the context of the professionals behind the method is important. “Since it may influence deep aspects of a person’s physiology and also behaviour and personality, the people who give treatments should have a proper general medical education and also good ethics and respect for other person’s integrity.” Touching Child Care distinguishes itself already positively from Brenda Pelsers Haptendo and De Maan Is Rond by the multidisciplinary integration of both massage and pedagogy. But if they want to address all kinds of problems of children, up to their brain, and also want to do research, then it would be desirable to appoint experts with higher qualifications, such as an orthopedagogue and a registered child psychologist, with credentials. The Dutch law for medical-scientific research on people (Wet Medisch-wetenschappelijk Onderzoek met mensen) would be pleased to see a medical doctor involved in experiments.

To get a good status, Touching Child Care should refrain from all of its grandiloquent claims. During the informational evening they showed, in the story about the imbalance in the brain of the children, a picture they borrowed from the website of the renowned Netherlands Brain Foundation (Hersenstichting), including the confidence inspiring logo of the foundation. Ms. Riekie van Nies, spokesperson of the foundation, wrote me that the foundation fights against “brain myths”, and that they would address Touching Child Care on the abuse of their logo. In the brochures published by the foundation: “The brain and growing children” and “The development of the brain during puberty”, there is no mention the development of Dutch children is endangered because they are not cuddled enough. The experts of the foundation know of no research which would prove school children suffer from an imbalance in their brain, caused by skin hunger, stress, influence of the media and the computer era.

Concerning the computer era, Ms Van Nies refers to the research of neuropsychologist Dr. Wijnand IJsselsteijn, linked to the Human-Technology Interaction Group of the technical university of Eindhoven.



From his research it appears that playing computer games is not all that bad for the brain. The Dutch newspaper *Algemeen Dagblad* published an article with the descriptive title: "Be social, go gaming" ("Doe toch sociaal, ga gamen"). It described several positive effects of computer gaming. Studies indicating games arouse aggressiveness were demolished in the book "Grand Theft Childhood" by Larry Kutner and Cheryl Olsen (2008), both linked to the Harvard Medical School.

Orthopedagogue prof. dr. Evert Scholte of Leiden University offers tips for the method of research. He does research on schools, amongst which some schools which are part of the Laurentius foundation. I mailed him the information of Touching Child Care and he returned a reference of the most recent state of the art in the scientific effectiveness of interventions in child psychiatry (Morgan c.s., 2007). Job Christians recognises that the impact of TCC's method has not yet been proven, but thinks that he can judge from his own perception that it works well. Spokesman Zweekhorst of the Laurentius foundation said that as well. In the book, referred to by prof. Scholte, can be read that such personal impressions lead to misrepresentation. An observer frequently has the inclination to seek affirmation of his/her own conviction. This is called the halo-effect. Comprehensive data and relevant comparison material are necessary to make a sound judgement.

## Gentle coercion

It is said that child massage, accompanied by relaxing music, creates a gentle environment in a classroom. A possible objection is that especially girls find this pleasant, but less so of boys. Boys love more action and movement, are wilder and more impulsive, seek challenges and adventure, are more targeted on competition and want to examine things. At birth boys have 9x more testosterone than girls. That hormone is related to aggression and activity. Around their fourth year the quantity testosterone doubles once more. And the level once more increases between the 11th and 14e years with 800%. There are scientists who think that in preschool and primary school, which in the Netherlands are mainly a workplace for women, teachers have too much appreciation for the qualities of girls.

Ms. Lieselotte Ahnert, a Viennese professor in developmental psychology, discovered that professionals in nursery schools commonly have a considerable better relation with girls than with boys, probably because their approach fits better to girls. This can cause little boys to discover early on that their strong sides are less accepted, as a result of which they are also less motivated when they go to primary school. Often they are corrected more frequently, and called into line, whereas the behaviour of the little girls irritates less rapidly. (Marreveld, 2007; Tavecchio, 2007)

It is said that children will no longer beat and insult each other if they have massaged each other carefully and affectionately. This means that they must let themselves be massaged not only by friends, but also by children of whom they are not as fond. During the parent evening which I attended, the school director said that children who do not participate in the mutual child massage "could fall outside the group". Also the presentation of Touching Child Care paid attention to the possible resistance of some children, which supposedly must be overcome.

The method can have a reverse effect if there are children who are not in the mood, and withdraw themselves from the therapy. Non-cooperation will give rise to two separate groups within the classroom, where the teacher may favour the children who participate enthusiastically. This could promote bullying. In this respect Ms. Van Nies of the Brain Foundation stated: "The school setting creates a framework in which children implicitly will assume that they must participate. The group pressure is strong." Indeed the method intends for children to indicate themselves where their boundaries lie, but it is unclear how that can be realised in practice. It should not be allowed that children are taught under group pressure to permit freedoms to others concerning their own personal integrity.

Parents may object to this type of alternative treatment. However, there are schools that incorporate the method as mandatory in the school program (or intend to do so, like at the Laurentius foundation), and do not permit parents to prohibit it. One should question to what extent that is desirable and admissible. If one takes the information by TCC seriously, it can be concluded that it concerns a psychological medical treatment. On the basis of the Dutch law on the medical treatment (WGBO) schools are obliged to collect individual authorisations from parents before they can apply such a treatment on pupils. Professor Scholte wrote me that “generally it is sensible to apply health interventions only after it is scientifically proven that they work.”

This matter is also relevant for other alternative methods which are offered by new ventures at Dutch schools. Nowadays there are more and more unrecognised experts who take aim at the problems of schools and children. Touching Child Care entered the schools of the Laurentius foundation thanks to a presentation by José Kuijsters at the “Day of the Teacher”. Another participant on this day was Henk-Jan van der Veen, a “school counsellor” who aids and coaches children that are “highly sensitive”. He followed a training at the Stichting Counselling Nederland (“Netherlands counselling foundation”). This foundation cooperated until recently with a post-office-box university which is blacklisted in the United States (see Skepter 20/1). Training lasts two years and is mainly in written form (with a study load of 8 hours per week). It is supposed to be higher education, but not recognised as such by the authorities.

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They found that inhaling the "cuddle hormone" oxytocin made men just as empathetic as women. The study in 48 volunteers also showed that the spray boosted the ability to learn from positive feedback. Writing in the Journal of Neuroscience, the researchers said the spray may be useful for boosting behaviour therapy in conditions such as schizophrenia. Oxytocin is a naturally produced hormone, most well-known for triggering labour pains and promoting bonding between mother and baby. Hormones. Mechanisms of Hormone Action. A hormone is a secreted chemical messenger that enables communication between cells and tissues throughout the body. Learning Objectives.Â Water-soluble hormone: A lipophobic hormone that binds to a receptor on, or within, the plasma membrane, to initiate an intracellular signaling cascade. hormone: A molecule released by a cell or a gland in one part of the body that sends out messages affecting cells in other parts of the organism. Since your hormones follow a predictable pattern every cycle, it means the effects they have on you are the same cycle after cycleâ€”and this allows you to know ahead of time what your moods, health and behavior will be. As a result, it can help you plan your day, week and month ahead and enable. You can also take advantage of hormonal benefits (such as high-energy days) and overcome hormonal challenges (such as countering fatigue on low-energy days), making every day of your cycle better.