

The APPPAH Newsletter

News From the First Frontier: Conception To Birth

Official Bulletin of the Association for Prenatal & Perinatal Psychology & Health, Winter 2009/2010

New Evidence-Based Approaches to Obstetrics

APPPAH Congress presentation by Dr. Marshall Klaus, 2009

Dr. Klaus cited important new research at the 2009 APPPAH Congress at Asilomar, in which many APPPAH members were extremely interested. In the spirit of service, we share highlights here, which include some transcribed material directly from Dr. Klaus' presentation, with his generous permission.

The research was conducted by Dr. Bystrova, a Russian pediatrician, and published in the journal *Birth*, June 2009. Dr. Bystrova's study is an important upgrade and verification of a study Klaus and Kennell completed in 1972, whose results were debated for ten years and not settled. One important goal of Bystrova's research was to assess what Klaus seemed to find 37 years earlier, a sensitive period in the first two to three hours of life, when attachment is optimized. Dr. Klaus was the "opponent" for Bystrova's doctoral dissertation, meaning he was a central member on her doctoral committee, to evaluate her research and knowledge in the field of infant bonding.

Bystrova's research examines physical closeness versus separation of the mother and infant from 30 to 120 minutes after birth. There was no separation during the first 30 minutes, but they were quite unusual minutes. Babies were placed on a table, were dried thoroughly, and then were put under a faucet of warm water, as a way of making sure all babies, experimental and control, had the same kind of physical treatment during the period. One hundred and seventy-six infants, whose mothers had a normal pregnancy and a normal labor, and not requiring any drugs for pain, were divided into eight groups of babies. [The main research theme in Groups 1-4 was skin to skin contact and breastfeeding, and in Groups 5-8 was swaddling. Those results in a future issue.]

Groups	30-120 Minutes	Five Day Period After Birth
Group 1	skin-to-skin contact	roomed-in & breastfeeding
Group 2	breastfeeding	roomed-in & breastfeeding
Group 3	placed in nursery	brought to mother, breastfed, and returned to nursery
Group 4	placed in nursery	roomed-in & breastfed

Group 1 babies had skin-to-skin contact with their mothers from 30 to 120 minutes after birth, and five days of rooming-in with their mothers and breastfeeding. Group 2 had breastfeeding from 30 to 120 minutes after birth, and five days of rooming-in and breastfeeding. Group 3 infants were placed in the nursery on the obstetric floor for 30 to 120 minutes, had first breastfeeding contact with their mothers during hours 3-4, and then taken out for breastfeeding seven times a day for five days, but placed back in the nursery each time. This is a bit of old style care. Group 4 babies were placed in the newborn nursery for 30 to 120 minutes, but then breastfed and roomed-in with their mothers beginning in hour 3, and for the next five days.

The major findings were that early skin-to-skin contact between mothers and infants, from 30 minutes after to 120 minutes, significantly altered maternal and infant behavior at one year. These infants demonstrated greater self-regulation, dyadic mutuality and reciprocity, and the mothers showed greater interaction and interest in their infants and greater reciprocity than the controls. In the absence of skin-to-skin contact, early breast-feeding from 30 to 120 minutes afterward elicited the same outcomes. Infants separated in the nursery for the first two hours were significantly less regulated, more irritable, had less dyadic mutuality, and their mothers showed less interest in the

[Cont. on page 3, see "Klaus"]

Letter from the President

Dear APPPAH Friends,

There are many exciting "happenings" in APPPAH right now. I am literally jumping for joy, and would like to share one or two. The first is that we are having a Congress in 2010, instead of waiting the usual two years until 2011, and are considering this as a potential change for the future. Second, the Congress is again at Asilomar, one of the most beautiful and welcoming conference venues I have ever been to, and that covers five decades! The Congress dates are Nov. 11-14, 2010. We're proud to have pioneering human consciousness researcher Stan Grof, MD joining us (see article next page), and we have also confirmed as an invited speaker obstetrician and gynecologist Paul Brenner, MD, who will give the David Cheek Memorial Lecture. Robbie David-Floyd, PhD, will be speaking on "Birth Models that Work," and Thomas R. Verny, MD, on "The Effects of Maternal Stress on the Development and Organization of the Human Brain." Breakout sessions are currently being finalized. Check the 2010 Congress website for updates at: www.birthpsychology.com/congress/2010/.



The theme of this Congress represents a landmark for our organization, because it focuses on embracing science, something we have always stressed but not made the focal point for a Congress—to embrace and elucidate the vital importance of research. The mission of APPPAH is to educate and communicate valid prenatal and birth information to professionals and parents in our society. The most effective educational data evolve from theories and hypotheses that are scientifically validated and then applied within the major sectors of our culture, like education, medicine, sociology, politics, childcare, maternity care, child development, etc.

A powerful example of APPPAH's efforts to apply the results of scientific research in shifting the prevailing culture, is being done by APPPAH members Rochele Hirsch and Jill Chasse, co-chairs of the Communications & Development Committee (ComCom). Inspired by the Marshall Klaus presentation reported the front page of this issue, about the major measurable and positive differences in postpartum results for both mother and child of skin-to-skin contact with mother during the first 120 minutes following birth, Rochele and Jill developed the APPPAH outreach catch-phrase, "Welcome Your Baby In -- With 60 Minutes Skin-to-Skin."

Rochele and Jill plan to use this phrase to anchor the communications and advocacy program of APPPAH. Their goals include educating parents, maternity care providers, and counselors through a variety of channels; seeking sponsorship to extend APPPAH's reach; highlighting hospitals that promote immediate skin-to-skin contact; and using the phrase to open the door for APPPAH to extend its influence in the world through the skin-to-skin project, and later through other themes submitted by APPPAH members and professionals.

Shortly, the Communications Committee will be calling many of you to learn about trainings and other services that you offer. We hope that you will collaborate with APPPAH in presenting the skin-to-skin theme and supporting CEU certification of APPPAH-sponsored training. If you are interested, please don't wait for a call. Go ahead and contact Rochele Hirsch (rochele@cxii.com , 404-521-0362) or Jill Chasse (baby_counselor@yahoo.com). Many thanks and gratitude to Rochele and Jill for launching this effort.

Wishing you the best as we move from the winter solstice toward the light.

In your service,
William R. Emerson, Ph.D.

["Klaus," cont. from pg. 1]

infants and had less interaction.

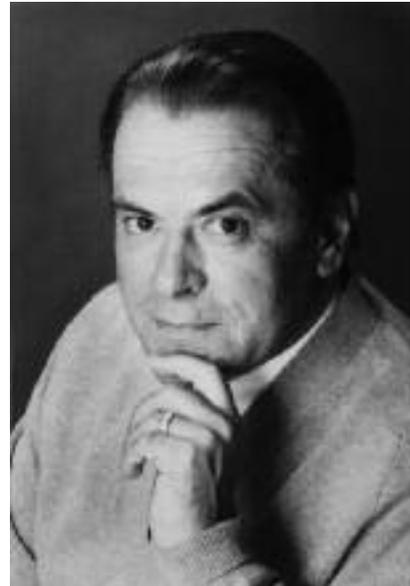
Of particular interest is that babies who were placed in the nursery for the first two hours and then roomed-in and breastfed on demand the entire five days after birth, were also significantly less regulated and relational than the early skin to skin or breastfed babies. They were irritable with decreased reciprocity and less dyadic mutuality, and mothers were less interested and interactive with their babies. This provided clear evidence of a short, early, sensitive period after delivery, lasting only two to three hours. The calm, regulated, interacting baby only occurred when skin-to-skin contact or breastfeeding was provided from 30 to 120 minutes after the birth, but not during the follow-up breastfeeding of five days. In other words, if the first 30 to 120 minutes of breastfeeding or skin to skin contact are missed, even a follow up of five days of breastfeeding did not provide the benefits of early breast feeding or skin contact.

Klaus concluded, "You know I agree whole heartedly with Bystrova and colleagues, that newborn babies should not be separated from their mothers if the mothers and babies are well. The first minutes of life should consist of drying the baby thoroughly and undertaking a brief physical exam. Brief is over in two minutes. Babies should have skin-to-skin contact with their mothers for the next two to three hours, breastfeeding when they are ready, and beginning to know their parents." [Ed. thanks William Emerson for synthesizing Dr. Klaus' presentation data]

Mark your calendars!

APPPAH's next International Congress will be held November 11-14, 2010. Embracing the Science of Prenatal and Birth Psychology: What We Know, How We Know It will take place at Asilomar, as there was such positive feedback for the last Congress being in a natural setting. Bobbi Jo (B.J.) Lyman is Congress Chair. The theme of this Congress is the importance of research in our leading edge field. Keynotes, presenters and workshop leaders are in the final stage of the selection process and will be announced soon.

Int'l Congress Spotlight on: Dr. Stanislav Grof



We are especially proud to let you know that Stanilav Grof will be the 2010 Congress recipient of the Thomas R. Verny Award, given to individuals who have made important contributions to the field of prenatal and perinatal psychology.

In line with the Congress theme of emphasizing prenatal and perinatal research efforts, Stan Grof is a pioneering psychiatrist who examined the effects of birth trauma and the roots of anxiety through his well-known LSD (and later breathwork) investigations. Describing this phenomenon that Grof labeled the BIRTH COEX-system, he also confirmed that reliving the birth experience could be a powerful healing process for psychopathology. He has published over 150 articles and 20 books discussing the theoretical and practical implications of modern consciousness research for psychiatry, psychology, and psychotherapy.

The topic of Dr. Grof's keynote presentation will be: Implications of the Prenatal and Perinatal Period for Psychology: Observations from Modern Consciousness Research. Dr. Grof will also be doing a post-Congress workshop entitled: Psychospiritual Death and Rebirth: A Visionary Journey.

A number of video clips of Dr. Grof speaking on his life's work can be found on youtube.com. For example, "Stanislav Grof 'Holotropic'" at <http://www.youtube.com/watch?v=mA1hDI5IiJQ>

Be sure to check out the 2010 congress web page for new and exciting developments, and let us see you in Asilomar, California, November 11-14!

Bobbi Jo Lyman, 2010 Congress Chair

Conferences of Interest

THE MID-ATLANTIC CONFERENCE ON BIRTH & PRIMAL HEALTH RESEARCH February 26-28, 2010, Las Palmas de Gran Canaria; Michel Odent, organizer. Dedicated to phrasing new questions at a time when rapid technological and scientific advances have brought us to a crossroads in the history of childbirth and the future of civilization. www.wombecology.com.

SPREADING THE APPPAH NEWS

A big part of APPPAH's mission is to empower individuals and institutions with information about the "treasures of prenatal and perinatal psychology," and here we highlight myriad ways in which our members are engaged in that endeavor. If you have something exciting to share in this regard, please send details to the newsletter editor at DrMarcy@QuantumParenting.com.

Michael Trout's Infant-Parent Institute is presenting the first U.S. offering of a training by Gerhard Schroth in his prenatal bonding model, March 27/28. As Michael puts it, "I was seriously impressed with this guy, and with this method. I wanted to learn more, and thought others might, too. I found the method to be sound and principled, and I was impressed with outcome data that showed reduced levels of maternal depression, an increased sense of connection with the baby and happiness with the baby's perceived characteristics, and reduced c-section rates, with the population that experienced this intervention. I thought it would be a gas to have him come to America and teach us. I could have waited for someone else to orchestrate this, but was motivated to create something myself." Michael's institute is guaranteeing Dr. Schroth's fees and expenses, and subsidizing the training, so the registration fee can be kept at a reasonable level. For details, go to www.infant-parent.com.

Jeanne Rhodes, former associate editor of the APPPAH Journal, has written a book entitled *The Birth of Hope*, revealing many positive possibilities for pregnant teen couples and others expecting their first child. The story's setting, involving a young couple in foster care, is an environment not well known to many readers outside that world. Hope's story is one of coming into this world through parents who, in spite of their age and other challenges, are very attuned to their baby throughout her gestation. This story inspires new awareness of the importance of the prenatal and birth stages of life. More information can be found at <http://thebirthofhope.com>.

Bulletin Board

Is there anyone out there who might be interested in co-authoring a book? I have done drafts over the years of *How to Make a Baby Buddha: The Diary of Queen Maya's Pregnancy*, but it is missing a fullness. Perhaps it needs a female Buddhist novelist's perspective? Fred Jeremy Seligson, fjseligson@yahoo.com

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Call for Reviewers: JOPPPAH is looking for interesting folks—those with training, expertise or even just a strong conceptual foothold in the field of pre- and perinatal psychology—interested in writing book reviews for the Journal. In as many issues as possible, JOPPPAH tries to inform readers in approximately 600-1000 words about what's being written in the field. This is where you come in: if you love to read and feel inclined to share your thoughts with your peers, do your bit and volunteer to become a book reviewer. You even get to keep the books! Call Bronwyn at 818-224-0305 or email joppah.chambers@gmail.com

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Jeanette Sawyer Cohen and Aurelie Athan, two student members of APPPAH, are currently researching pregnancy and motherhood for their clinical psychology doctoral dissertations at Columbia University in New York. With your help, they would like to learn more about the process of becoming a mother and how it may inform a woman's identity, relationships, spirituality, mental health, and general well-being. Birth professionals, including many APPPAH members, are excited about this research, which is being promoted by word-of-mouth. The researchers are continuing to recruit adult women in their 2nd and 3rd trimesters to complete a confidential, IRB-approved, online survey. The estimated survey completion time is 30-60 minutes, once during pregnancy and then again in the postpartum. For more info., click on "The Motherhood Project" at www.headandbelly.org, or call 800-871-9012 ext. 74538.

With sadness and regret I inform you of the passing of our colleague Micheline Charpié, MD, PhD. I did not know Micheline well but had the privilege of interviewing her on camera at the last APPPAH conference. Of the many accomplished individuals I spoke with in the dozens of interviews conducted that weekend, my conversation with Micheline came back to me again and again. I knew her academic degrees and professional accomplishments were remarkable. I knew of her pioneering work in the scientific quantification of the impact of music and the human voice on health outcomes for premature infants. But it was the depth of her inspiration and a haunting dignified beauty that captured me as she spoke, and drew me through a portal onto the floors of Roosevelt Hospital in New York City. Here in a large inner city hospital in rough and tumble contemporary Manhattan, she attended to the smallest of human beings. Micheline sang to the premature infants' every day. She trained her staff to sing to them. 21st century New York is a hub of every ethnicity on the earth and she often met immigrants from far simpler cultures who understood exactly why singing to these tiny human beings could prove critical to their survival. Micheline would make a point of asking the parents for a few phrases or words in their native tongue, as, quite naturally, the babies would respond more pointedly to the language of their ancestors. I repeated her soulful story over and over to friends. Though disguised as a modern French doctor, I felt I had met a priestess from an ancient time who knew the mystical potency of the human voice as she linked it unselfconsciously to the sensitivity and full humanity of babies. Micheline died in an apartment fire in Paris on January 4th. Her story will not be forgotten.

— Shelley Campbell

Resources of Note

NEW FILM ON POSTPARTUM DEPRESSION FROM PSI

Postpartum Support International (PSI) has produced a new short film on the experiences of women coping with a postpartum mood or anxiety disorder such as postpartum depression. "Healthy Mom, Happy Family: Understanding Pregnancy and Postpartum Mood and Anxiety Disorders" features four women who have suffered and recovered from perinatal mood disorders. By sharing their stories the women help educate and reassure new mothers, their family members and friends, and health care professionals that postpartum depression is temporary and treatable. The film also includes up-to-date information from experts in the field who share tips on what women and healthcare providers need to know for the effective identification and treatment of mental illnesses related to childbirth. A preview of the film is available at <http://postpartum.net/Resources/PSI-Educational-DVD.aspx>.

MEDIA WATCH

This section of the APPPAH Newsletter is intended to draw attention to items in the news that are pertinent to prenatal and perinatal psychology. APPPAH does not necessarily agree with, or vouch for, the scientific worthiness of any of the news items mentioned here. We mean merely to take note of what is going on, so that you may.

MIGHT BIRTH REFORM “FOLLOW THE MONEY” AND THE BABY?

It was reported during a series on health care reform on PBS' The NewsHour with Jim Lehrer that “for the Dutch, a huge cost saver starts the day you're born.” Reporter Ray Suarez noted that the majority of Dutch babies are born at home in a nation where the infant mortality rate is 25% lower than that of the U.S.—which is consistent with a recent study of more than 500,000 births in the Netherlands, which found that planned home birth with trained midwives is as safe as hospital birth. “What we've learned from the Netherlands and other countries is that expanding access to out-of-hospital maternity care by providers with the type of training that Certified Professional Midwives receive benefits mothers and babies,” said Katherine Prown, Campaign Manager for The Big Push for Midwives. “The research shows that we could make significant improvements in birth outcomes and in lowering health care costs here in the United States by implementing very basic policy measures, such as closing the gap in federal Medicaid law that neglects to include CPMs as eligible providers.” David A. Anderson, a professor of economics with a research specialization in the costs of out-of-hospital maternity care, calculates that a 5% increase the rate of both home births and births in freestanding birth centers would result in an annual savings of more than \$9 billion. The Big Push for Midwives Campaign represents thousands of grassroots advocates in the United States who support expanding access to Certified Professional Midwives and out-of-hospital maternity care. The mission of The Big Push includes educating national policy-makers about the reduced costs and improved outcomes associated with out-of-hospital birth and advocating for including the services of Certified Professional Midwives in Medicaid. [Reported in Oct. 2009 on PBS; for more info., visit www.thebigpushformidwives.org.]

DNA CHANGES AFTER C-SECTION AND INCREASED RISK OF DISEASE

Researchers at Karolinska Institute have discovered that babies born by planned cesarean section experience changes to the DNA pool in their white blood cells, possibly related to altered stress levels during this method of delivery. The findings help explain why babies born by cesarean section are more susceptible to immunological diseases such as diabetes, asthma or leukaemia than those born by normal vaginal deliveries. “Our results provide the first pieces of evidence that early so-called epigenetic programming of the immune system during birth may have a role to play,” says researcher Mikael Norman. Blood was sampled from the umbilical cords of 37 newborn infants just after delivery and then again three to five days after the birth. The blood samples were analyzed to see the degree of DNA-methylation (chemical altering of the DNA) in the white blood cells; the 16 babies born by cesarean section exhibited higher DNA-methylation rates immediately after delivery than the 21 born by vaginal delivery. Three to five days after birth, DNA-methylation levels had dropped in the c-section infants to the degree that there were no longer significant differences between the two groups. “Although we do not know yet how specific gene expression is affected after Caesarean section deliveries, or to what extent these genetic differences related to mode of delivery are long-lasting, we believe that our findings open up a new area of important clinical research,” concludes lead author Titus Schlinzig, a research fellow at Karolinska Institute. [Published July 2009 in *Acta Paediatrica*.]

HORMONAL LINK TO BREASTFEEDING SUCCESS (AND BENEFITS?)

A Norwegian study concludes that difficulty breastfeeding a newborn may involve higher levels of the male hormone testosterone during pregnancy. The team from the Norwegian University of Science and Technology followed 180 pregnant women, including those at risk of delivering a small baby—a risk that is known to be influenced by higher levels of testosterone. After taking into account other factors such as age, education and smoking, they still found a clear relationship between low rates of breastfeeding at three and six months and higher levels of testosterone. The team suggests that the hormone may impact negatively on the development of glandular tissue in the breast, in turn affecting her ability to feed her baby. Lead researcher Professor Sven Carlsen said: “Basically a mother who finds she has difficulty shouldn't feel guilty - it probably is just the way it is, and her baby will not suffer for being fed formula milk.” He argues that it is the hormone balance in the womb that explains both a mother's ability to breastfeed and any apparent health benefits of a baby who is breastfed - rather than the breast milk itself. Last year Professor Carlsen's team reviewed 50 international studies on the relationship between breastfeeding and health. Based on this work he concludes the benefits of breast over formula milk may have been exaggerated. “When you look at the epidemiological studies and try to strip away the other factors, it is really hard to find any substantial benefits among children who were breastfed as babies.” Professor Ashley Grossman of the Centre for Endocrinology at Barts in London said the suggestion that male hormones may influence the ability to feed was an interesting one. “We are learning more and more about how the environment of the womb may influence a child's future development - this is really where it's all happening, and it has a much greater impact than whether or not a child is breastfed or not.” [Reported Jan. 2010 in BBC News, <http://news.bbc.co.uk/go/pr/fr/-/2/hi/health/8443904.stm>.]

HORMONAL LINK TO CHILDBIRTH COMPLICATIONS

A Dutch team has found even “low to normal” levels of thyroid hormone thyroxin may cause problems during labor and delivery. In their study of nearly 1,000 apparently healthy mums-to-be, lower levels of thyroxin at 36 weeks of pregnancy was strongly linked to abnormal positioning of the baby’s head and risk of assisted delivery. Although still head down, the babies tended to be posterior, making labor generally longer and harder, and more likely to end in an assisted delivery with forceps or suction, or with a cesarean. The researchers from the University of Tilburg believe the hormone problem is so common, affecting about one in 10 pregnancies, that a blood test for it should become a routine part of prenatal care. Too little thyroxin is already known to complicate pregnancy, increasing the risk of miscarriage, premature birth and pre-eclampsia. Professor Victor Pop and his team believe the relative lack of hormone might stop the unborn child moving as well as it should, preventing the baby from getting into the optimal position for labor. He said more work was needed to explain the link found and to see if giving pregnant women extra thyroxin, even if they do not have full-blown thyroid disease, would be beneficial. Professor John Lazarus, an expert in endocrinology at Cardiff University School of Medicine, said the link found was not necessarily causal. “However it does highlight the importance of checking thyroid hormone levels in pregnancy.” [Reported Dec. 2009 in BBC NEWS, <http://news.bbc.co.uk/go/pr/fr/-/2/hi/health/8425901.stm>]

BABIES “CRY IN MOTHER’S TONGUE”

New findings by German researchers suggest that babies begin to pick up the nuances of their parents’ accents while still in the womb. Studying the cries of 60 healthy babies born to families speaking French and German, they found that French newborns cried with a rising “accent” while the German babies’ cries had a falling inflection. Writing in the journal *Current Biology*, they say the babies are probably trying to

form a bond with their mothers by imitating them. This extends earlier findings that fetuses could memorize sounds from the outside world in the last three months of pregnancy; are particularly sensitive to the contour of the melody in both music and human voices; and that infants can match vowel sounds presented to them by adult speakers, after 12 weeks of age. Says lead researcher Kathleen Wermke from the University of Wurzburg, "The dramatic finding of this study is that not only are human neonates capable of producing different cry melodies, but they prefer to produce those melody patterns that are typical for the ambient language they have heard during their fetal life." Debbie Mills, from the department of developmental cognitive neuroscience at Bangor University, said: "This is really interesting because it suggests that they are producing sounds they have heard in the womb and that means learning and that it is not an innate behavior." [Reported Nov. 2009 in BBC News, <http://news.bbc.co.uk/go/pr/fr/-/2/hi/health/8346058.stm>.]

STUDY EXAMINES SIDS AND COSLEEPING

A four-year, population-based, case-control study conducted in southwest England, investigated risk factors for Sudden Infant Death Syndrome (SIDS), including an examination of specific circumstances in which SIDS occurs while cosleeping (infant sharing the same bed or sofa with an adult or child). Researchers found that many of the SIDS infants had coslept in a hazardous environment. They concluded that the major influences on risk included use of alcohol or drugs before cosleeping, regardless of parents' socioeconomic status. In addition, more mothers of SIDS infants smoked during pregnancy, and a greater proportion of SIDS infants were preterm. [Published Oct. 2009 in BMJ http://www.bmj.com/cgi/content/abstract/339/oct13_1/b3666, reported by National Healthy Mothers, Healthy Babies]

TECHNIQUE TO MEASURE PLACENTA'S VOLUME

Yale researchers have developed an easy method of measuring the volume of the placenta during pregnancy. Harvey J. Kliman, the doctor who developed the technique with a team of scientists, likens the placenta to a fuel tank, and the measurement to a gas gauge. "Here's the sad part," he says: "A minute before your car runs out of gas, it still runs perfectly normally. If you don't have a gauge, you don't know that it's literally running on fumes. If you did, you would do something." A small placenta can endanger a fetus by limiting the delivery of food and oxygen. Dr. Kliman worked with his father, Merwin Kliman, a mathematician from Hofstra University, who derived a formula for finding the placenta's volume using measurements that can be obtained during an ultrasound typically done halfway through a pregnancy: the placenta's maximal width, maximal height and thickness at maximal height. "The problem is that a placenta is shaped like a yarmulke," making it hard to measure, the younger Kliman said. "It's as if you molded clay on top of a ball." But he said the formula could be programmed into an ultrasound machine. "This should be routine," he added. "It's so easy to do." [Reported in the NTY; read the Amer J of Perinatology abstract at <http://www.thieme-connect.de/ejournals/abstract/ajp/doi/10.1055/s-0029-1234034>]

DESIGNING CARS FOR EXPECTANT MOTHERS

UK researchers have developed a new computer model—“Expecting”—that can be used as a tool for automotive designers to help ensure that vehicles can accommodate the safety needs of pregnant occupants. The researchers explain that the safety of pregnant women is often compromised because of the changes in their body size and shape that occur during pregnancy. These changes are not limited to the abdominal region, but affect the chest and thigh areas, all of which can affect sitting and driving posture and seat belt use. Inappropriate seat belt is a significant problem for pregnant women. It is often difficult and sometimes impossible for a pregnant user to get her seat belt into a comfortable position. Another problem is pressure on the abdomen from the steering wheel in the event of a crash. Researchers have found that more than one in ten pregnant women finds the gap between their abdomen and the steering wheel is less than 2.5 cm and for some there is no gap at all. This proximity to the steering wheel may put the placenta at increased risk of abruption from direct impact with the steering wheel. Serpil Acar and Alix Weekes have taken 48 different measurements from 100 pregnant women in different postures and at different terms in their pregnancies to create their computer model. The measurements show that even the designs that take into account the measurements of larger men, may still exclude majority of women at the late stages of pregnancy. “Expecting” has been further developed to become the world’s first computational model of a 38-week pregnant car occupant, complete with a detailed representation of a fetus within the uterus, and is to be used in further research, including the simulation of crash scenarios. [Published in Intl J of Vehicle Design; reported at www.sciencedaily.com/releases/2009/09/090903165013.htm]

FISH OIL DURING PREGNANCY MAY SLASH INFANT ALLERGY

A new randomized, placebo-controlled double-blind study finds that omega-3 supplementation during pregnancy and lactation may reduce a child’s risk of developing allergic sensitization to egg, IgE-associated eczema and food allergy during the first year of life. Immunoglobulin E (IgE) is the predominant antibody associated with an allergic response. The Swedish study found that the occurrence of eczema and food allergies was 16 and 13 per cent lower, respectively, in infants of mothers receiving the fish oil supplements during pregnancy and the early months of breast-feeding, compared to placebo, according to findings published in the journal *Acta Paediatrica*. recruited 145 pregnant women with allergies, or with partners or other children with allergies. Starting at the 25th week of their pregnancy, and continuing for between three and four months of breastfeeding, the women were randomly assigned to receive either daily fish oil supplements providing 1.6 g of EPA and 1.1 g of DHA (Bio Marin capsules from Pharma Nord, Denmark), or placebo. Among the possible mechanisms proposed, the Linköping-based scientists proposed that both DHA and EPA may produce changes in the fluidity of the membranes of immune cells, and reduce the levels of the omega-6 fatty acid arachidonic acid (AA). By inhibiting the metabolism of AA, the formation of the less inflammatory eicosanoids is favored, which may be linked to lower allergic sensitization in the children. “Additional anti-inflammatory effects of EPA and DHA in early immune development through bioactive lipids, lipoxins, neuroprotectins and resolvins, have been discussed but it is not clear whether those are plausible explanatory mechanisms regarding our findings,” they said. [Published in *Acta Paediatrica*; read online at <http://www.nutraingredients.com/Product-Categories/Nutritional-lipids-and-oils/Fish-oil-during-pregnancy-may-slash-infant-allergy>]