

Pre-Birth Trauma

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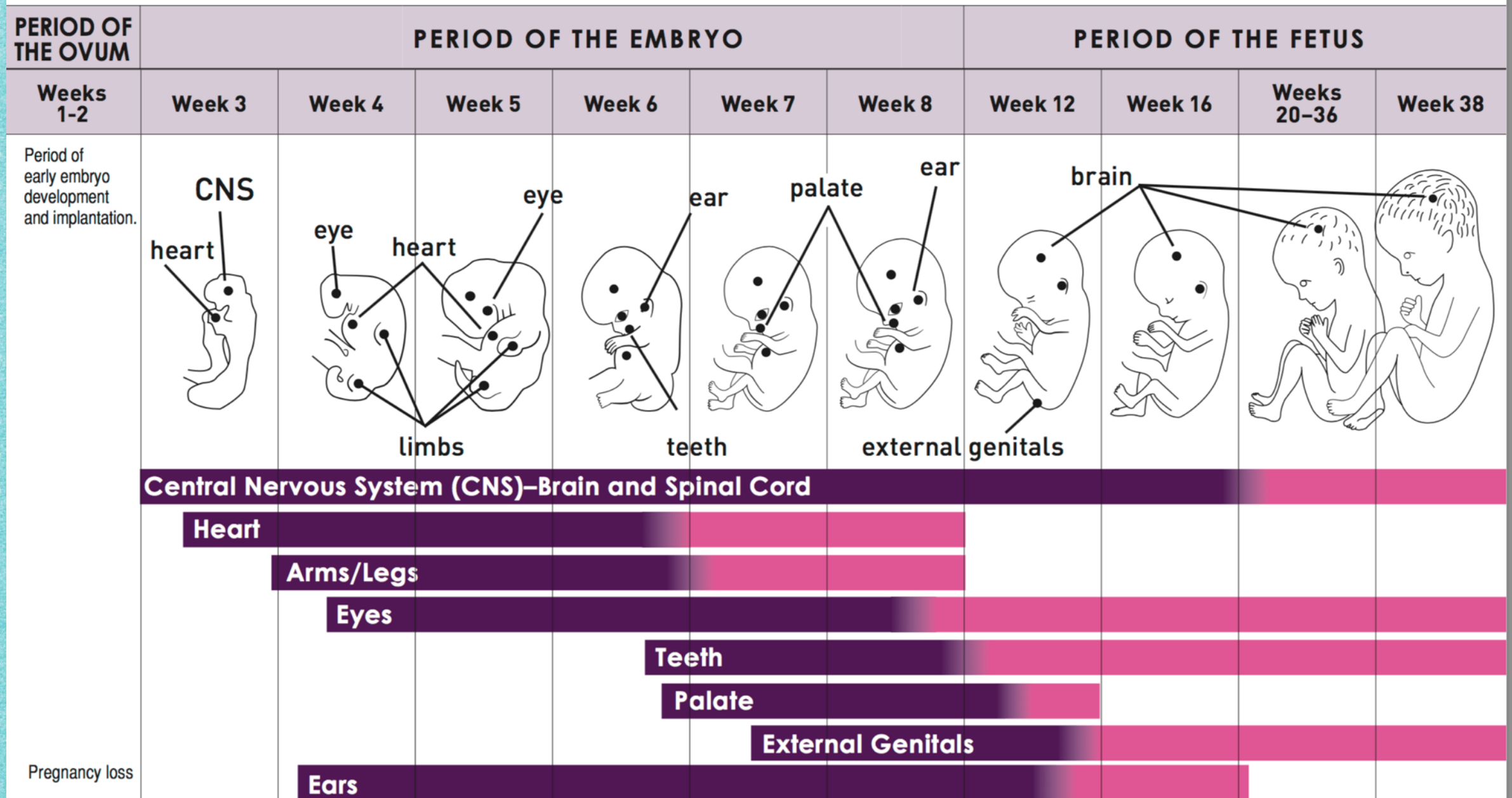
June 28, 2018



FETAL DEVELOPMENT CHART

This chart shows vulnerability of the fetus to defects throughout 38 weeks of pregnancy.*

• = Most common site of birth defects



Period of development when major defects in bodily structure can occur.

Period of development when major functional defects and minor structural defects can occur.

Adapted from Moore, 1993 and the National Organization on Fetal Alcohol Syndrome (NOFAS) 2009

*This fetal chart shows the 38 weeks of pregnancy. Since it is difficult to know exactly when conception occurs, health care providers calculate a woman's due date 40 weeks from the start of her last menstrual cycle.

Interfering Factors

Culture

Family traditions/beliefs

Diabetes

Placenta issues

Pre-eclampsia

Drug and alcohol usage

Bedrest (when and how long)

Breech (when and how long)

Movement en utero (change)

Cord wrap (where & how many wraps

Pitosin or other drugs

Suction

Emergency or planned C-sections

Stress (when and what)

Heart rate (too fast, too slow, erratic)

Weight and size of mom & baby

Parenting style

Generational Issues

Trauma is generational if patterns of toxic stress continue.
Goal is to treat mom and unborn child to stop cycle of stress.
If Mom has unresolved trauma, it may be repeated and attachment may be a challenge.

- What does this mom need to be healthy?
- What does she need to heal to be a parent in the entire year of pre conception to birth
- How can we help the cycle of trauma at each step of pregnancy?

Stress in Pregnancy

Placental CRH stimulates the fetal HPA axis, fetal cortisol secretion, organ maturation and growth (Grammatopoulou, 2008). Increased concentrations are linked to growth restriction (Wadhwa et al., 2004).

Placental CRH is associated with the timing of pre-, post-, and at term deliveries (McLean et al., 1995).

Chronic but not acute

Elevated CRH concentrations indicate placental response to adverse intrauterine conditions—enhance the flow of nutrients to the fetus and accelerate growth (Gangestad et al., 2012). If these heightened metabolic demands cannot be met anymore, birth onset is triggered.

(Corticotropin-releasing hormone (CRH) Urocortin(UCN)

Stress in Pregnancy

Extreme exposure to toxic stress can change the stress system so that it responds at lower thresholds to events that might not be stressful to others, and, therefore, the stress response system activates more frequently and for longer periods than is necessary.

National Scientific Council on the Developing Child
(2005/2014).

Excessive stress disrupts the architecture of the
developing brain: Working paper no. 3. Updated Edition. [http://
developingchild.net](http://developingchild.net).

Child Conceived From -Rape

More likely to suffer severe psychological
Issues with most common being:

PTSD

Depression

Anxiety

32,000 pregnancies and 12,000 carried to
term in U.S. in 2013

Soloman, 2014

Rape

- Poor parent child relationships
- Loving bond effected by violent rape
- Abusive or neglectful parenting
- Kids live in guilt and embarrassment

“I’ve always felt rejected by my mother and the rest of the family.

And now she feels responsible for the problems I’m having, and I feel guilty about that.”

Children Born of Rape Face a Painful Legacy – The Trauma & Mental Health Report

Child Conceived From -Rape

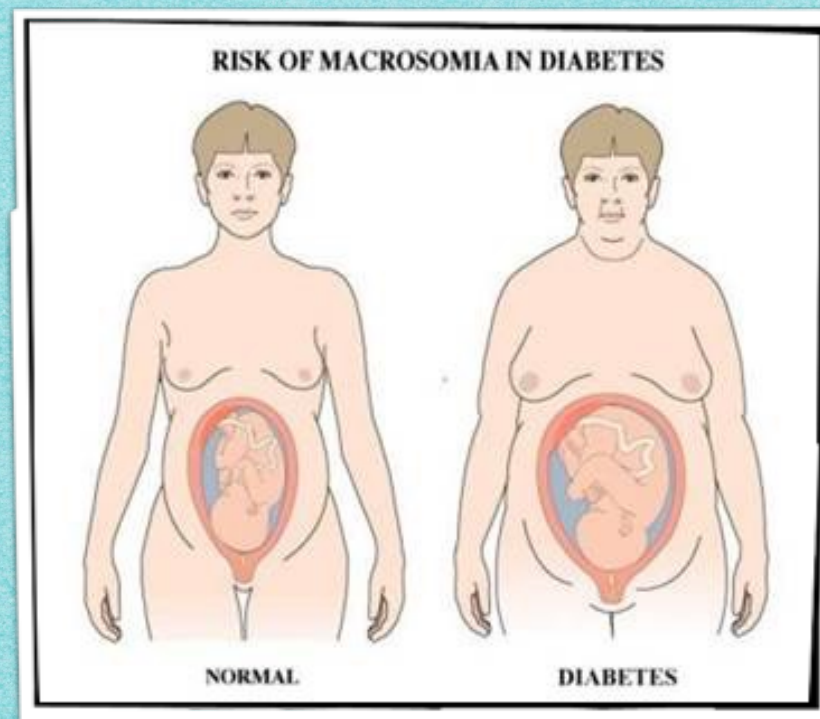
Key Practitioner Messages

- ▶ Children born of rape face serious mental health risks.
- ▶ Perceive children born of rape as secondary rape victims -due to risk of confrontation with the direct trauma of the mother via the mother-child relationship.
- ▶ Acknowledging the existence of multiple perpetrators creates the opportunity to hold those involved accountable for their behavior.
- ▶ Clinicians have to develop a comprehensive perspective that considers the needs and rights of both children and mothers.

Growing Up Under a Shadow: Key Issues in Research on and Treatment of Children Born of Rape
Elisa van Ee Rolf J. Kleber <https://doi.org/10.1002/car.2270>: 10 June 2013

Diabetes in Mother

“Even short duration exposure to diabetes... affects the status of key adhesion molecules responsible for maintain endothelial integrity.”



Endothelium=tissues that form a single layer of cells that line organs and cavities of the body, i.e. blood vessels, heart, and lymphatic vessels

Babawale et al., (2000).

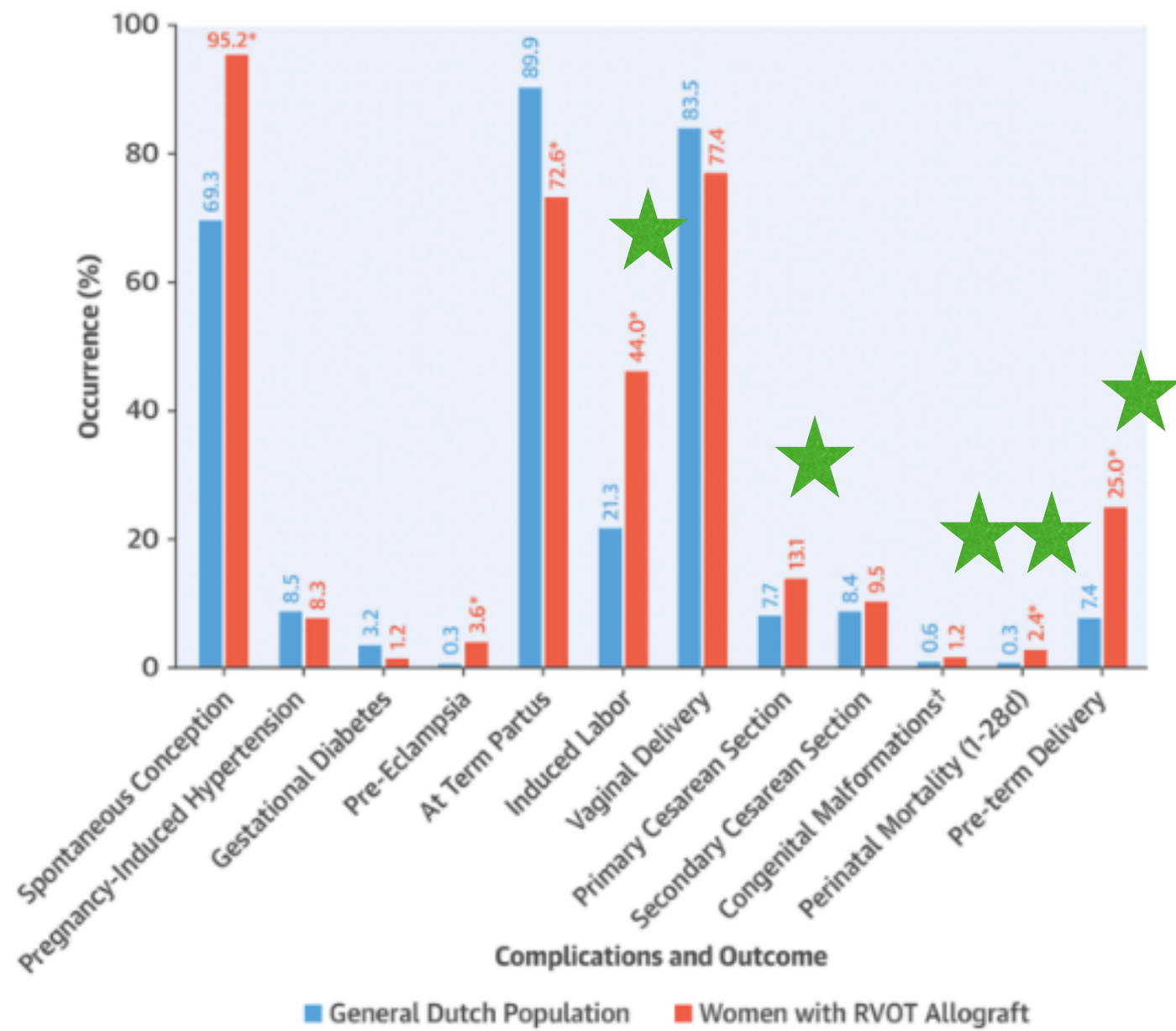
Cardiac Issues in Mother

“Fetal growth restriction as a consequence of maternal inability to maintain cardiac output and maintain normal oxygen uptake.”

“Significant...decrease in cardiac output might have led to maternal stress associated with premature labor.”

Romeo et al. (2018)

CENTRAL ILLUSTRATION Pregnancy and Right Sided Allograft Reconstruction: Incidence of Maternal and Neonatal Outcomes



Romeo, J.L.R. et al. J Am Coll Cardiol. 2018;71(23):2656-65.

Romeo et al. (2018)

Perinatal Stroke

Perinatal stroke can jeopardize neurodevelopment outcomes.

- hemiplegia or hemiparesis
- abnormal fetal heart rate patterns
- respiratory depression



Risk factors include:
prolonged second stage labor
pre-eclampsia
intrauterine growth restrictions

NICU Stress

NICU procedures and structure that could activate the infant's stress response system and be potentially **traumatic** for babies. Such circumstances include:

Maternal separation

Pain

Routine medical procedures

Isolation

Loss of trust

Bright lights

Loud sounds

(Coughlin, 2013).

Stress in NICU

Repeated exposure to severe, chronic stressors such as those that occur in the NICU, results in the baby's stress response system continuously being activated.

Prolonged activation of the stress response system has been shown to lead to: long-term changes/alterations in brain structure and overall neurobiology of the child .

These changes can result in impairments in:
learning,
memory,
ability to regulate emotions and behaviors

(National Scientific Council on the Developing Child, 2010; 2005/2014, Shonkoff, Boyce, McElwen, 2009).

HOW- with our toolbox

- Breath
- Rhythm
- Reflex Integration
- Relationships- Love
- Floor Time, DIR, RDI, Etc
- Sensory Motor Work
- Sensory Integration
- Body work
- Cranial Sacral Therapy
- Imagery
- Heart Centered Therapy
- Body Code
- INTENTION!!!!



AIM Advanced Intervention Model

This model addresses what's necessary for typical development from conception onwards.

Each part of the plant contributes to the development of the next emerging part.

The seed, tap root, side roots and the stem continue to support the health and vitality of the plant through its lifespan.

