

The APPPAH Newsletter

News From the First Frontier: Conception To Birth

Official Bulletin of the Association for Prenatal & Perinatal Psychology & Health, Winter 2012/13

Maternal Stress Shortens Fetal Telomeres and Programs Aging and Disease *In Utero*

Bruce Wilson (bruce@medicalwriter.ca)

Maternal stress during pregnancy is associated with shorter telomeres in newborns, according to researchers at the Universities of California at Irvine and San Francisco, and the University of Pittsburgh.

Telomeres are short strands of DNA at the end of each chromosome that protect the chromosomes from deterioration or from fusing with other chromosomes. After each cell division, the telomeres become shortened and an enzyme known as telomerase adds more DNA to keep the telomeres intact. But over time, the telomeres reach a critical short length and the cell ages and dies. For this reason, telomere length has long been established as a marker for human aging – the shorter the telomeres, the earlier you will die.

Studies in the past few years have shown that the telomeres are far more than a marker for aging; they also mediate epigenetic changes, preserve the overall structure of chromatin (the DNA and proteins in the cell nucleus), and regulate gene expression. In effect, the telomere/telomerase system is one of the major mediators of health and disease throughout the lifespan.

A number of landmark studies have shown that psychological stress in adults is associated with shortening of the telomeres and accelerated aging. More recently, Sonja Entringer, Elissa Epel, and colleagues demonstrated that maternal psychological stress during pregnancy correlates with shorter telomeres in young adulthood. [1] Now they've gone one step further to show that telomere shortening occurs in the fetus when the mother is psychologically stressed. [2] By measuring telomere length in leukocytes taken from the cord blood and assessing the mother's stress during her pregnancy, they were able to correlate the length of the telomeres with the degree of stress experienced by the mothers. In the words of the authors, "it is plausible that in utero telomere biology represents a molecular mechanism whereby stress exposure in this critical period *before* birth can impact aging and subsequent disease susceptibility over the lifespan."

Short telomeres are also sign of oxidative stress in the womb, whether caused by maternal psychological stress or other stressors. In other words, womb stress causes senescence of fetal and placental tissues which can trigger preterm birth. One group at the University of Texas Medical Branch at Galveston correlated short fetal leukocyte telomere length with preterm prelabor rupture of the membranes and characterized the phenomenon as a "placental membrane disease likely mediated by oxidative stress-induced senescence." [3]

Findings like this emphasize how important it is to reduce maternal stress during pregnancy and especially in the critical period before birth. Once the telomeres are shortened, the damage is done, although there have been promising attempts to stimulate telomerase activity in adults through mindfulness meditation and lifestyle factors such as a healthy diet and nurturing relationships. [4]

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However, even if such efforts are proved to reduce negative effects of stress from the primal period, it is obviously much better to prevent that damage in the first place, especially since problems in early stages of development might easily lead to a cascade of further harmful consequences.

References

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 2. Entringer S, Epel ES, Lin J, et al. Maternal psychosocial stress during pregnancy is associated with newborn leukocyte telomere length. *Am J Obstet Gynecol*. 2013;208(2):134.e1-7.
 3. Menon R, Yu J, Basanta-Henry P, et al. Short fetal leukocyte telomere length and preterm prelabor rupture of the membranes. *PLoS One*. 2012;7(2):e31136.
 4. Daubenmier J, Lin J, Blackburn E, et al. Changes in stress, eating, and metabolic factors are related to changes in telomerase activity in a randomized mindfulness intervention pilot study. *Psychoneuroendocrinology*. 2012;37(7):917-28.
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Another relevant study:

The Contribution of Maternal Stress to Preterm Birth: Issues and Considerations

(Wadhwa, Entringer, Buss, and Lu)

Summary and Conclusion

The question of the contribution of maternal stress to preterm birth is a challenging issue. Concepts in evolutionary biology and developmental plasticity support a rationale for considering a role for maternal stress in preterm birth. Evidence from population-based epidemiological and clinical studies suggests that after accounting for the effects of other established socio-demographic, obstetric and behavioral risk factors, women reporting higher levels of psychological stress during pregnancy are at significantly increased risk of preterm birth. However, at the individual level, the specificity and sensitivity of maternal stress as a predictor of preterm birth risk is, at best, modest. In order to translate population-level findings to public health and clinical practice applications it is critical to identify which subgroups of women, in what circumstances, and at which stage(s) of gestation, may be particularly susceptible to the potentially detrimental effects of high prenatal stress.

The full article may be found at:

<http://www.ncbi.nlm.nih.gov/pmc/articles/PMC3179976/>

Letter from the President

Dear APPPAH Members, Friends, and Colleagues,

It's a wonderful time of the year, with the light returning day by day, and Spring on the near or far horizon, depending on where you live. And there is much to be thankful for, especially the wonderful for, especially the the wonderful Fall 2012 Congress. We've received many outstanding reviews expressing gratitude. For example, our public relations chair and midwife, Deb Puterbaugh said, "Wow, what an amazing congress! Jeane Rhodes and her team did such a great job choosing the speakers and organizing interactive panels after the keynotes to benefit from participant feedback and commentary. I left the Congress more inspired than when I arrived! I believe in APPPAH's message, and know deep in my heart that what APPPAH can bring to the world is vital for our healthy evolution as a species. As Michel Odent, MD, contends, it is vital for our very survival." Dr. Raylene Phillips, our keynoter who presented "The Sacred Hour" said, "APPPAH is such an amazing community of kindred spirits who validated my long-held "knowing" that babies are conscious and aware. I am proud and honored to be a part of this group of people who work individually and together with amazing diversity, incredible talents, and immense passion to change the world into a healthier place for women and babies."



I'd like to share some additional comments. David Chamberlain said, "If we torture babies, where do we get off thinking they will become wonderful people?" Marjie Hathaway said, "Thomas Verny, spoke on 'Hunger for the Absent Parent'. This is a brave topic for today's generation of parents. Thank you." Another participant felt grateful for our ED, Maureen Wolfe, commenting, "Most people have no idea that Maureen Wolfe is the spine of APPPAH, quietly making sure everything functions. She has been with us forever." Most people informed me that the keynote addresses and follow-up panels were sensational. Much gratitude to keynoters Elan McAlister, Peter Nathanielsz, Thomas Verny, Joel Evans, Stan Grof, Carista Luminaire, and Michael Mendizza for their inspiring presentations.

The 2013 Congress is now on the immediate horizon, and we anticipate that it will be another dynamic and powerful experience for all. This Congress is co-chaired by 2012 co-chair Ellyne Skove and new co-chair Peg Bledsoe. We have an outstanding group of keynote speakers including Wendy McCarty, Annie Brook, Gary Malkin, and Pam England. APPPAH will bestow a birth artist of the year award, and the worthy recipients are Gary Malkin, Lisa Rafel, and David Surrenda. Together, they created "Safe in the Arms of Love", a CD and book combo to promote bonding with parents and babies in hospital NICU's. The Congress also features the opening of the APPPAH certification program, where certain sessions provide CEUs toward certification as a pre and perinatal educator. The basic principles of PPP can be applied within many professions.

I welcome you to an enticing and promising Congress on the coastline of California, with beaches and sunsets to die (or live) for. Hoping to see you there.

Warmly,

William R. Emerson

William R Emerson, Ph.D.
APPPAH President

2013 Congress: Welcome from Congress Chairs



APPPAH'S 18TH INTERNATIONAL CONGRESS

BIRTH PSYCHOLOGY in ACTION: TRANSFORMATION through the CREATIVE & HEALING ARTS

November 14-17, 2013 - Asilomar Conference Grounds, Pacific Grove, CA

The 2013 annual international Birth Psychology Congress is pleased to return to the natural beauty of Asilomar State Park in Pacific Grove, California, on the Monterey Peninsula.

Within the supportive surround of salt air, ocean breezes, majestic pines, ambient sounds of the waves, and the historic rustic beauty of Asilomar's architecture, this Congress has a mission to highlight the sensory experiences of pre and perinatal psychology and health focusing on how the healing and creative arts play a primary role in this field. We will bring to the fore the necessity of using somatic and creative healing arts in both preventative and restorative aspects of conception, gestation, birth, and the perinatal period for babies and their families. This Congress will be a true marriage of the arts within the sciences. We encourage presenters and attendees in the fields of creative and expressive arts to attend along with psychologists, social workers, NICU staff, ob/gyn professionals, childbirth educators, doulas, pediatricians, early childhood educators, health advocates, and professionals in somatic healing practices.

Please join us!

Ellynn and Peg

Congress Chairs

Ellynn Skove is a licensed creative arts therapist and Polarity therapy practitioner, focusing on pre and perinatal health. She is the founder and director of GoGo Babies and True North Wellness, and has worked with hundreds of babies and their families providing support through the arts as well as birth trauma healing. Ellynn co-chaired the 2012 APPPAH CONGRESS. She was a guest of OMEAP at the UN Commission on the Status of Women, presented at the 2012 Motherhood & Spirituality Conference, among others. Ellynn is the mother of two.

Peg Bledsoe is an Occupational Therapist who has been working with birth trauma since 1988. She has been involved in birth training with William Emerson and Ray Castellino and is training in pre and perinatal psychology. She also has had Craniosacral Training, Myofascial Release Training, and done Neurolink Integration System work.

Early Registration Savings ~ Sign Up Before March 1st

Planning to attend this year's congress?

Be sure to take advantage of the reduced rates available through March 1st.

[Register Now](#)

<http://birthpsychology.com/2013-conference>

Last Chance to submit Proposal

Professionals working in the field of prenatal and perinatal psychology and related disciplines are invited to present their research and expertise. A peer review committee will review each proposal.

Deadline for submission is **February 22, 2013**.

[Proposal Application](#)

Go to: <http://birthpsychology.com/2013-conference/call-proposals>

Congress Dates: November 14-17, 2013

Congress Place: Asilomar, Pacific Grove, California

2013 Congress Keynote Speakers

Annie Brook, somatic psychotherapist and movement artist, is a highly skilled clinician, author, and public speaker. Her presentation "How Birth Influences Behavior: Working with the Earliest Brain States and Cellular Repair" - a session not to be missed!



Pam England, teacher and midwife for over 20 years, will explore the social seeds of birth trauma and discuss ways to minimize emotional birth trauma in her presentation "Birth Story Medicine" ~ a way to change the U.S. birth culture.



Gary Malkin, an award-winning composer dedicated to making a difference in the world by creating music that inspires the heart and catalyzes healing.



Wendy Anne McCarty has worked with families for over 40 years using energy psychology to help heal and support babies and families. She will share stories in her presentation "Aligning Our Multidimensional Wholeness and Awakening our Human Experience within Its Embrace: Babies, Families and All of Us!"



2013 Congress Training Sessions

"Sensory Integration: Tools and Tips for Integrating Birth to Health" ~ Peg Bledsoe, an occupational therapist, will teach a variety of treatment techniques that support Sensory Integration and healing of birth trauma.



"Creative Arts Solutions for Peri-natally Based Relationship Issues" Kathlyn Hendricks will show how unresolved dynamics from the pre- and perinatal period shape partner choice and relationships. Learn to notice these patterns and heal them.



"The Sacred Hour: Critical Importance of Uninterrupted Skin to Skin in the First Hour after Birth"

Raylene Phillips, 2012 recipient of the Thomas Verry Award, will illustrate and describe practical ways to change the culture of hospitals to support uninterrupted skin to skin after birth.



This is going to be a fabulous congress! Be sure to register early!

How People Change: Relationships and Neuroplasticity in Psychotherapy

March 8-10, 2013 | UCLA | Ackerman Union Grand Ballroom

Join us as we continue to integrate research related to the nature of the brain, mind and body. We are moving towards remarkable new insights into how people change. We will explore to the deeply social nature of the brain, investigate the properties of healing relationships and learn ways that new scientific insights provide us with a deeper understanding of how psychotherapy works.

In addition to understanding the mechanisms of change, we will examine how the social brain results in the kinds of communication that adds to the process of change.

Speakers include: Jessica Benjamin, Bonnie Goldstein, Peter Levine, Bruce Perry, Mary Pipher, Allan Schore, and Daniel Siegel.

For more info: <https://www.uclaextension.edu/attachment/Pages/default.aspx>

APPPAH Publications: *The Journal & the Newsletter*

JOPPPAH (*Journal of Prenatal & Perinatal Psychology and Health*) is our peer-reviewed publication whose original mandate to publish current findings from the growing field of prenatal & perinatal psychology later became refined and expanded to cover:

- Psychological factors that affect conception, pregnancy, labor, delivery and the post-partum period;
- The reciprocal mechanisms of interaction between the pregnant mother and her unborn and sentient child and the mother and her newborn;
- The influence of the family, society, and the environment on the pregnant mother and her unborn child;
- Evidence-based measures that will improve the emotional well being of mothers, fathers, and newborns;
- The psychological effects of medical technology during conception, pregnancy, labor, and delivery on all parties concerned;
- Methods of prevention and intervention/resolution of prenatal and perinatal traumas with children and adults;
- Interfaces between prenatal and perinatal psychology and medicine, genetics, developmental psychology, anthropology, ethics and the law.

JOPPPAH is looking for high-quality research or clinical papers focused on the psychological dimensions of human reproduction and pregnancy, as well as the mental and emotional development of the unborn and newborn child.

Please contact the editors at journal.editor@birthpsychology.com for complete author guidelines and/or to submit your manuscript of 2,000 to 8,000 words.

APPPAH Welcomes Two New Associate Editors for the Journal !

Kerry Cerelli, MA, CD (DONA) is a certified labor and birth doula, and an early childhood educator. She has been happily running her independent doula practice over the last five years, attending home and hospital births. Her approach to doula work is somewhat unique in that she supports the perspective of the baby's experience, consistent with APPPAH's mission statement. She has also been active in supporting families in preparing for conception, pregnancy, and parenthood. As a free lance editor, Kerry focuses on articles and books in the field of pre and perinatal psychology, and runs a charity organization that provides financial support for women wanting home births.



Kerry Cerelli



Kate White

Kate White is passionate about communications and media, especially about how to apply the most effect means to disseminate a message. Her career previous to one as a therapist was in the field of communication for social change, working primarily in Africa. She is also passionate about research especially in the field of pre and perinatal psychology and health. She is a mother of two children, holds a BA and MA in Communication and is happily married and living in the Charlottesville, VA in the Blue Ridge Mountains. Her website is: belvederearts.com

Kate and Myrna Martin co-wrote a long article for Pathways to Family Wellness, the feature of their winter issue, The Science of Happy Babies (pathwaystofamilywellness.org). A film was made about her work. You can google that on youtube. <http://www.youtube.com/user/pathwaysconnect>

Kate has also been doing podcasts on the evidence around birth, pregnancy, postpartum interventions: <http://www.wina.com/pages/14964032.php>

She was recognized by Birth Matters, VA a non-profit in Virginia that seeks to improve the culture of birth in Virginia for my work with moms, babies, and professionals. It was a peer-reviewed, peer-nominated award for the central Virginia region: www.birthmattersva.org

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APPPAH's quarterly **Newsletter** is a bulletin featuring notable accomplishments of our worldwide membership, information on upcoming events, our collaborations with other organizations, brief book reviews, and notes/commentary on prenatal issues in the press and popular culture.

APPPAH Members: Please send news items, reviews, events, commentary, and other items to the Newsletter Editor, Peter G. Prontzos at: pprontzos@langara.bc.ca

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Nobel Prize winning University of Chicago Economics Professor James Heckman

The Heckman Equation - invest in early human development!

"The highest rate of return in early childhood development comes from investing as early as possible, from birth through age five, in disadvantaged families.

Starting at age three or four is too little too late, as it fails to recognize that skills beget skills in a complimentary and dynamic way. Efforts should focus on the first years for the greatest efficiency and effectiveness. The best investment is in quality early childhood development from birth to five for disadvantaged children and their families."

["Only one thing wrong....it should be from CONCEPTION through age five." – Bruce Wilson]

<http://www.heckmanequation.org/>

MEDIA WATCH

This section features 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.

Docs: Wait - or get out of Utah's bad air - to conceive.

A growing body of research is linking air pollution to negative birth outcomes, most often prematurity, low birth weight and restricted growth in the womb... That study, published in the peer-reviewed journal *Environmental Health Perspectives*, used data from 3 million births in nine countries. Low birth weight is linked to problems in later childhood, including impaired intellectual ability, elevated blood pressure, diabetes and obesity. [Feb. 15, 2013; Salt Lake Tribune:

<http://www.sltrib.com/sltrib/news/55825755-78/pollution-utah-birth-studies.html.csp>]

'Laborist' Obstetrical Care Improves Pregnancy Outcomes.

The "laborist" concept has been around for nearly a decade. In this model, obstetricians provide 24-hour a day on-site staffing of labor units... The study showed that using the laborist model resulted in 15 percent fewer labor inductions, reduced maternal length of stay (0.09 days), and a significant reduction in preterm delivery (17 percent). [Feb. 11, 2013; ScienceDaily:

<http://www.sciencedaily.com/releases/2013/02/130211102302.htm#.URprlrErmWI.email>]

Abnormal Brain Development in Fetuses of Obese Women.

In a study presented in February at the Society for Maternal-Fetal Medicine's meeting in San Francisco, researchers from Tufts Medical Center presented findings showing the effects of maternal obesity on a fetus, specifically in the development of the brain. The study... found that fetuses of obese women had differences in gene expression as early as the second trimester, compared to fetuses of women who were a healthy weight. [ScienceDaily; Feb. 11, 2013:

<http://www.sciencedaily.com/releases/2013/02/130211102256.htm>]

Air pollution linked to low birth weight.

Mothers who breathe the kind of pollution emitted by vehicles, coal power plants and factories are significantly likelier to give birth to underweight children than mothers living in less polluted areas... The study is believed to be the largest to examine how newborns' bodies are affected by air quality, an issue that has raised particular concern in China and other developing nations. [6 Feb. 2013; San Francisco Chronicle: <http://www.sfgate.com/health/article/Air-pollution-linked-to-low-birth-weight-4254514.php?cmpid=emailarticle&cmpid=emailarticle>

California Intends to Declare BPA a Reproductive Health Hazard.

Under state law, items that contain a certain level of the chemical bisphenol A would need warning signs for consumers. [Scientific American; Jan. 25, 2013:

http://www.scientificamerican.com/article.cfm?id=california-intends-to-declare-bpa-a-reproductive-health-hazard&WT.mc_id=SA_CAT_SP_20130128]

Fathers' Leave, Fathers' Involvement and Child Development - Are They Related? Evidence from Four OECD Countries.

Previous research has shown that fathers taking some time off work around childbirth, especially periods of leave of 2 or more weeks, are more likely to be involved in childcare related activities than fathers who do not do so. Furthermore, evidence suggests that children with fathers who are 'more involved' perform better during the early years than their peers with less involved fathers. These results suggest that what matters is the quality and not the quantity of father-child interactions. [Jan. 14, 2013; OECDiLibrary:

http://www.oecd-ilibrary.org/social-issues-migration-health/fathers-leave-fathers-involvement-and-child-development_5k4dlw9w6czq-en]

Mode of birth and women’s psychological and physical wellbeing in the postnatal period.

Physical and psychological problems after childbirth are common, and may have a significant negative and long-term impact on women’s wellbeing and daily functioning. The method of birth may be a particularly important factor influencing women’s health and wellbeing following birth, however, population-wide evidence is limited. This study uses data from 5,332 women who responded to a national survey of women’s experiences of maternity care in England. We examined women’s postnatal wellbeing in the first three months after birth, and whether these varied by mode of birth. [BMC Pregnancy and Childbirth; Nov. 28, 2012: <http://www.biomedcentral.com/1471-2393/12/138/abstract>]

Maternity Program Results in Fewer Cesarean Sections, Shorter Hospital Stays for Mothers.

A program delivering collaborative maternity care resulted in fewer Caesarean deliveries, shorter average hospital stays and higher breast-feeding rates for mothers, according to a study in the *Canadian Medical Association Journal*. [ScienceDaily; Sept. 10, 2012: <http://www.sciencedaily.com/releases/2012/09/120910122345.htm#.UNeqhh4AG9o.email>]



**Early Health Risk Factors for Violence:
Conceptualization, Review of the Evidence, and Implications
Jianghong Liu, PhD[Assistant Professor]**

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Abstract

Violence and aggression are public health problems that can benefit from ongoing research into risk reduction and prevention. Current developmental theories of violence and aggression emphasize biological and psychosocial factors, particularly during adolescence. However, there has been less focus on understanding the interactive, multiplicative effects of these processes. Furthermore, little attention has been given to the pre-, peri-, and postnatal periods, where prevention and intervention may yield effective results. Early health risk factors that influence negative behavioral outcomes include prenatal and postnatal nutrition, tobacco use during pregnancy, maternal depression, birth complications, traumatic brain injury, lead exposure, and child abuse. There is an ample literature to suggest that these early health risk factors may increase the likelihood of childhood externalizing behaviors, aggression, juvenile delinquency, adult criminal behavior, and/or violence. This paper proposes an early health risk factors framework for violence prediction, built on existing developmental theories of criminal behavior and supported by empirical findings. This framework addresses gaps in the adolescent psychopathology literature and presents a novel conceptualization of behavioral disturbance that emphasizes the pre-, peri-, and post-natal periods, when a child’s development is critical and the opportunity for behavioral and environmental modification is high. Implications for such a framework on violence prevention programs are discussed.

Full paper: <http://www.ncbi.nlm.nih.gov/pmc/articles/PMC3052794/>

Gratitude to Jeane Rhodes

On behalf of APPPAH and its board of directors, I want to express my immense gratitude to Jeane Rhodes for years of dedicated service. She was an associate editor of our Journal from 2002 - 2008, and editor-in-chief from 2009 to 2012, the latter period including 12 editions—over 720 quality pages. In addition, she has been an APPPAH member for 23 years, was a board member for 3 years, and a vice president. She also participated in numerous congress planning committees, and co-chaired the 2011 and 2012 Congresses, both of which were outstanding and memorable. She resigned from her editorial and board positions in December of 2012, pleased with her tenure of service and accomplishments. She continues as a member of APPPAH, a faculty member of the Chicago School of Professional Psychology (CSPP), and an occasional mentor to APPPAH.

She leaves behind a clear legacy. She was the first Ph.D. graduate from SBGI in pre and perinatal psychology. David Chamberlain and Thomas Verny served as course advisors, and Emerson Training Seminars was an important portion of her graduate degree. She has always been a leader in bringing pre and perinatal psychology to academia, starting in the early 90s with a local community college, and continuing as a faculty member at SBGI and CSPP, where her work is ongoing. She devoted so much time getting APPPAH's message out the world, including managing the APPPAH Facebook page. She is the longest tenured associate and journal editor in APPPAH's history, her service in that capacity spanning over 9 years. Jeane also wrote and published a book entitled *The Birth of Hope*, available on Amazon. and was the first American to discover and document that hatha yoga begins in the womb! There are more legacies to name, but one of my favorites is that she invited her grandchildren into her doctoral research, so they share a bond as pre and perinatal advocates.

I want to congratulate Jeane for claiming a large part of her life back, including family, grandchildren, and friends. And on behalf of APPPAH I would like to say we wish you well, and cherish whatever precious time we have left to benefit from your wisdom and knowledge and enjoy your camaraderie. We know you're not going away and that you are continuing to advocate for prenatals, neonates, and for what all of us at APPPAH stand for and believe in.

Many blessings to you,

William R. Emerson, Ph.D.
President of APPPAH

Birth of a Bond: Illustrating a Year of Mother and Baby Development By Katherine Harmon

From embryo to infancy, biologically accurate illustrations from the VisualMD.com illuminate changes in mother and baby as the two grow and develop together

http://www.scientificamerican.com/article.cfm?id=illustration-pregnancy-bond&sc=WR_20100514

