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- President FOGSI 2018
- President Elect SAFOMS
- President Elect ISPAT
- Vice President ISAR
- Past President ASPIRE 2014-2016
- Past President IMS 2017
- Regional director Ian Donald school Croatia
- Member FIGO committee of Reproductive medicine 2015-2018
- Member FIGO Working Group on Reproductive & Developmental Environmental Health
- Editor SAFOG Journal
- Editor SAFOMS Journal
- Editor and Co editor of several books
- Consultant Advisor : JN Medical college Aligarh
 SMS Medical college Jaipur
 Maulana Azad Medical college Delhi
- Credited with producing the First IVF ,ICSI, TESA babies of UP and First 300 babies of Nepal
- 12 collaborative centers for IVF in India, Nepal and Bangladesh



**“A mother is a family’s richest possession.
A being of priceless worth.”**

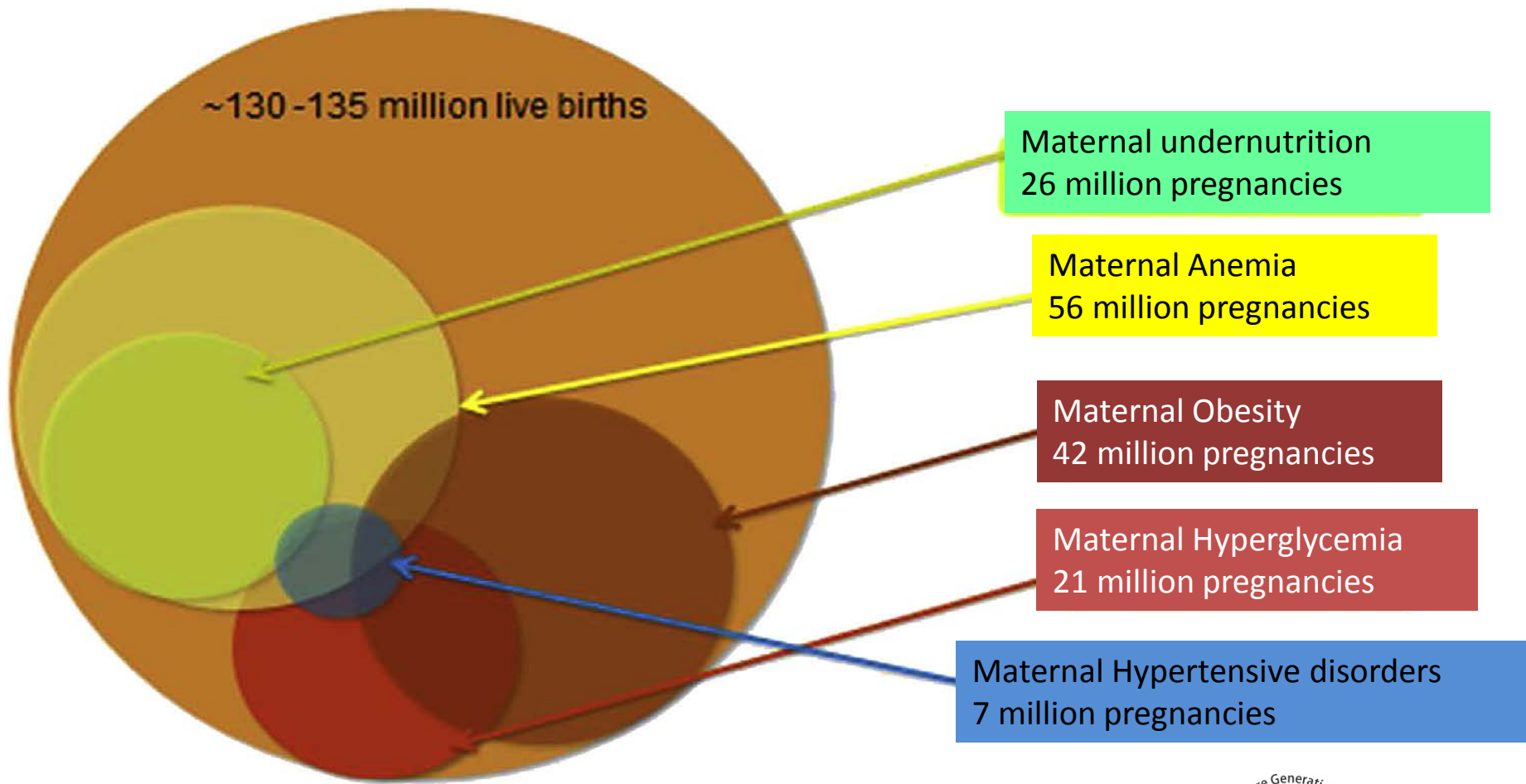
Dr Reg Hamlin OBE



This presentation is prepared for those

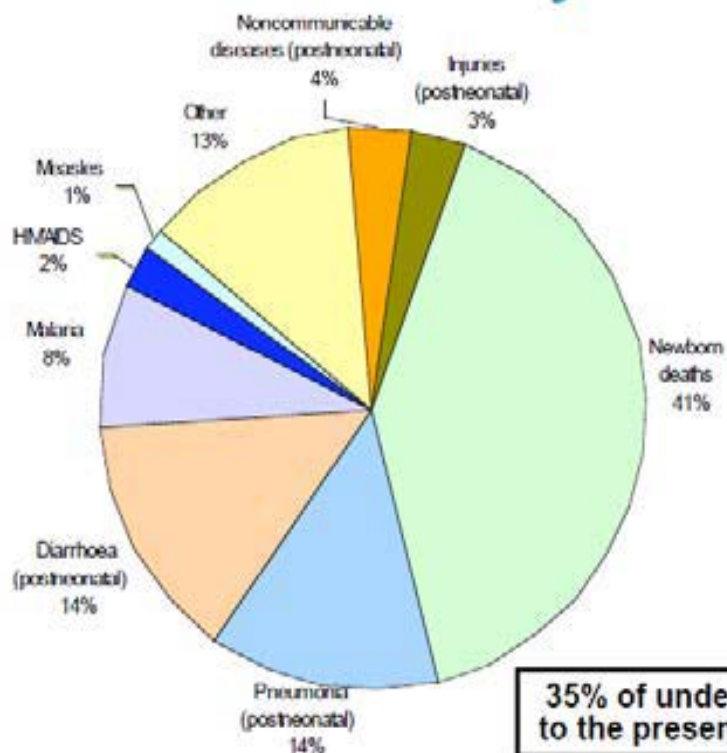
- Who are motivated to take care of our mothers.
- Who have time to spend with their patients.
- Who know their few minutes well spent can have deep impact on someone's life.
- Their small effort can reduce the burden on health infrastructure.
- Help achieve a great future generation which is healthy, wealthy and wise...

Face the facts

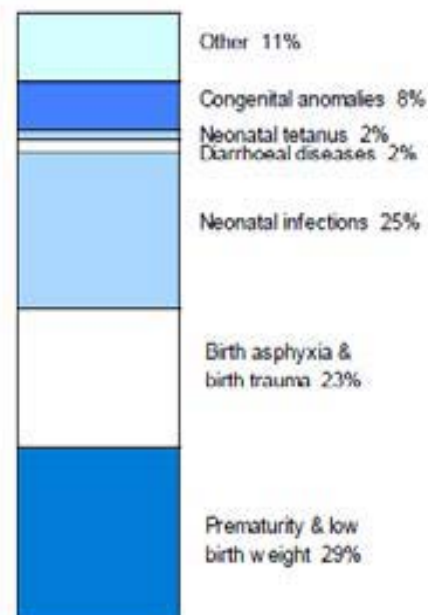


Major causes of death in newborns and children, WORLD - 2008

Children under 5 years



Newborns under 1 month



Sources

Causes of death: World Health Statistics 2010, WHO.
Undernutrition: Black et al. Lancet, 2008.

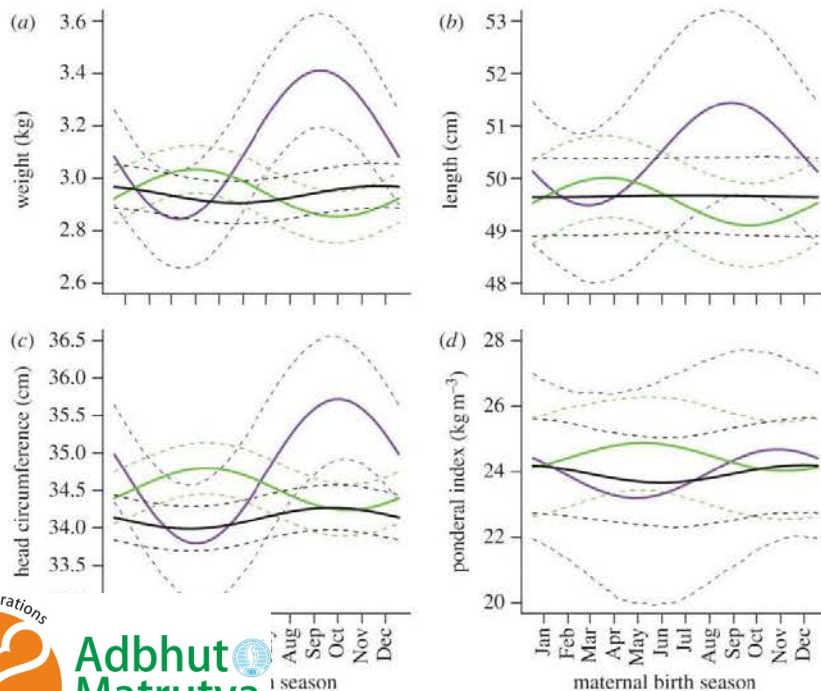


World Health
Organization

In a small African nation called the Gambia...



- A study in 3 Gambian villages showed that people born during the wet (hungry) season are 10 times as likely to die prematurely as are people born during the dry (harvest) season.
- Babies conceived in the wet season have very different levels of activity of a particular gene that's important for regulating the immune system.



In a small African nation called the Gambia...

- It has clearly been shown the children have **different weight** and **head circumference** depending on the season in which a mother is born and there is **different methylation patterns** depending on whether the children were conceived in the harvest season or in the food deprived rainy season.
- **Identical epigenetic changes** were observed in **lymphocytes** and **hair follicles** indicating that they were established at conception and then carried through all lineages of the cells.



Folic/Iodine /Thalidomide

- Professor Basil Hetzel : Iodine deficiency
- Perth study Folic acid deficiency: Neural tube defects.
- Thalidomide was a widely used drug in the late 1950s and early 1960s for the treatment of nausea in pregnant women. Phocomelia.



Early-life origins of non-communicable diseases

Cardiovascular diseases, diabetes, cancers, and chronic respiratory diseases are the most common non communicable diseases , accounting for:

63% of global deaths (36 million) in 2008

&

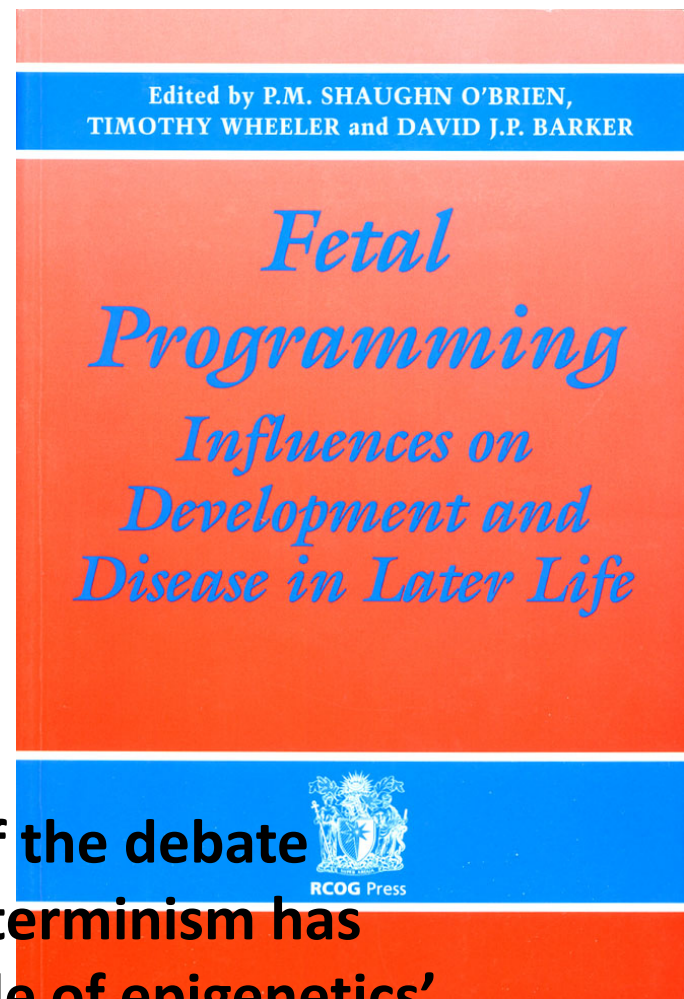
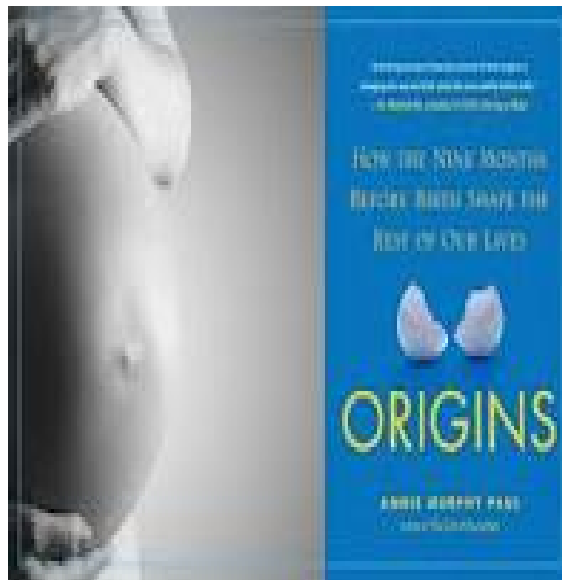
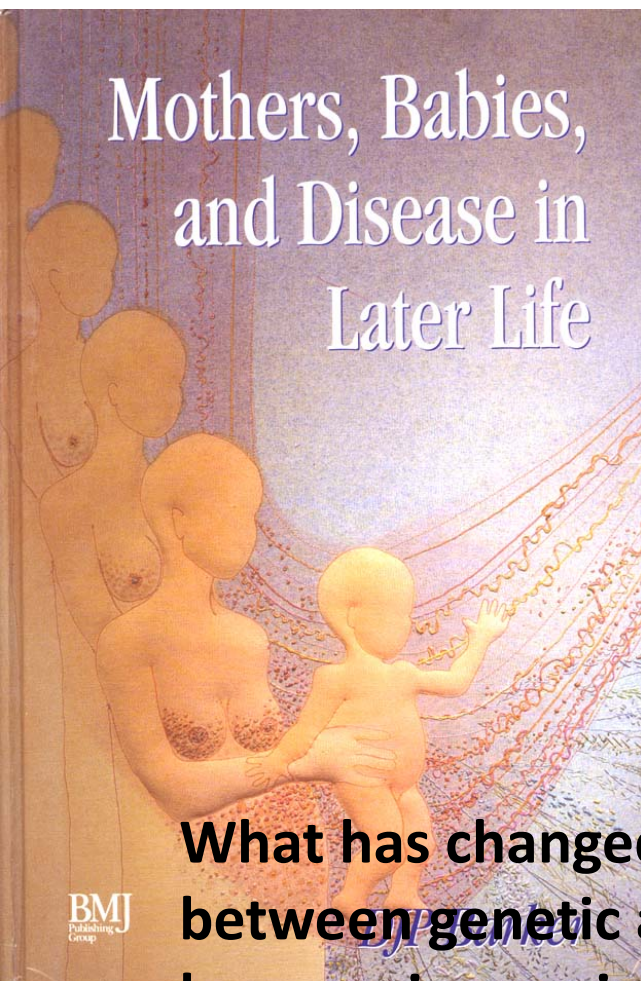
Projected to claim 52 million lives by 2030.

United Nations. Prevention and control of non-communicable diseases. Report of the Secretary General. UN General Assembly, 19 May 2011.

- Mounting evidence shows that prenatal and early-life development influence the risks of NCD in later life .
- And might be especially relevant to low-resource countries .

- Godfrey KM. Maternal regulation of fetal development and health in adult life. Eur J Obstet Gynecol Reprod Biol 1998;78(2):141–50.
- McCance DR, Pettitt DJ, Hanson RL, Jacobsson LT, Knowler WC, Bennett PH. Birth weight and non-insulin dependent diabetes: thrifty genotype, thrifty phenotype, or surviving small baby genotype? Br Med J 1994;308(6934):942–5.
- Gluckman PD, Hanson MA, Cooper C, Thornburg KL. Effect of in utero and early life conditions on adult health and disease. N Engl J Med 2008;359(1):61–73.
- Yajnik CS, Deshmukh US. Maternal nutrition, intrauterine programming and consequential risks in the offspring. Rev Endocr Metab Disord 2008;9(3):203–11.

Fetal origins of adult disease



What has changed our understanding of the debate between genetic and environmental determinism has been an increasing knowledge of the role of epigenetics'.

Off the ground

- Though it takes a lot of power
To make a big tree grow.
It doesn't need a pot of knowledge.
For a seed knows, what a seed must know.



GENETICS IS THE HARDWARE & EPIGENETICS IS THE SOFTWARE.

Discovered that the dietary and lifestyle conditions affected the genetic expression of not only the individual, but also their children and grandchildren.

Concluded

“it is through epigenetic[s]...that environmental factors like diet, stress and Prenatal nutrition, Prenatal Stress, Postnatal Behavior can make an imprint on genes that are passed from one generation to the next.”



The work of Dr. Lars Olov Bygren, 2010 a preventative-specialist .



Both mice and people have a gene called agouti. When a mouse's agouti gene is completely unmethylated mouse has a yellow coat color, **is obese, and prone to diabetes and cancer**. When the agouti gene is methylated (as it is in normal mice) the coat color is brown and the mouse has a low disease risk. Fat yellow mice and skinny brown ones are genetically identical. The fat yellow mice look different because they have an epigenetic mutation.

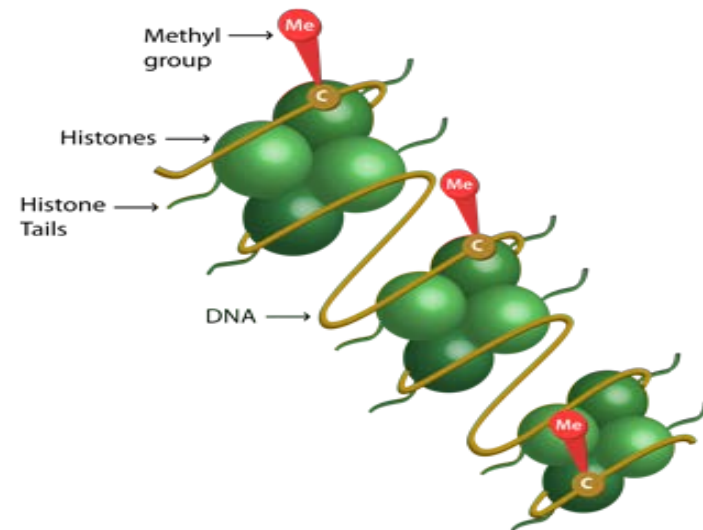
Dolinoy, Huang, & Jirtle, 2007

DNA Methylation and Disease

DNA methylation is an epigenetic mechanism used by cells to control gene expression.

Links between DNA methylation and human diseases such as

- **Lupus, cancer,**
- **Muscular dystrophy,**
- **Diabetes,**
- **Hypertension,**
- **Obesity,**
- **Cardiovascular disease,**
- **Schizophrenia,**
- **Bipolar disease and various congenital defects.**



Their findings could be significant in aiding the development of therapies and for understanding and preventing conditions that develop during embryonic development as a result of abnormal methylation of the X chromosome and gene imprinting.



- Researchers at the University of British Columbia have demonstrated that **human infants of mothers with high levels of depression and anxiety during the third trimester have increased methylation of the Nr3c1 gene promoter in cord blood cells.**

Devlin, Brain, Austin, & Oberlander, 2010.

Dutch hunger winter



- **Audrey Hepburn** spent her childhood in the Netherlands during the famine and despite her later wealth she had lifelong negative medical repercussions.
- She suffered from **anemia, respiratory illnesses, and edema** as a result. Also, her clinical depression later in life has been attributed to malnutrition.
- People **conceived during the famine** had a **2-fold increase in coronary artery disease** compared with people not exposed to famine in utero.
- Women exposed to prenatal famine more often reported a **history of breast cancer** than did **unexposed women**.

Longterm effects of Dutch hunger winter

Depending on the timing of exposure ;

- | | |
|-----------------------------------|-----------------------------|
| • Preconception | Infertility |
| • 1st trimester | Obesity & heart disease |
| • 2nd trimester | Airway disease ,diabetes |
| • 3rd trimester | Diabetes,Insulin resistance |

Can we avoid them?

- Undernutrition,
- Overweight,
- Obesity,
- Hypertension
- and hyperglycaemia

are commonly associated with pregnancy and cause considerable maternal morbidity and mortality, poor pregnancy outcomes as well as foetal programming.



Effects of undernutrition

Maternal diet Uteroplacental blood flow Placental transfer Fetal genome



Nutrient demand exceeds supply
FETAL UNDERNUTRITION

Brain sparing

Down regulation of growth

Early Maturation

Altered body composition

Impaired development: bloodvessels, liver, kidneys, pancreas.

↓ Insulin/IGF-1
 Secretion and sensitivity

Cortisol

Muscle ↓

Hyperlipidaemia
 Hypertension

Central obesity

Insulin resistance

Type 2 diabetes and CHD



Fuel-mediated Teratogenesis

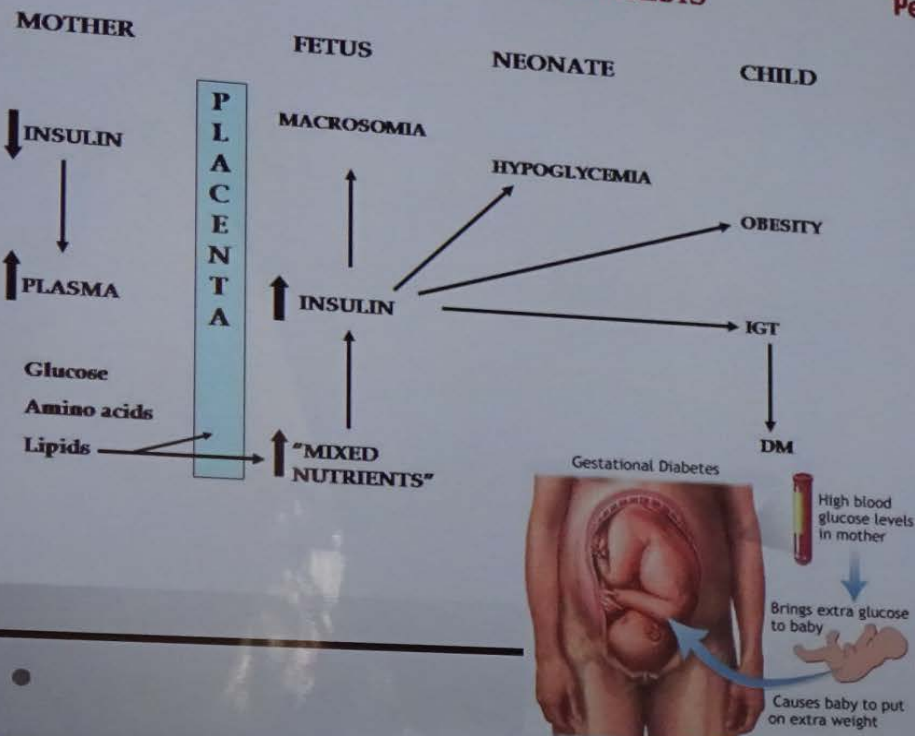
The unified Pedersen- Freinkel Hypothesis

1

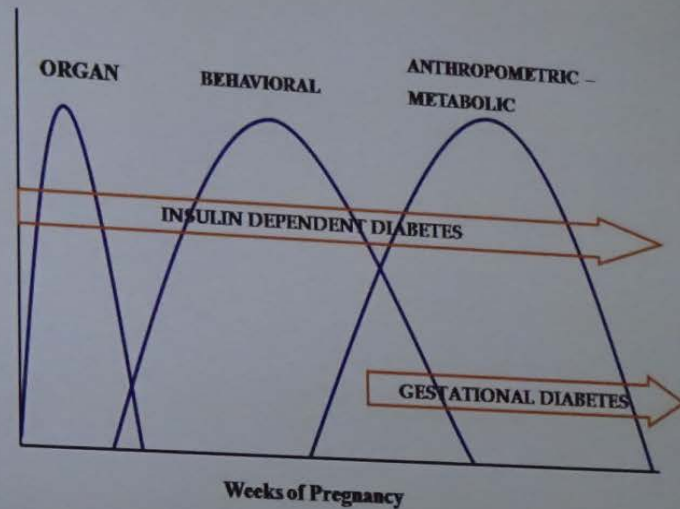
Overnutrition

2

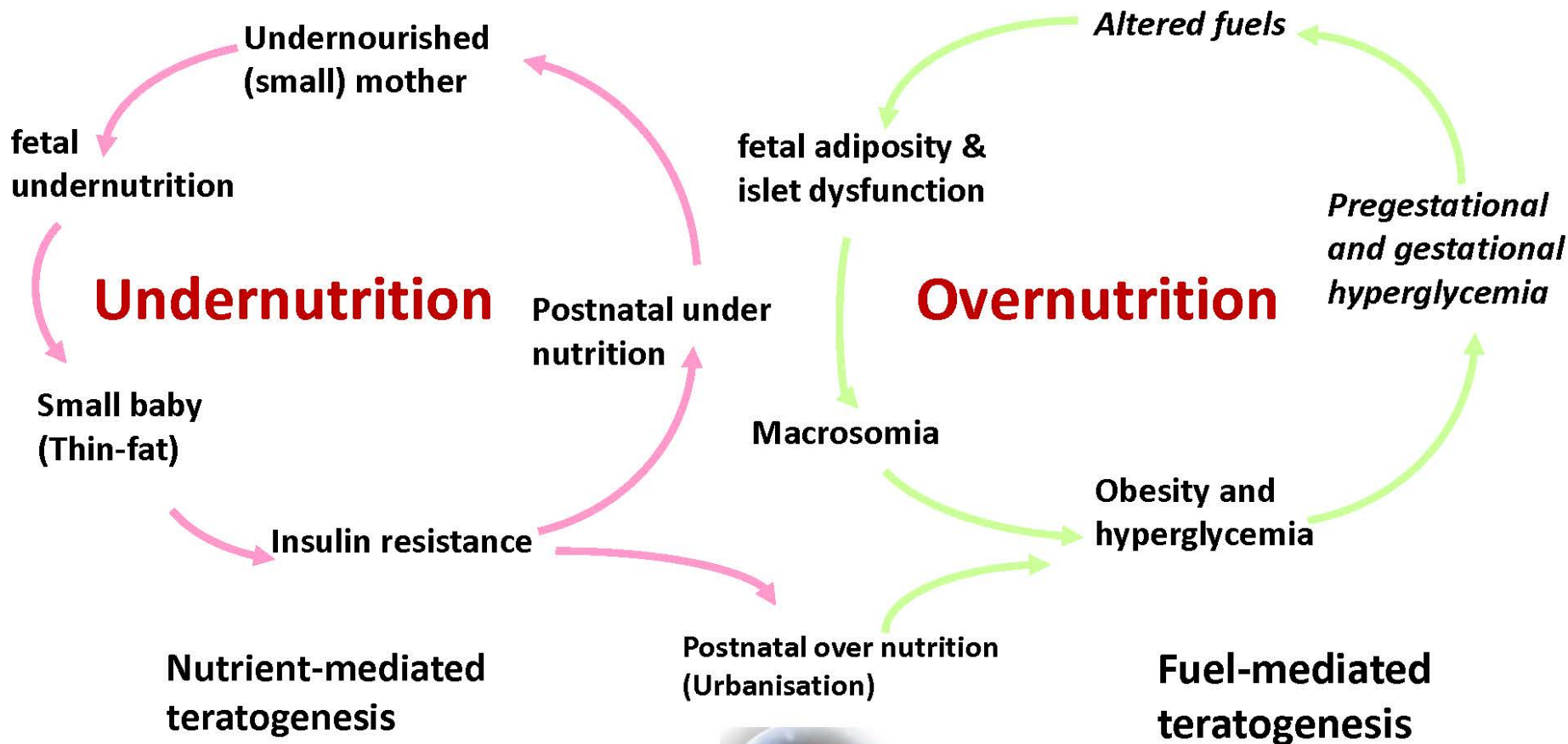
PEDERSEN/FREINKEL HYPOTHESIS



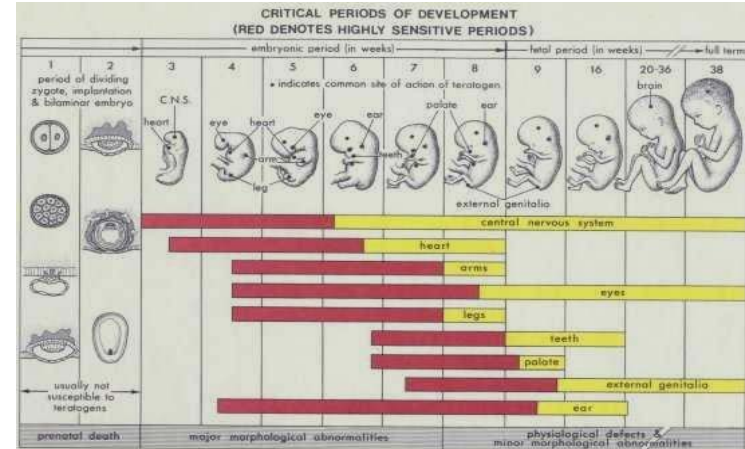
Permanant change in habitus caused by abnormal concentrations of nutrients during period of intrauterine development



Teratogenesis



Early ANC is too late



1. To Prevent Some Birth Defects Critical period of teratogenesis:

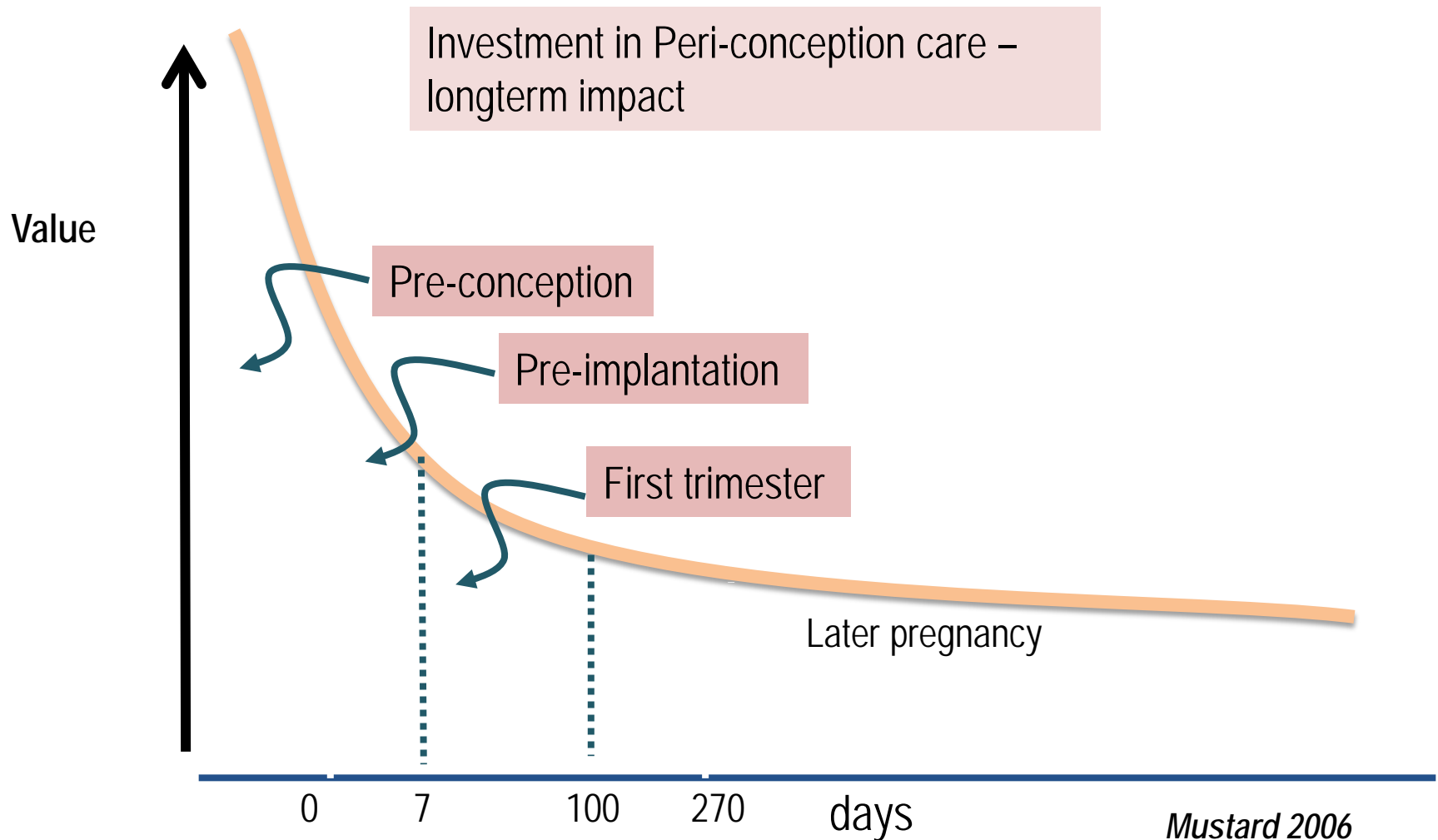
- D17 to D56 Heart: begins to beat at 22 ds after conception
- Neural tube: closes by 28 ds after conception
- Palate: fuses at 56 ds after conception

2. To Prevent Implantation Errors.

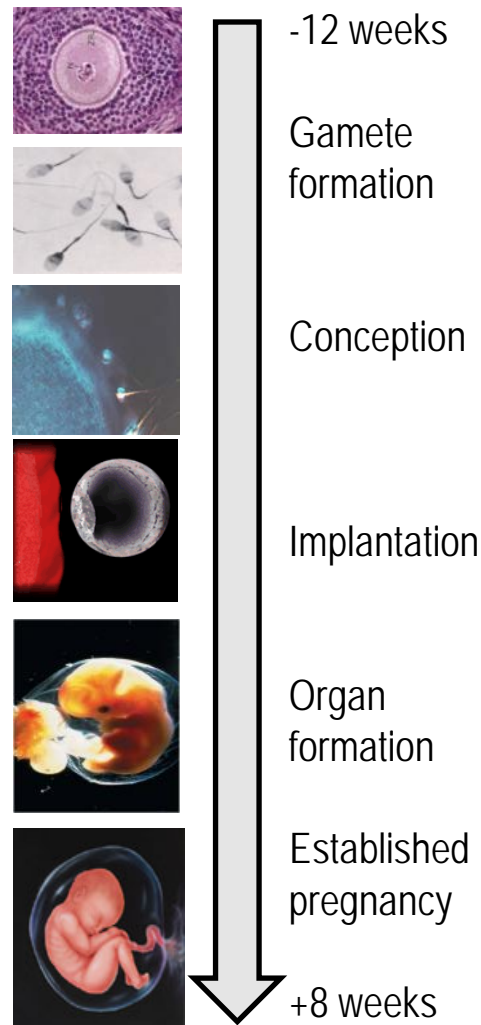
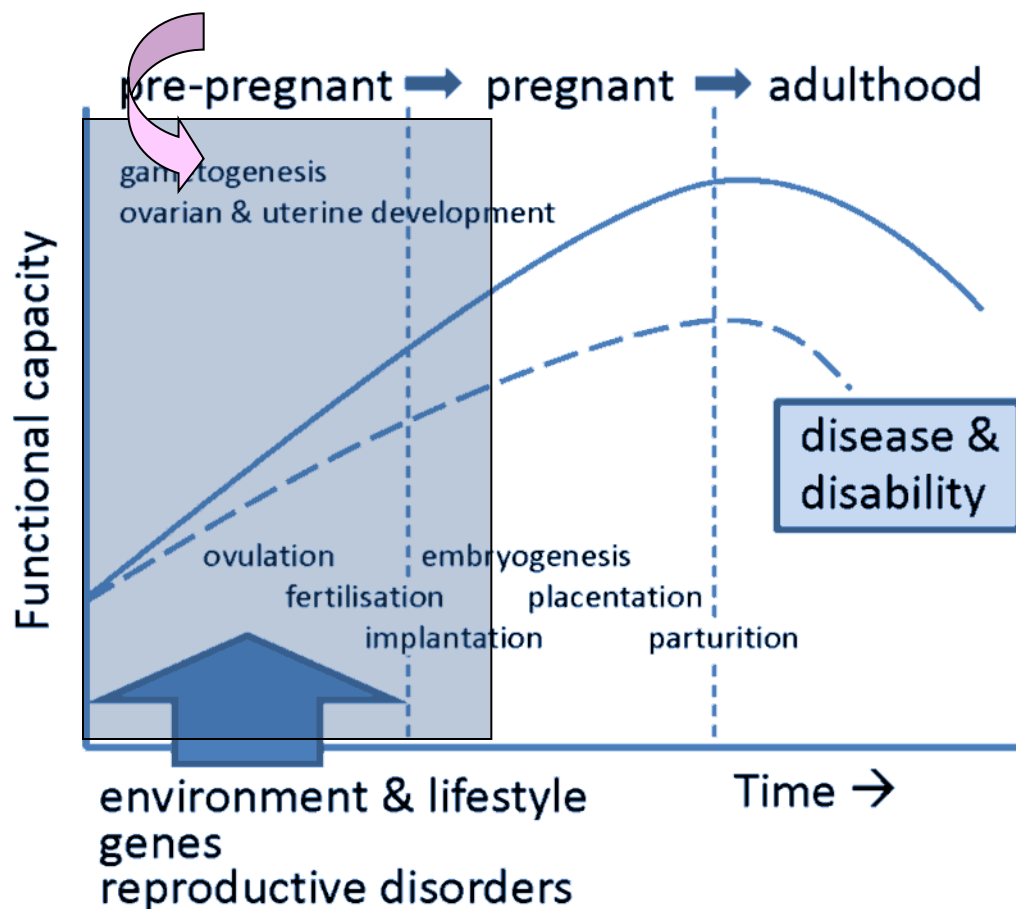
3. To restore allostasis: Maintain stability through change.

An important objective of PCC is to restore allostasis to women's health before pregnancy.

Early life is a platform to face it all...

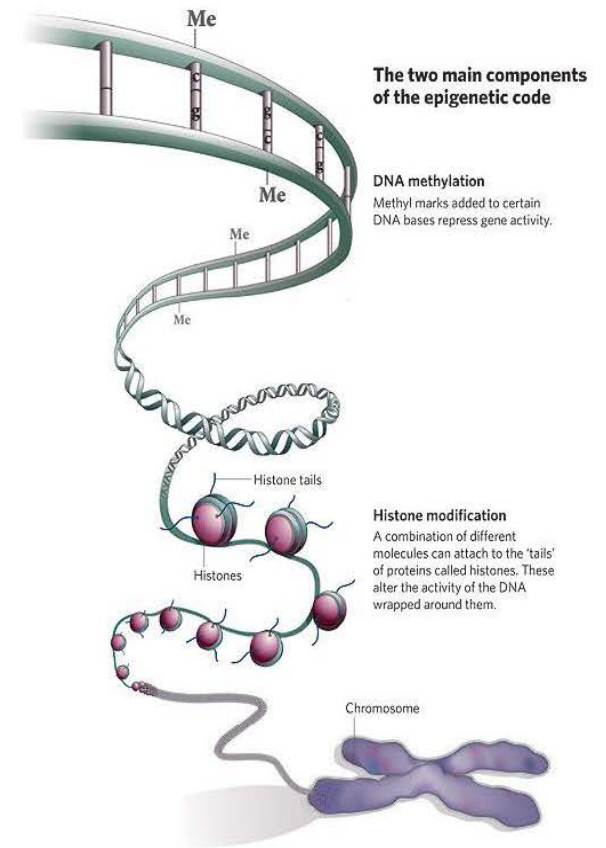


Periconceptual medicine is the new area

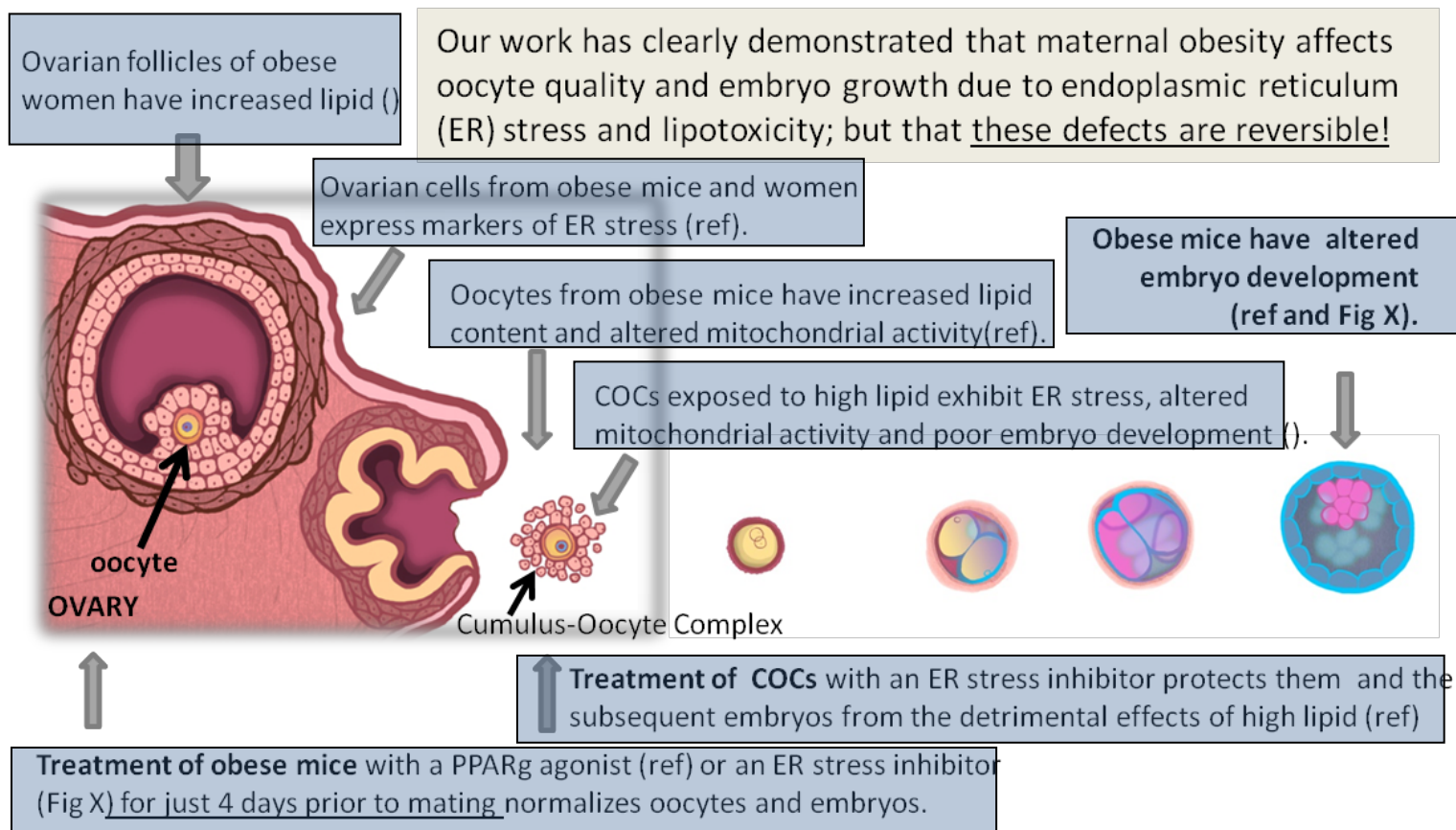


Periconceptional influence affects organisation of :

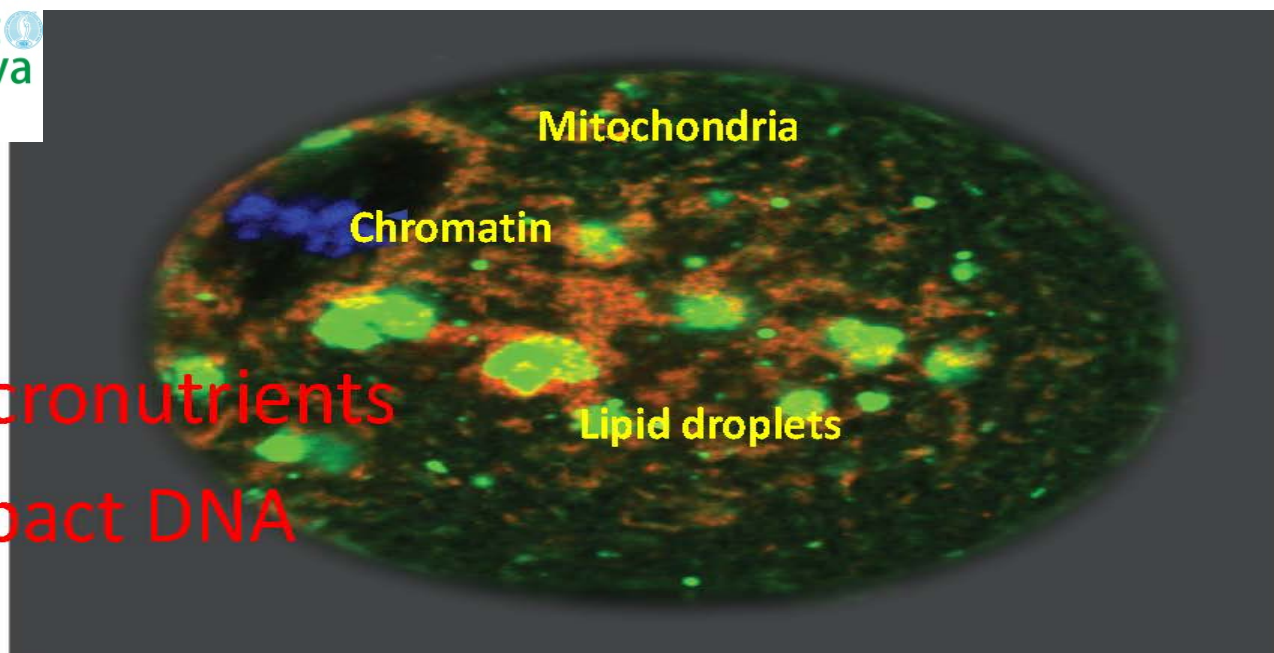
- DNA
- Epigenome
- Mitochondria
- Metabolism
- Placentation
- Organ Development
- In the gamete, embryo and Fetus



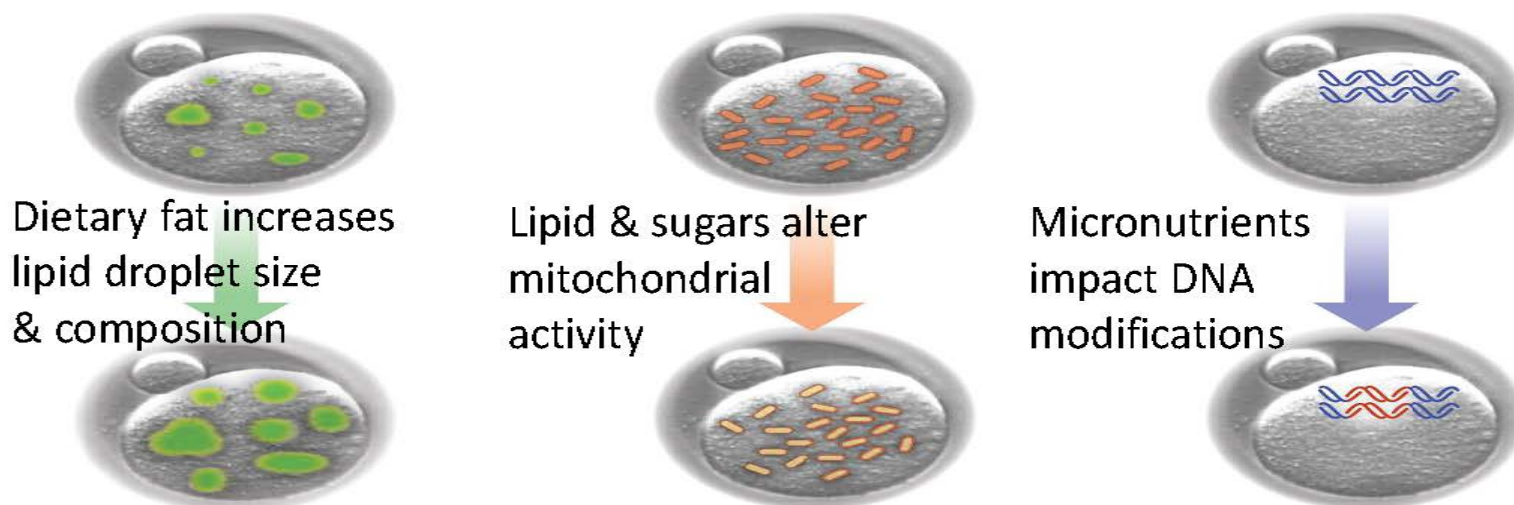
Obesity affects follicles, eggs embryos



Micronutrients impact DNA



Altered diet, inflammation, toxins

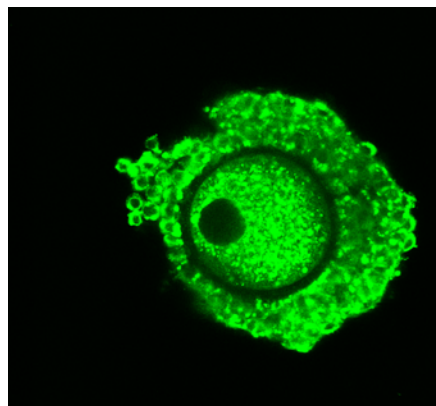
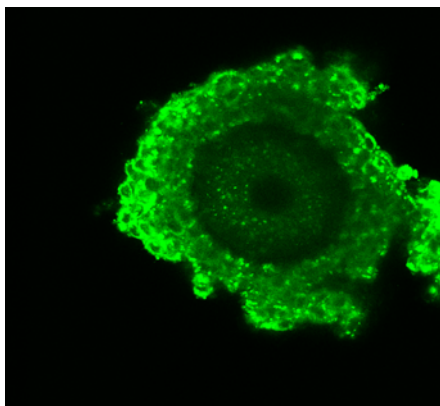


The maternal environment influences oocyte stores of mitochondria and metabolites.

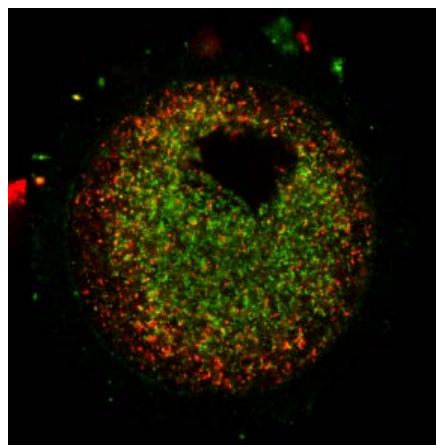
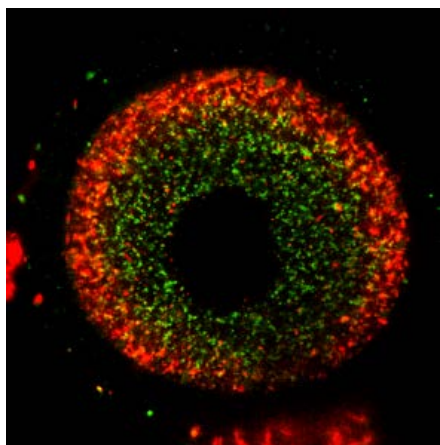
M lane Science

Diet has an impact on the oocyte Quality

Fat stain



Mitochondrial stain



Normal diet

High fat diet

Is Pregnancy BMI important?

- Pre-pregnancy body mass index (BMI) less than 19.8 kg/m^2 indicates chronic malnutrition, and $\text{BMI} > 26.1 \text{ kg/m}^2$ shows an imbalance between energy intake and expenditure.

Several studies have shown that low BMI is associated with

- Intrauterine growth restriction (IUGR),
- Preterm delivery,
- Iron deficiency anemia

On the other hand, high BMI is related to

- Infertility ,
- Gestational diabetes ,
- Hypertension and preeclampsia induced by pregnancy
- Birth defects ,
- Infant macrosomia ($w \geq 4500 \text{ gr}$),
- Cesarean section, prolonged labor , and postpartum anemia.



Mens' weight and assisted reproduction

Bakos et al 2011

Outcome	Normal (n = 63)	Overweight (n = 148)	Obese (n = 62)	Morbidly obese (n = 32)
Pregnancy loss (%)	10.3 ^a	38.5 ^b	36.4 ^b	20.0 ^{a,b}
Live birth/OPU (%)	41.3 ^a	26.4 ^b	22.6 ^b	12.12 ^c

Note: Data are expressed both per oocyte pickup (OPU) and also per embryo transfer (ET). Linear decrease with increasing BMI, $P < .05$, for all values except pregnancy loss. Different superscripts are significantly different within each outcome, $P < .05$.

Bakos. Paternal obesity and ART pregnancy. Fertil Steril 2011.

350 cycles of IVF

- Male BMI documented
- Decreased pregnancy rates
- Increased pregnancy loss
- Worse embryos

Embryo development outcomes according to paternal BMI.

Embryo development outcomes	Normal (n = 63)	Overweight (n = 148)	Obese (n = 62)	Morbidly obese (n = 32)
Day 5 on-time blastocyst development, 2PN (%) ^a	29.3 ± 4.3	27.8 ± 3.1	20.3 ± 3.9	18.7 ± 5.7
Day 5 expanded blastocyst, 2PN (%) ^a	17.9 ± 3.3	15.2 ± 2.2	10.7 ± 2.9	8.5 ± 4.2

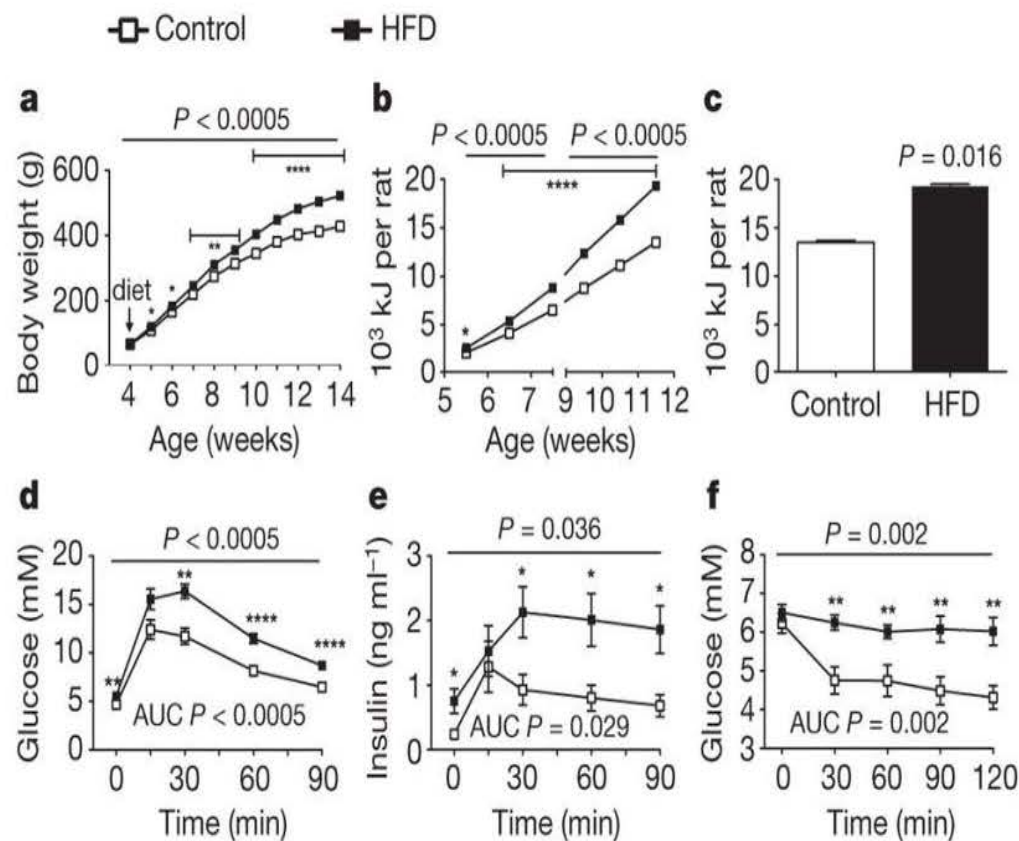
Note: Results are expressed as \pm SEM. ND = not done.

^a Linear decrease in blastocyst development with increasing BMI, $P < .05$. Values for other outcomes not statistically significantly different.

Bakos. Paternal obesity and ART pregnancy. Fertil Steril 2011.

Paternal obesity - offspring IGT

- Paternal high fat exposure programs beta cell dysfunction in rat female offspring
- Earlier impaired insulin secretion and impaired glucose tolerance
- Altered pancreatic gene profiles





Day 1

Day 1-2



Day 2



Day 3



Nutrition
 Toxins
 Infection
 Smoking

Weight
 Stress
 ART
 Alcohol

Day 7



Day 6



Day 5

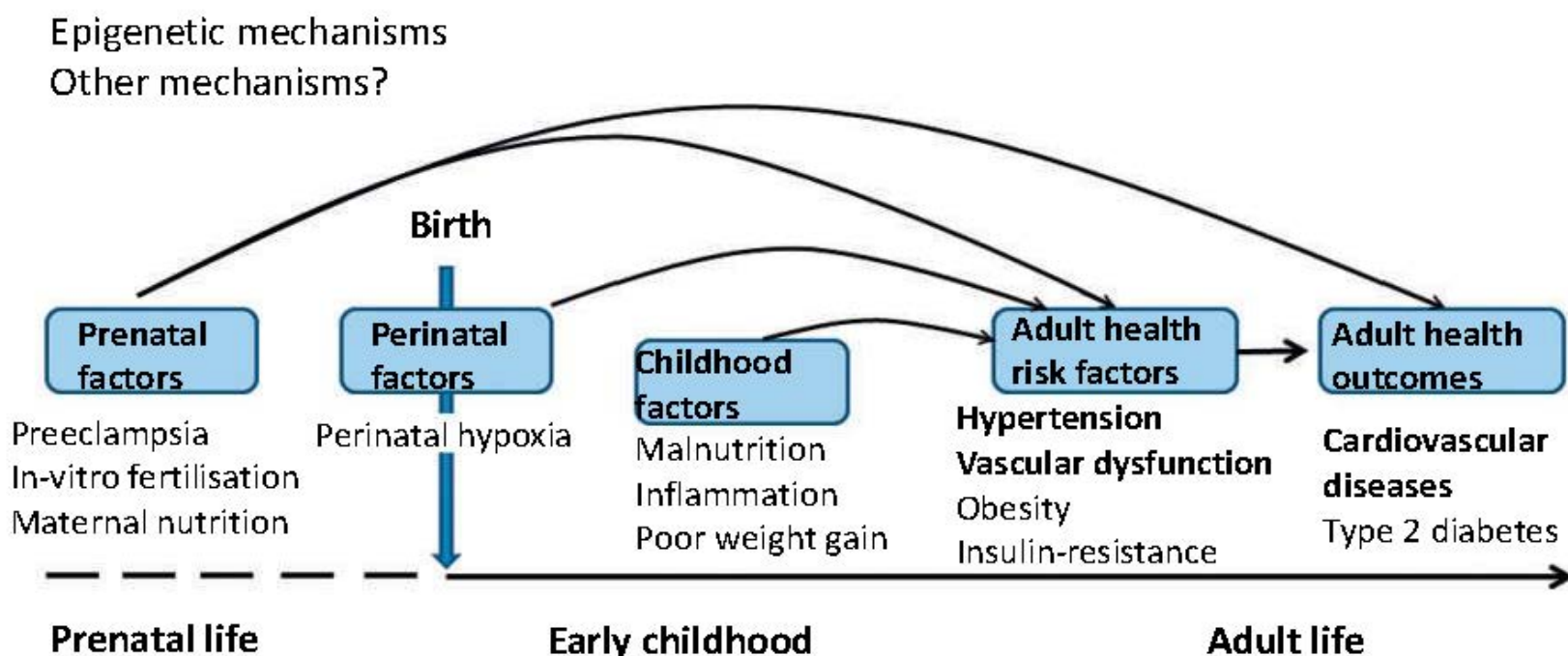


Day 4

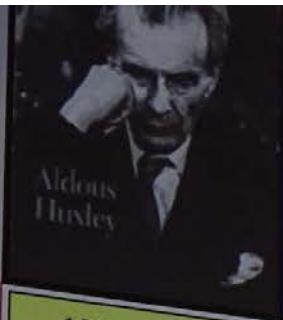


What can affect the embryo growth and future development?

Schematic representation of prenatal, perinatal and childhood factors that may lead to epigenetic alterations that alter cardiovascular function and determine cardiovascular risk later in life.



From: Rimoldi SF, Sartori C, Rexhaj E, Cerny D, Von Arx R, et al. Vascular dysfunction in children conceived by assisted reproductive technologies: underlying mechanisms and future implications. *Swiss Med Wkly.* 2014;144:w13973,



1894-1963

"Brave New World"

Aldous Huxley



1932

Central London Hatchery

Fetuses grow in special broth
The **ingredients** of the **amniotic soup** are adjusted depending on which kind of child they need.

Children destined to work in :

Chemical factories - are treated so they can tolerate lead and cadmium

Pilot rockets - are constantly rotated so that they learn to enjoy being upside-down.

Doctors ? Politicians ... ? Scientists...? Statesman ?

50 years before ART-IVF

THE GHOST IN OUR GENES:

"At the heart of this new field [of epigenetics] is a simple but contentious idea — that genes have a 'memory.'

That the lives of your grandparents — the air they breathed, the food they ate, even the things they saw — can directly affect you, decades later, despite your never experiencing these things yourself."

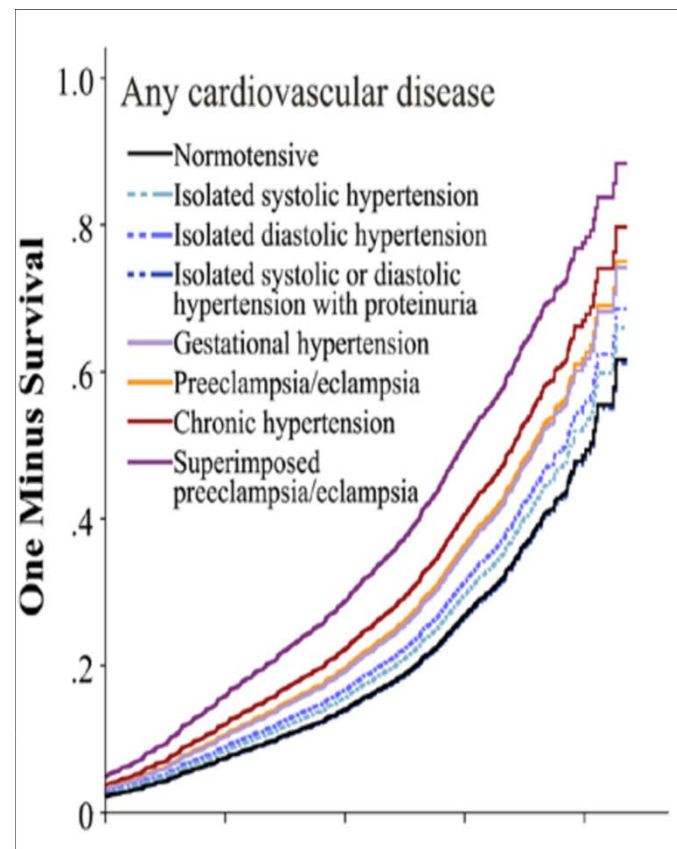
BBC, Ghost in Your Genes.

HYPERTENSION IN PREGNANCY

Elevated blood pressure during pregnancy, regardless of type and even without known risk factors, signals

- High risk of later cardiovascular disease,
- cerebrovascular disease and kidney disease...

Circulation. 2013;127:681-690



GESTATIONAL DIABETES

**GDM predicts increased risk of developing
CV disease, type 1 and 2 diabetes**

20 cohort studies including 675,455 women

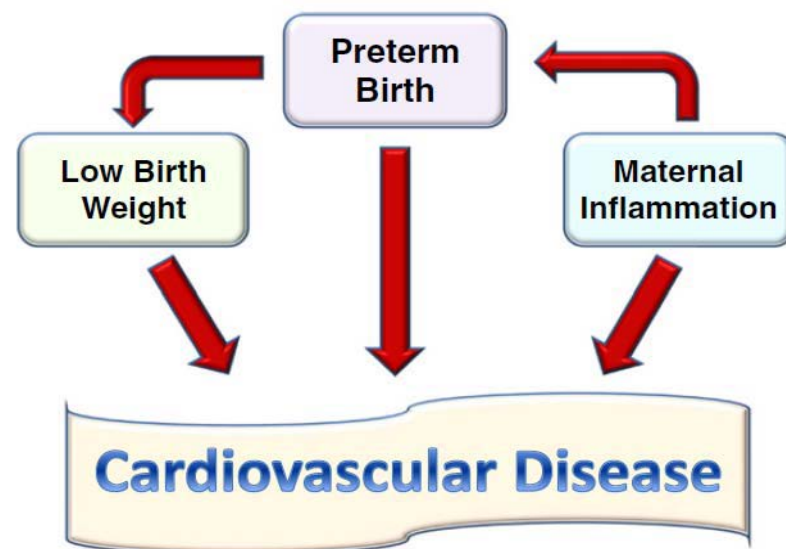
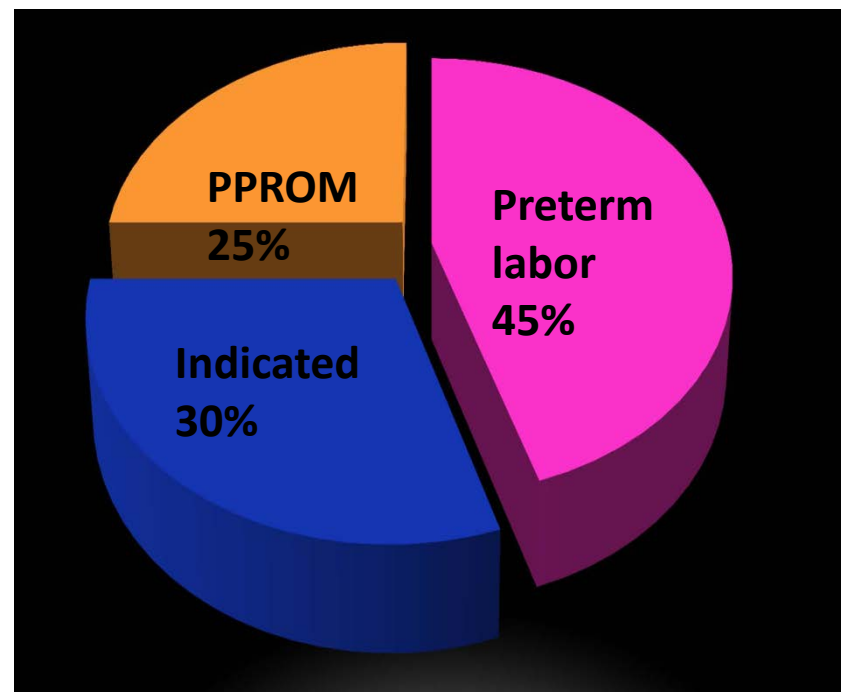
- 10,859 with type 2 diabetes
- RR 4.69 within the first 5 years after delivery
- RR 9.34 more than five years after delivery.

Lancet. 2009;373(9677):1773

Prematurity

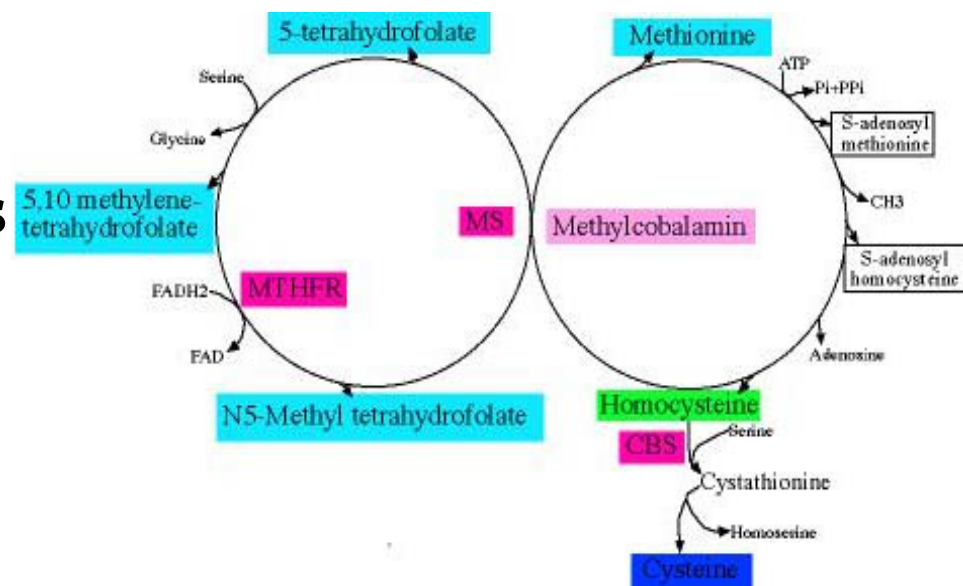
Preterm infants <32 wks;
strong correlations between
prematurity and CV
complications
regardless of Birth Weight.

Dalziel et al., 2007; Doyle, 2008; Irving et al., 2000)



Hyperhomocystenemia

- Maternal fasting plasma levels of homocysteine more than or equal to 12 micromol / litre.
- -More significant if measured in the first trimester.
- -Could be attributable for adverse pregnancy outcomes both in pregnancy and beyond.
- Adverse obstetric outcomes include:
- **Abortions,**
- **Neural tube defects,**
- **Other congenital defects**
- **FGR, PTL, PET,**
- **Pl. abruption and IUFD.**



Pregnancy: a window of opportunity

- Pregnancy offers a window of opportunity to provide maternal care services, not only to **reduce the traditionally known maternal and perinatal morbidity and mortality** indicators, but also **great potential for intergenerational prevention of several chronic diseases**, such as diabetes, arterial hypertension, cardiovascular disease, and stroke.



World Diabetes Foundation, Global Alliance for Women's Health. Diabetes, Women, and Development. Meeting summary, expert recommendations for policy action, conclusion, and follow-up actions. Int J Gynecol Obstet 2009;104(Suppl 1):S46–50

- A standard programme of four antenatal visits is recommended (with additional visits should conditions emerge which require special care).
- The WHO guidelines are also specific as regards the timing and content of antenatal care visits according to gestational age.

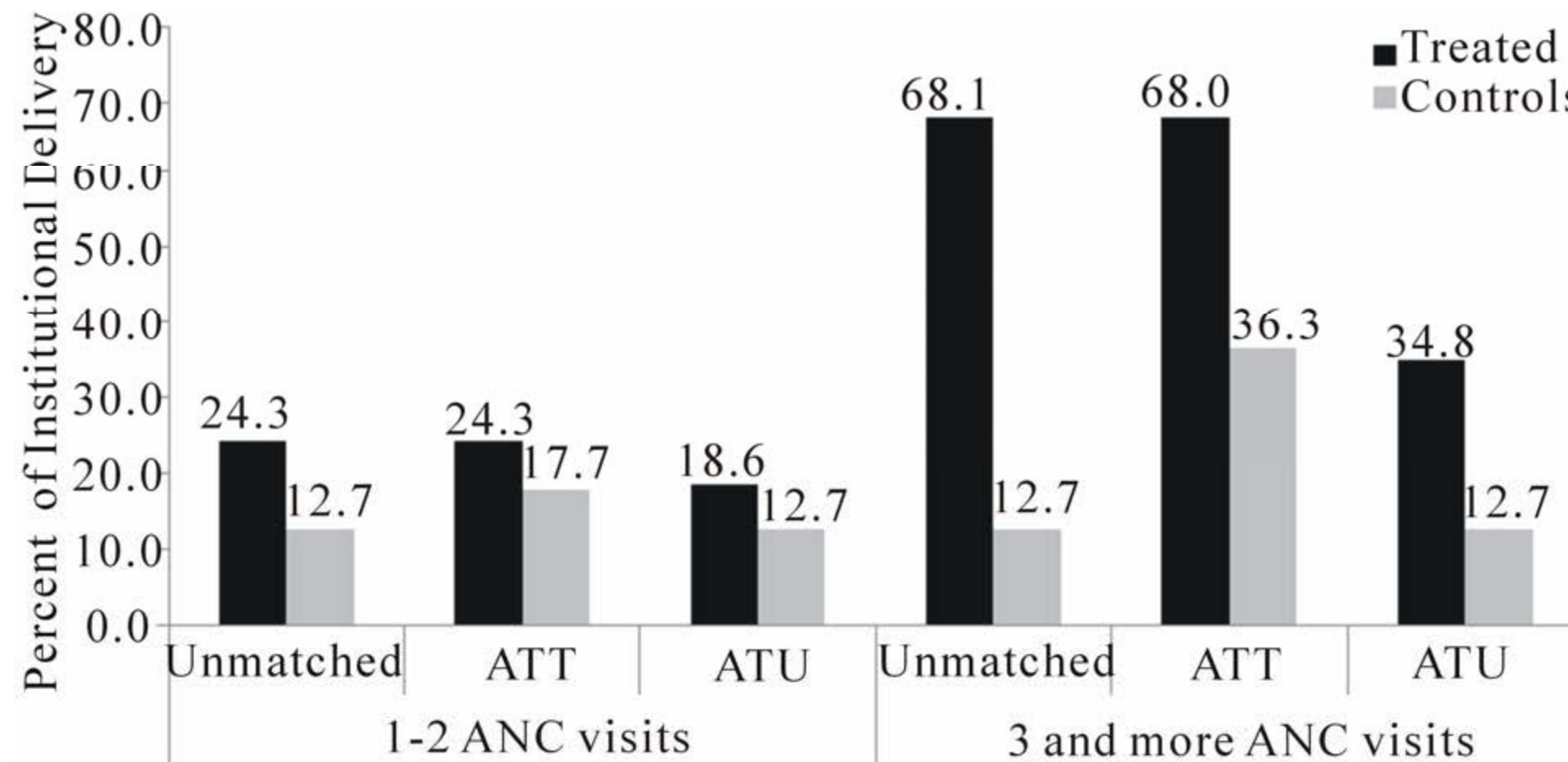


**World Health
Organization**

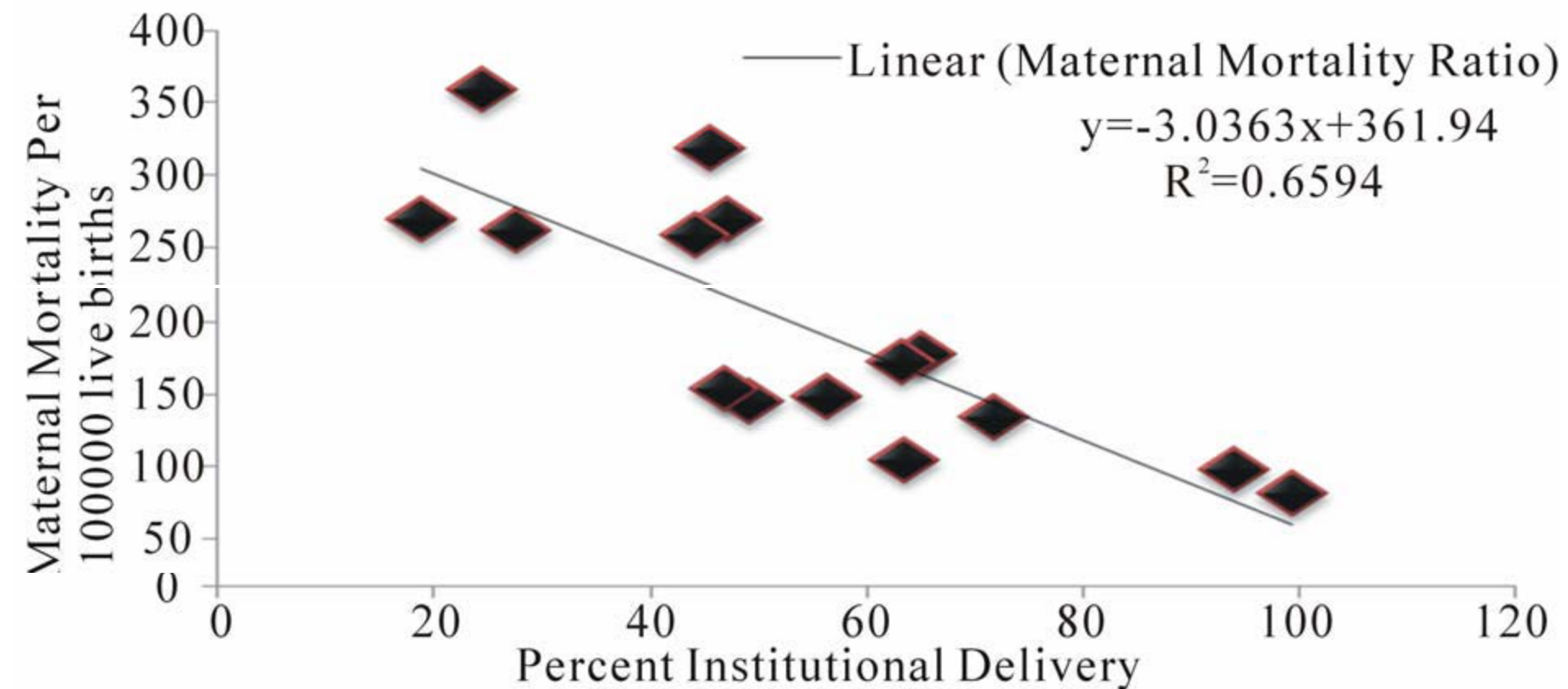
- On average a first visit client is counselled for 1:30 minutes, while counselling in revisiting clients hardly take place at all.
- The simulation of focused ANC revealed that proper counselling would take about 15 minutes per visit.
- Estimated requirement of 46 minutes per first visit consultation ,while the WHO estimate of 40 minutes.



Number of antenatal visits

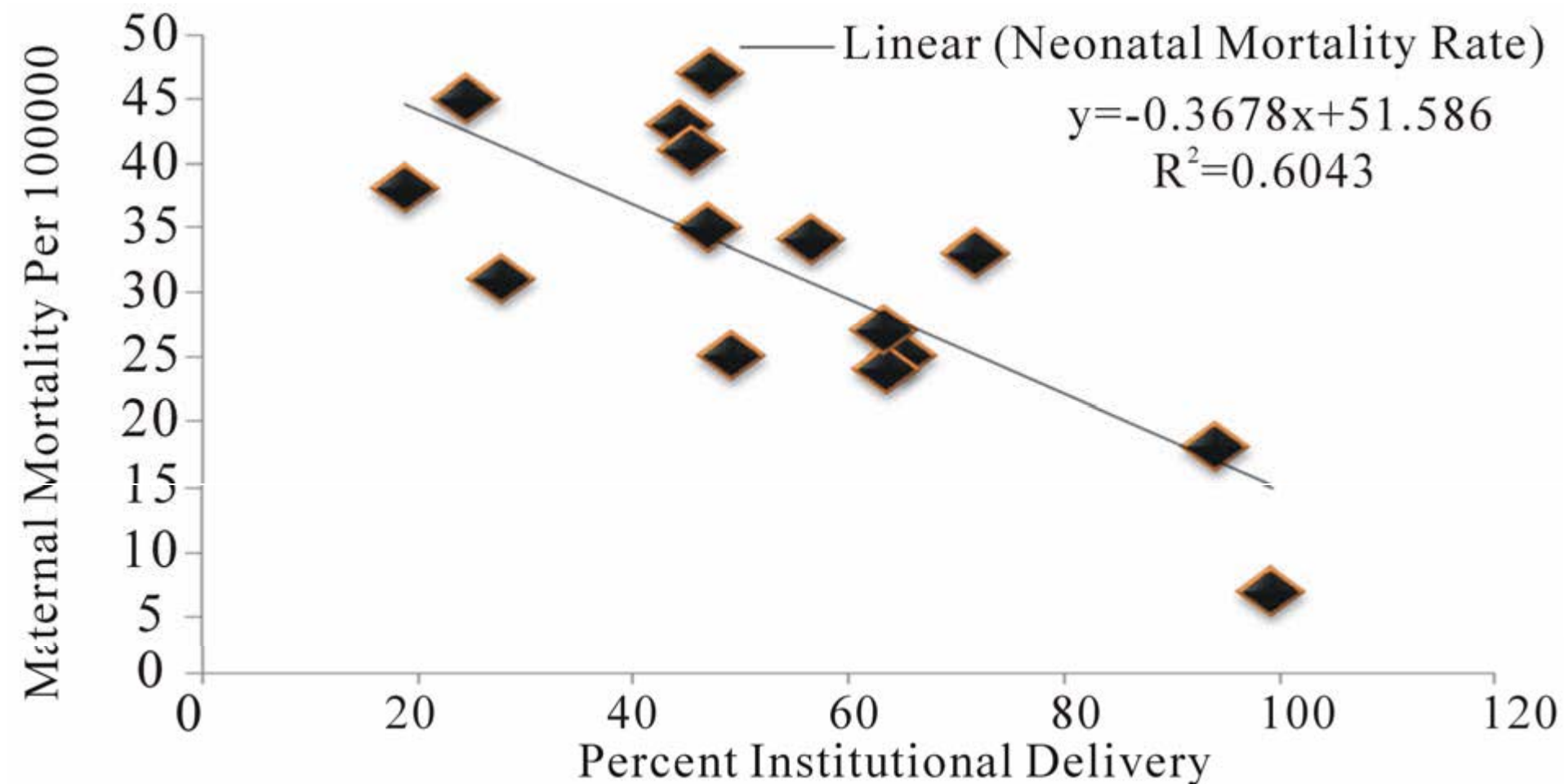


Impact Institutional delivery



(Office of Registrar General and Census Commissioner, India, 2011).


Impact Institutional delivery



(Office of Registrar General and Census
Commissioner, India, 2011).



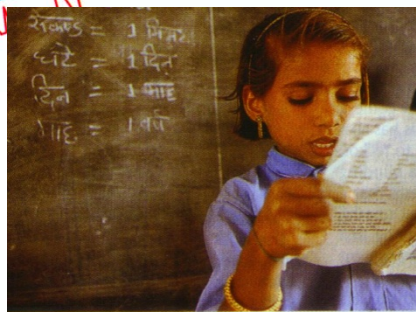
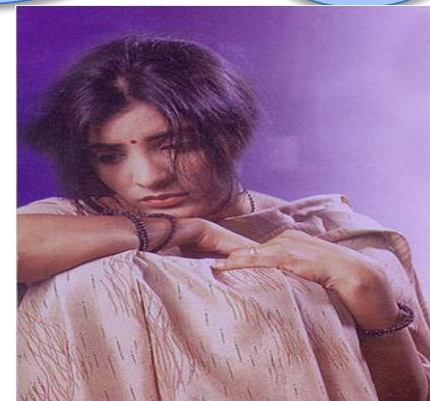
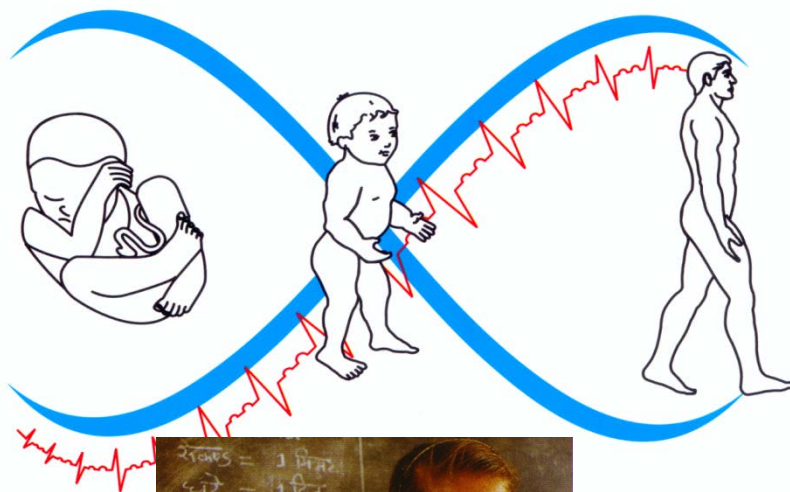
Thus, with one high-quality intervention related to maternal and child health services, it is now possible to achieve several objectives with far reaching health and economic benefits

A close-up photograph of a person's eye, looking directly at the camera. The eye is framed by a circular opening, possibly a lens or a hole in a surface. The background is blurred, showing warm, brownish tones. Overlaid on the lower part of the eye is a quote in a bold, italicized font.

***“Knowing is not enough; we must apply.
Willing is not enough; we must do.”***

Goethe

Pregnancy – a critical window of opportunity



Ref: Dr.Niva Shapira, *Women's Health*, 2008;4(6)-639-656
 Yajnik CS, Deshmukh U, 2009

The Clalit – Mor Pregnancy Management Project

Adding a Penthouse and a Basement to the Perinatal Pyramid of Care

Pre-Pregnancy Evaluation

Maternal Medicine

Perinatal Pyramid of Care

Fetal Medicine

The 1st Trimester Triage

Post-Pregnancy Evaluation

Maternal Medicine

Non Communicable Diseases Management

11-13W

Specialist Care
13-34w

20W

37W

41W

Pregnancy Induced Complications
Management & Prevention
Future NCD

Don't lose opportunity to...



Preconception counselling and spacing

Health Care
 Before and Between Pregnancies

Healthy Happy Family



Preconception care has a positive effect on a range of health outcomes:



child mortality	maternal mortality
birth defects	low birth weight
preterm birth	macrosomia
neonatal hypoglycemia	mental retardation
goitre	cretinism
hypothyroidism	childhood cancers
type 2 diabetes and cardiovascular disease in later life	congenital and neonatal infections
vertical transmission of HIV/STIs	underweight and stunting
reduced breastfeeding	diarrhoea

Successful preconception care initiatives



- There is growing experience in implementing preconception care initiatives:
- in high-income countries, such as Italy, the Netherlands and the United States
- in low- and middle-income countries, such as Bangladesh, the Philippines and Sri Lanka



First trimester Counselling

- Physical activity
- Nutrition and diet
- Nausea and Vomiting
- Physiological Changes
- Screening for genetic anomalies
- Medications

Screening
Confirming pregnancy; Pregnancy test.
Rubella susceptibility
HIV
Varicella
Syphilis (RPR, VDRL)
Hepatitis B virus
CBC
Vitamin D
Hemoglobinopathy screening
ABO/Rh/Ab screen
Urine – dipstick
Cervical cancer screening
Book first trimester combined Down Syndrome Screening

First Trimester Screening

- Pathophysiology present in 1st trimester:
 - Preeclampsia, fetal demise, gestational diabetes mellitus, preterm birth, fetal growth restriction and macrosomia
- At risk women can be identified:
 - Ultrasound
 - Maternal biophysical parameters
 - Maternal history
 - Biochemical markers



First Trimester Screening “The Combined Test”

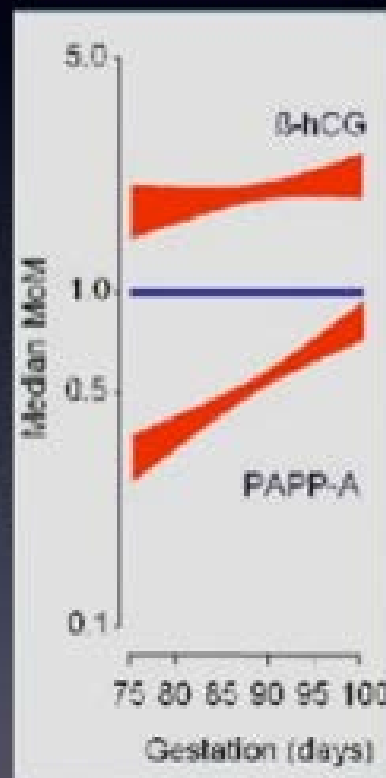
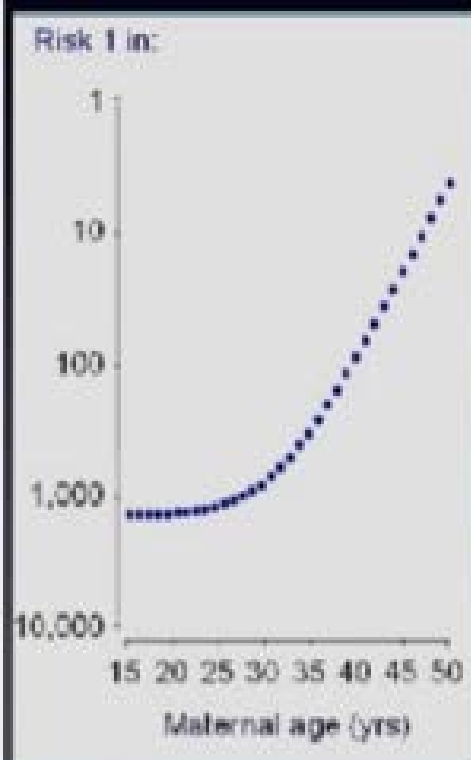
Maternal Age

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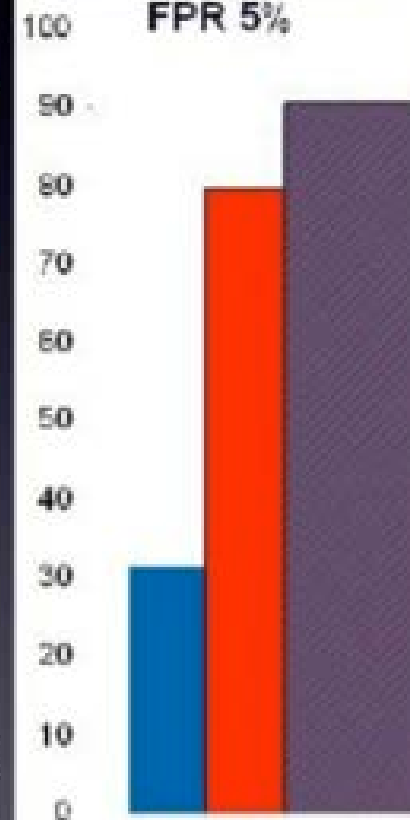
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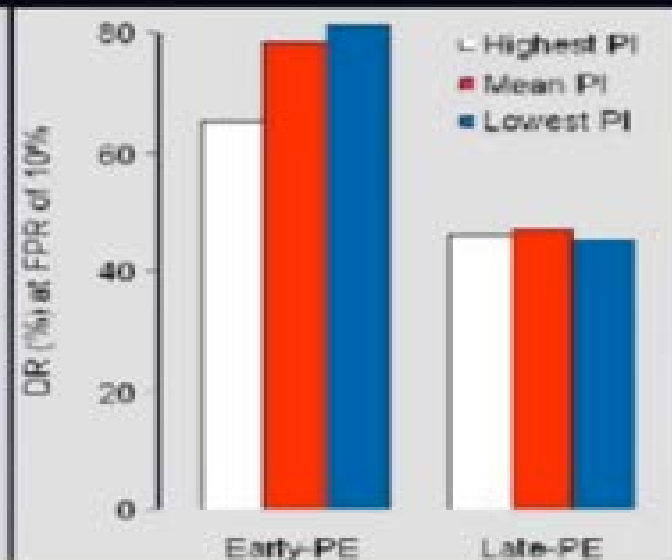
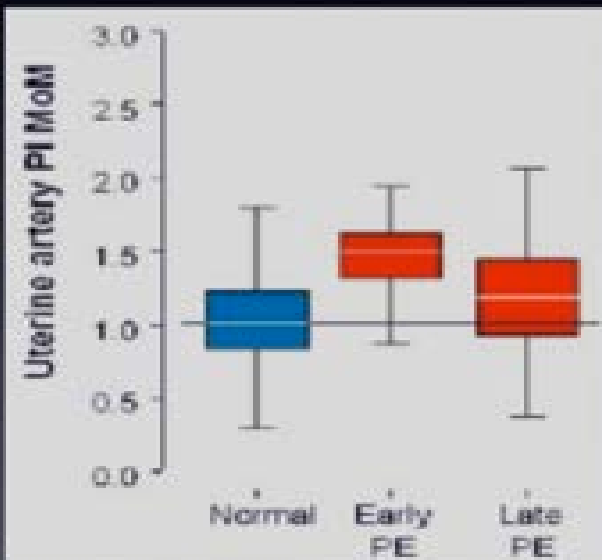
B-hCG
& PAPP-A



Detection rate for
FPR 5%



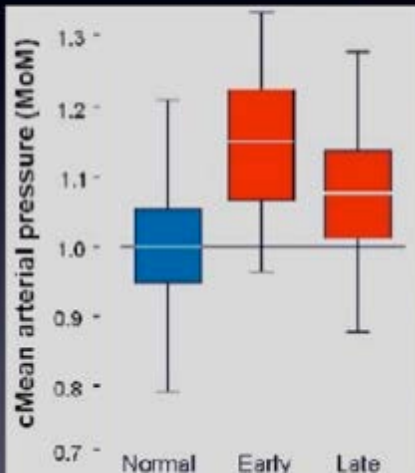
Uterine Artery 11-13wks 6 days scan



Blood Pressure at 11-13 weeks



Mean Arterial Pressure =
 $\text{Diastolic BP} + (\text{Systolic BP} - \text{Diastolic BP})/3$



+1.7%



Preterm Birth Prediction

- 1st TM Screen Model (PTB < 28 Wks)
 - 15% Maternal History Alone
- 22% Mat. History + Characteristics
 - 82% Add Cervical Length
- Treat with Progesterone
 - Inexpensive, easy, no adverse effects
 - Reduces risk of Recurrent PTB



Non-invasive prenatal genetic testing for fetal Chromosomal Aneuploidies

healthcare

Just Accepted by The Journal of Maternal-Fetal and Neonatal Medicine

Noninvasive Prenatal Diagnosis of Common Fetal Chromosomal Aneuploidies by Maternal Plasma DNA Sequencing

Tze Kin Lau, Fang Chen, Xiaoyu Pan, Ritsuko K Pooh, Fuman Jiang, Yihan Li, Hui Jiang, Xuchao Li, Shengpei Chen, Xiuqing Zhang

doi: 10.3109/14767058.2011.635730

THE JOURNAL OF
MATERNAL-FETAL
& NEONATAL
MEDICINE

VOLUME 24 • NUMBER 6 • JUNE 2011

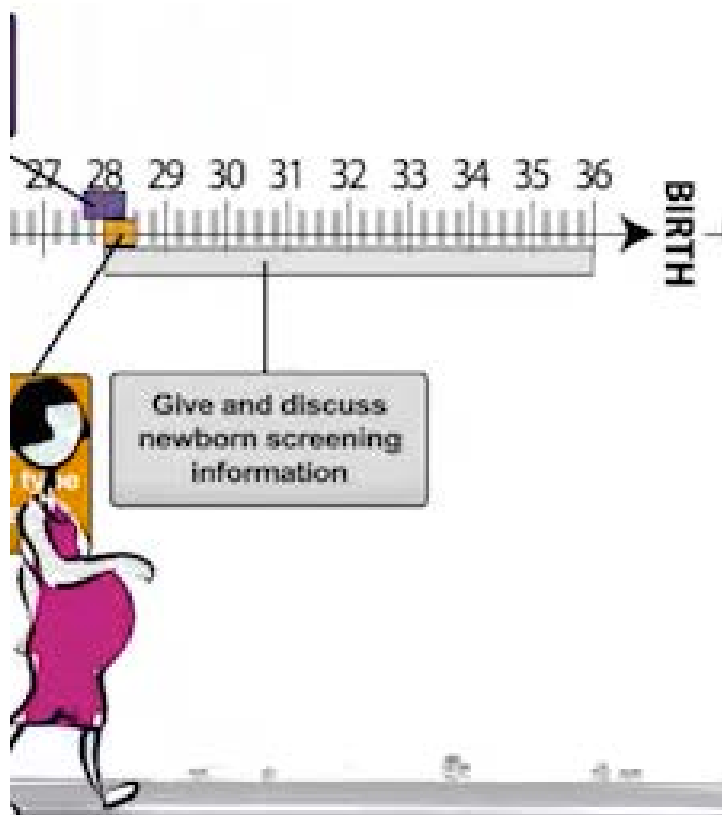
Universal screening By DIPSI

- 75gm glucose test

PLASMA GLUCOSE	IN PREGNANCY
<120 gm/dl	Normal
120-139 gm/dl	Gestational glucose Intolerance
140-199 gm/dl	Gestational Diabetes Mellitus
>200 gm/dl	Overt diabetes



Timeline continues..





Newborn blood spot screens (ideally on day 5) for:


sickle cell disease (SCD),

cystic fibrosis (CF), congenital hypothyroidism (CHT) and inherited metabolic diseases (PKU, MCADD, MSUD, IVA, GA1 and HCU)

NB: babies who missed the screen can be tested up to one year (except CF offered up to 8 weeks)

- **How many obstetricians have lost the focus and motivation that took them into the specialty?**
- **How many more have happily given up the discipline altogether and no longer use the practical skills that have been gained so painfully over countless night-time hours?**



- 
- **An all-India survey released by the Indian Medical Association (IMA), the largest Association of allopathic doctors, recently found that 82.7 % of the doctors in the country feel stressed out in their profession.**
 - **The survey found that fear of violence was the main source of stress for as many as 46.3% of the doctors surveyed, followed by fear of being sued (24.2%), while 13.7% feared criminal prosecution.**

Lies between doctor patient relationship

- Unfortunately, both patients and physicians are often challenged by complicated communications.
- Each group withholds, distorts, misrepresents, fabricates, or lies about information that is crucial to the doctor-patient relationship and to effective treatment.
- What doctors reveal, withhold, or distort matters greatly to their patients.
- Such untruths and manipulation of information can damage relationships and compromise clinical care.

There is a necessity of Honesty

Researchgate publication 2017

“we should learn the past and
research the present to predict the
future”

Hippocrates

What we require?



- The international health community, including donors and national governments, cannot afford to continue with their “silo” short-term approach of fixing certain health and development indicators while continuing to ignore the long-term overall health and economic benefits that would accrue from an **integrated health system approach.**

Improve access

- Improvements in access to care in many low- and middle-income countries have led to improved survival for even the “at risk” small for gestational age (SGA) babies born to undernourished mothers in rural settings.
- We cannot reach everywhere or counsel everyone.
- Invest in good support staff.
- Delegate duties.





- To get it right will require strengthening of health systems to further reinforce **maternal and child care services** at primary care level and **integrating elements of NCD prevention and health promotion.**
- It will also **require investments in information technology to identify and track high-risk individuals to educate, enlighten, empower, and encourage** them to adopt healthy living throughout life.

Goals of Focussed ANC



- Immunization for Tetanus Toxoid

Causes about 200,000 infant deaths and 8% neonatal deaths

- Correction of Anemia

Single most prevalent nutritional deficiency in pregnant mothers.

Underlying principles of care provision

- Women friendly
- Culturally appropriate
- Inclusive of women friends or family
- Individualised.
- Part of the hospital to home continuum of care.
- Integrated



Birth preparedness and complication readiness



Hygiene

Smoking

exercise

Benefits of breast feeding

Coming back to prepregnant weight

Neonatal and infant immunization

Contraceptive advice



- The World Health Organization recommends that women receive information on family planning (FP) during antenatal care (ANC), immediately after birth, and during postpartum and well-baby care.
- However, few studies have assessed the effect of information during each of these stages on women's use of contraceptive methods in the six months following delivery.

Attendance at selected maternal care services & postpartum family planning use, by country (%)

	ANC use	Institutional delivery	Postpartum contraception
Dominican Republic	100	98	47
Haiti	85	54	17
Nicaragua	68	74	55

- **Family planning counseling during the postpartum period is a neglected service that should be integrated into the spectrum of safe motherhood care.** Providers should be encouraged to reinforce contraceptive messages throughout the maternal care cycle as part of the effort to address mother and child care comprehensively.

POP council 2008

Prevention of Ca Cervix

26

OPPORTUNITY FOR CATCH- UP HPV VACCINATION IN YOUNG WOMEN AFTER FIRST DELIVERY

Primiparous 15 – 24 years

Rama et al 2006 Brazil

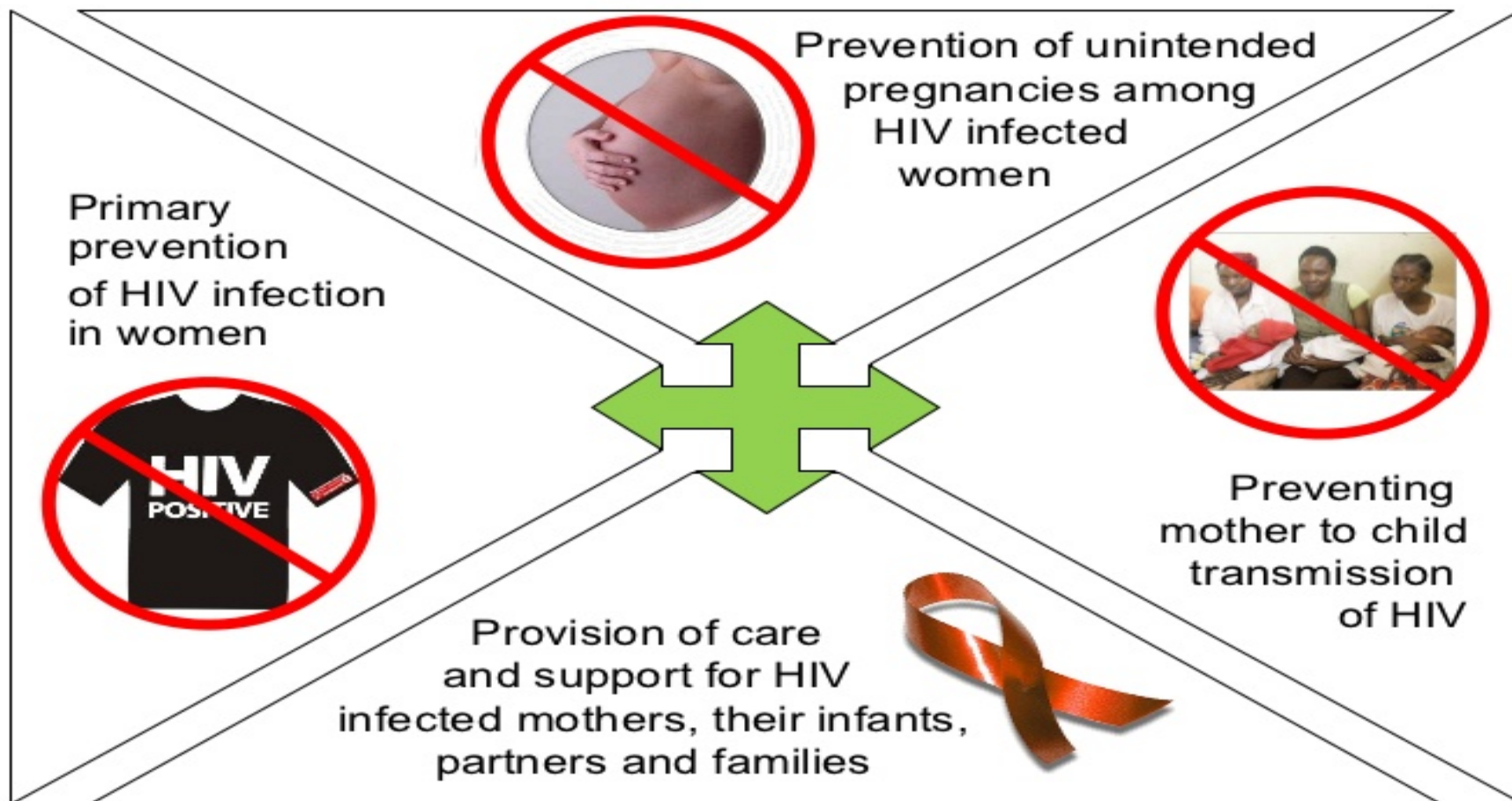
Screening for sexually transmitted infections



- Because of the implications of treatment for the newborn, the USPSTF recommends that all pregnant women be screened for **hepatitis B, HIV, and syphilis.**
- Also, the USPSTF recommends that pregnant women younger than 25 years and those engaging in high-risk sexual behaviours also be screened for chlamydia and gonorrhea.

Prevention of Mother to child transmission of HIV

Four Prongs of PMTCT



Life Style modification



Prevention of domestic violence

Facts About Intimate Partner Violence (IPV)

- Affects approximately 1.5 million women each year
- Affects as many as 324,000 pregnant women each year
- May be more common than conditions for which pregnant women are routinely screened
- Possibly associated with unintended pregnancy, delayed prenatal care, smoking, alcohol and drug abuse

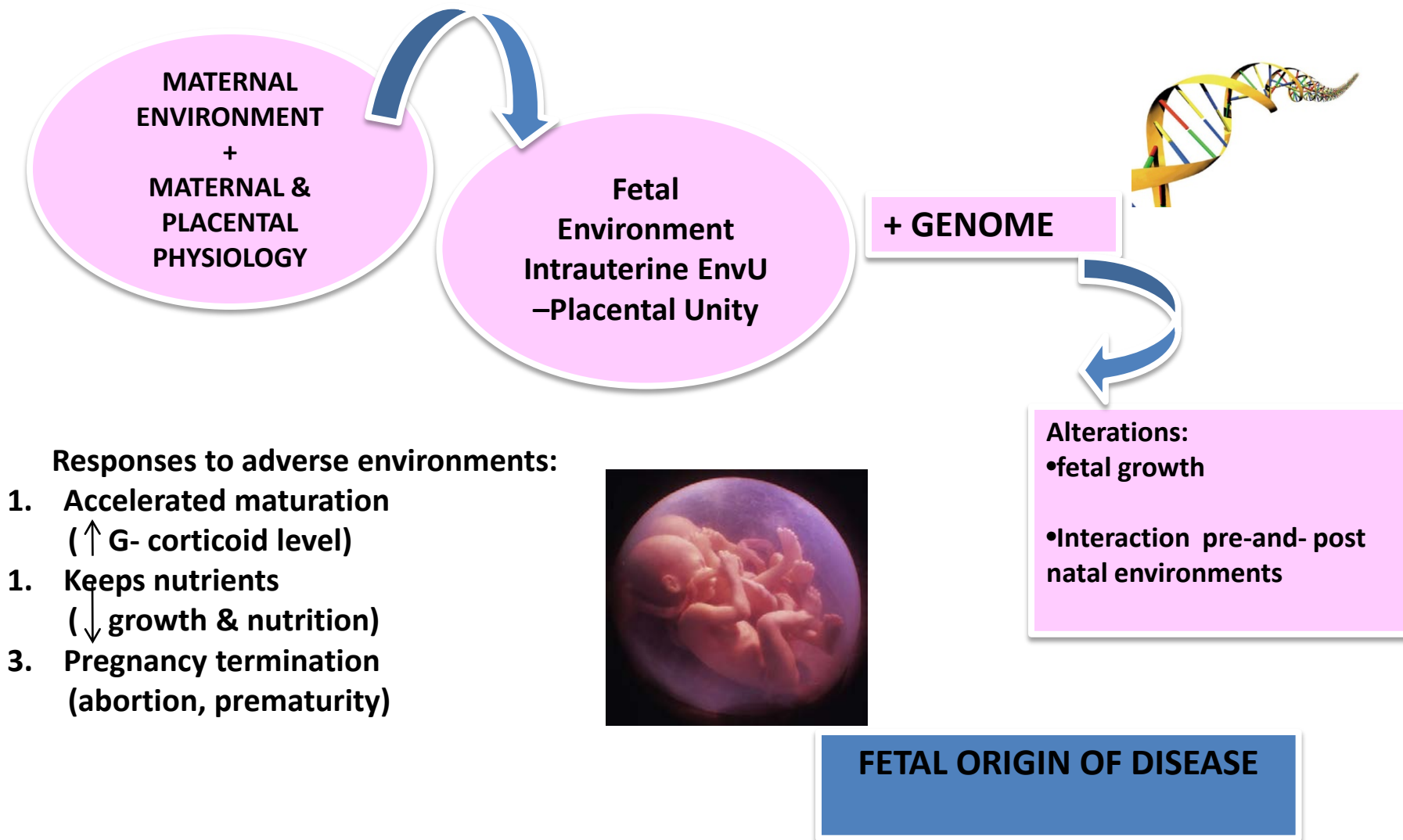
Gender ~~X~~ discrimination





“Whatever we learn should have an impact on the society at large...”

Fetal Origins of Adult Disease



Science behind Garbh sanskar

- The Sanskrit word **Garbh** means foetus in the womb and **Sanskar** means educating the mind. So, Garbh sanskar essentially means educating the mind of the foetus.
- It is traditionally believed that a **child's mental and behavioural development starts as soon as he/she is conceived**. His/her personality begins to take shape in the womb, and this can be influenced by the mother's state of mind during pregnancy.
- This knowledge can be traced back to ancient scriptures and is included in the Ayurveda.

The Sanskars



- **Manusmriti** says that 16 “sanskars,” that is proper rituals, should be done for humans beings. Sanskars should be done for and since the time of conception, during pregnancy, at birth, during childhood, adulthood, old age, and at death because these are beneficial for this and future lives. Of these, 12 are for children and cover a period from conception, pregnancy, birth, childhood and adolescence, and entry into adulthood. The “sanskars” not only instil good qualities in a child but also remove bad habits. These are described briefly as follows:
- **Garbhadhan Sanskar** : Even before a child is conceived, Manusmriti says, adults desirous of having a child should conduct themselves in the prescribed manner to conceive a healthy child.
- **Punsavan** : This is done for birth of child when the signs of pregnancy appear or in 2nd or 3rdantenatal month.
- **Seemantonnyan**: This is done in the 4th month of antenatal period and is for the stability of the foetus.
- **Jaatkarm**: This is done at birth before severing the cord in which the newborn is made to lick small amounts of ghee (clarified butter) and honey.
- **Naamkaran**: Here the child is named on 10th, 12th postnatal or any other good day.
- **Nishkraman**: The child is taken out of the house for a stroll in fresh air in 4th month or thereafter.
- **Annprashan**: The child is fed easily digestible tasty food consisting of pulses and cereals.
- **Mundan or Chudakarm**: Here head is shaven at 1st or 3rd year of birth.
- **Upnayan**: This is done at the time of taking the child to his guru or “acharya” who accepts the child for education at his Gurukul (hostel) and does his “yagyopaveet.”
- **Vedaarambh**: While living with guru the child learns “vedas” and other quality education.
- **Keshant**: Haircut at the beginning of puberty or adolescence.
- **Samavartan**: This is graduation at the completion of education and the young person leaving Gurukul for his home. It marks the end of adolescence and beginning of young adulthood.

The Effect of Selected Aspect of Garbha Sanskar on Stress, Coping Strategies and Wellbeing of Antenatal Mothers

- Pregnant women who were exposed to selected aspect of garbha sanskar had significantly **reduced stress, improves coping strategies**, and wellbeing of antenatal mother after practicing selected aspect of garbha sanskar.

Jyotsna Deshpande Assistant Professor, Bharati Vidyapeeth College of Nursing Pune-43, India PhD Nursing, Tilak Maharashtra Vidyapeeth, Pune, India

International Journal of Science and Research (IJSR) ISSN (Online): 2319-7064 Index Copernicus Value (2013): 6.14 | Impact Factor (2013): 4.438

Revolution in the making...





- ***There have been significant contributions, made by ancient India, which have led to the development of many medical and surgical procedures and advancement of technology .***
- ***Yoga and Ayurveda have gained immense popularity and brought about impact on health of the worlds' population, so will the integration of Garbh Sanskar and fetal origin of adult diseases.***

“If maternal and child nutrition and stressors can be optimized, the benefits will accrue and extend over generations; which is why we must work together to seize this opportunity.”

*Dr. Richard Horton.
Editor in chief; Lancet*



Adbhut Matrutva

A FOGSI Initiative





Dr. Jaideep Malhotra
President FOGSI

Welcome

DELEGATES to

WALK FOR



**Adbhut
Matrutva**
A FOGSI Initiative



January 19th, 2018

Walk in collaboration with  **Walter Bushnell**





**Adbhut
Matrutva**
A FOGSI Initiative



Be the guardian angel to your patients' wellness



Healthy Diet & Mind Skills
(Positive Thinking)



Exercises and Pranayam
Meditation and Visualization



Recommended Antenatal Visits
& Guidance for Immunization



Music and Color Therapy
Reading Mindfully



Appreciating Your Healthy Baby
Towards a Safe & Normal Delivery



Bonding Between Patient & Doctor



**Respectful care
during pregnancy
and labour**



Components of Adhbhut Matrutva



Digital FOGSI

Healthy India App

Digital e India

Presents

More than an APP



Wishing you a very
Happy New year
2018

A complete EMR Solution
customised for FOGSI members

FREE
to

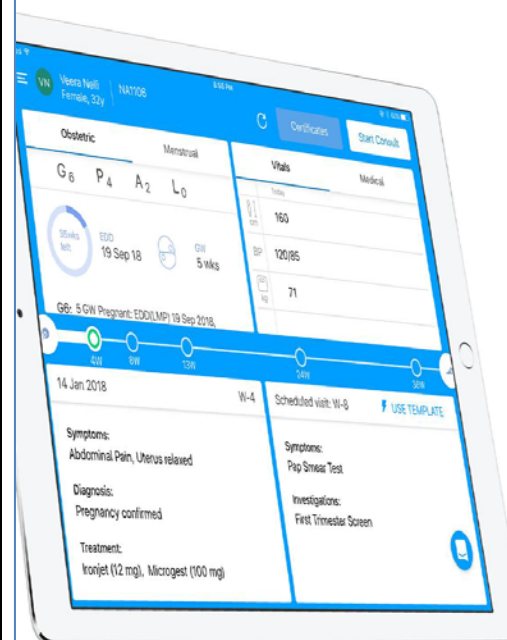
All registered delegates at
AICOG 2018, Odissa



Dr. Jaideep Malhotra



Software that doctors love to use



Faster than writing - just 40 sec to create an Rx

Digital medical records at your fingertips

Analytics, messaging & reporting – communicate with your patients outside the clinic too

500+

Doctors using
across India

1.5 million

Prescriptions
generated by our
doctors

750k

Patient's records stored
on our platform

Outcomes of Adhbhut Matrutva

- Building healthy future generations

Bonding of the mother with the Baby

Bonding of the patient with the Doctor and hospital staff (confidence building)

Allaying the fear of vaginal delivery

Educating and sensitising many important aspects of pregnancy and postpartum period

Making motherhood a blissful experience





सत्यमेव जयते



9th of Every Month



Adbhut
Matrutva

A FOGSI Initiative



Shri. J.P. Nadda

Hon. Minister of Health and Family Welfare



Prof. Jaideep Malhotra
President FOGSI

Govt. of India and FOGSI appeal to all FOGSIANS for taking care of our pregnant women free of charge on 9th of every month

Shri. J.P. Nadda

Prof. Jaideep Malhotra

Onus lies on our shoulders!

- **Need to think beyond ourselves**
- **Region is very diverse, with a lot of cultural, social, religious and financial differences.**
- **Will need strong commitment, advocacy and cumulative sustained efforts to build future healthy generations...**



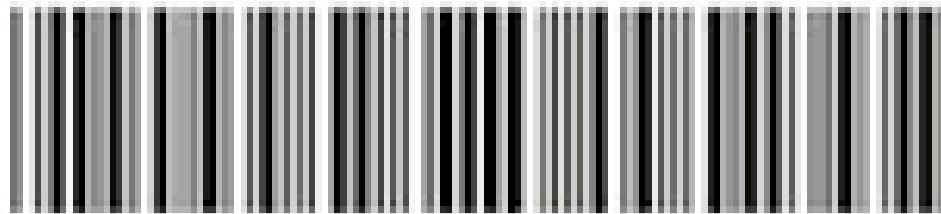


I don't want to get to the end of my life and find that I lived just the length of it. I want to have lived the width of it as well."

Diane Ackerman

UNIQUE CARD

Authorised signature



58073941

This card must be presented to redeem discount.
Terms & conditions will vary with each business.
This vip card is not transferrable and subject to rules of use.
For full terms & conditions refer to website.

FOGSI Social security scheme

- When tragedy strikes families can be lost and distressed particularly in a situation where the support or protection of organized social security is lacking as in our country. This is even more acute with professionals who have to look out for themselves.
- The FOGSI SSS is a fellowship scheme that in the true sense engenders a spirit of fraternity and togetherness among our members by encouraging their participation in a common cause and creating a reliable financial and emotional safety net for their loved ones in case of tragedy.
- The FOGSI SSS is the only national scheme for our specialty, specially formulated for the mutual benefit of the large family of FOGSI members. Financial support and solace in their time of need is available at a very short notice. It is your support to your colleague's family !!

FOGSI Indemnity Scheme

- There is no doubt that of all the medical specialties, our branch of obstetrics, gynecology, infertility management and gynecological endoscopy is considered to be at the highest medico-legal risk, with anything less than an optimal outcome being considered unacceptable by our patients and their families.
- It was to address specific concerns brought on by the currently charged medico-legal climate we now have to cope with as medical specialist professionals, that FOGSI devised and launched this tailor made scheme, which was made possible by negotiating with insurance companies as a national professional organization to protect member interests.
- This policy offers coverage to all participating FOGSI members as well as the medical establishments owned by members. It can also club the *standard policy* with an *errors and omission policy* for medical establishments. An important feature is the in built coverage of unqualified staff. Recently we have increased the cover till around Rs.3 Crores.

FOGSI JHPEIGO Samarth initiative





- 70% healthcare in private
- Private dependent on semi trained or untrained paramedical staff.
- Private nursing colleges churning out paramedics without practical training.
- Samarth initiative will help in skill assessment before employing and the ones employed can undergo a two week structured skill enhancement programme .


ADHBHUT MATRUTVA

17-18 March, Manesar



 **Adbhut Matrutva**
A FOGSI Initiative

 **FOGSI**



ADHBHUT MATRUTVA
A FOGSI Health Initiative
For Divine Mothers
& Virtue Babies
on
4th February at Assi Ghat, Varanasi
By
Honorable MoS HFW
Ms. Anupriya Patel

Dr Jaideep Malhotra Ms. Anupriya Patel Dr Jaydeep Tank Nikita Sobti BK Shubha Neel









Saath Saath with IAP



YATA

ome together to
ate maternal mortality!
ForgetMoms

www.manyatalamothers.org
#ForgetMoms


MANYATA

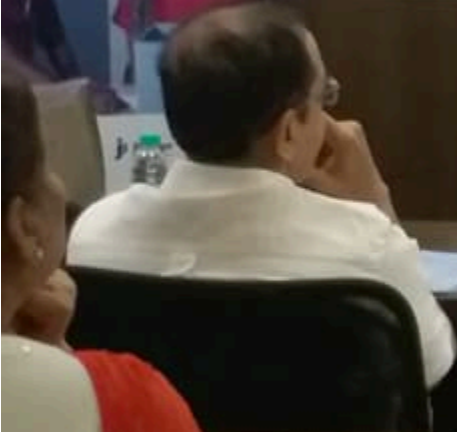
DON'T FORGET MOMS - A FOGSI INITIATIVE

*Let's pledge to reduce
maternal mortality - together!*

Log on to www.manyatalamothers.org today!

www

Mr. Apoor
Bhandari



Core cells





USAID
UNFINISHED BUSINESS
Improving Maternal and Child Health Care to Achieve Sustainable Development Goals

Mr. Pradeep Kumar
Pallan

Shubasree Raghavan
SAATHI

Anjali Nayyar
Health Strategies

Aparajita Go
Centre for Catal

Dr. Jambh Karnal

Pathfinder

Rajni Gera
M. G. Gera

FOGSI JHPIEGO SAMARTH INITIATIVE







**Adbhut
Matrutva**
A FOGSI Initiative





Adbhut Matrutva

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Be the guardian angel to your patients' wellness



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Reading Mindfully



Appreciating Your Healthy Baby
Towards a Safe & Normal Delivery



Bonding Between Patient & Doctor

**Respectful care
during pregnancy
and labour**



Freinkel hypothesis ; Potential long-range effects upon the fetus of altered interactions in maternal fuels during pregnancy.
Fuel-mediated teratogenesis as the basis for long-range anatomic and functional changes

