


COLLEGE OF EDUCATION & HUMAN DEVELOPMENT
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 MEMBER THE TEXAS STATE UNIVERSITY SYSTEM™

PRECONCEPTION NUTRITION – PART 2

Nutrition through the Life Cycle

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PRE-EXISTING DIABETES

- Blood sugar must be under tight control at time of conception
- High blood glucose in embryonic period is teratogenic
 - 2-3 times the risk of birth defects
 - Higher risk of miscarriage



<http://pregnancyfamilyeducation.com/general-health-and-safety/managing-diseases-during-pregnancy/66238.html>

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- Type 1 vs. type 2 diabetes
 - Type 1
 - No insulin produced
 - Young age at onset
 - Low to normal weight



<http://www.kidpath.co.uk/health/healthnews/734885/Landis-pancreas-cells-hope-for-type-1-diabetes.html>

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- Type 2 (90-95% of all diabetics)
 - Insulin produced, but cells resistant
 - Traditionally older at onset
 - Overweight or obese
- Preconception screening for type 2
- Intervention:
 - Exercise
 - Weight loss
 - Diet



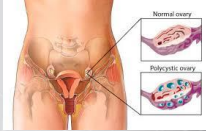
<http://www.dynmicrtd.com/for-facts-about-type-2-diabetes-therapy-help-to-combat-effects-of-type-2-diabetes/>

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POLYCYSTIC OVARIAN SYNDROME (PCOS)

- 5-10% of women have PCOS
- Absence of ovulation
- Menstrual irregularities
- Outer layer of ovaries is thick and hard – follicles cannot develop
- Having PCOS means increased risk of:
 - Fertility problems
 - Gestational diabetes
 - Type 2 diabetes
 - Cardiovascular disease



<http://womenrhealth.gov/publications/our-publications/facts-sheet/polycystic-ovary-syndrome.htm>

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PCOS

- Symptoms and signs
 - Women tend to be obese (or have a lot of central body fat), have excess body hair and acne
 - High triglycerides, cholesterol
 - Low HDLs
 - High androgens



<http://makeupandbeauty.com/polycystic-ovarian-disease...a-rising-epidemic/>

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ACANTHOSIS NIGRICANS

- Insulin resistance appears to be a major factor in most cases
 - Excess insulin stimulates ovaries to produce androgens
 - Excess insulin raises triglycerides and lowers HDLs



<http://healthtoss.blogspot.com/2012/03/acanthosis-nigricans.html>

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- Treatment
 - Drugs to increase insulin sensitivity
 - Drugs to stimulate ovulation
 - Weight loss and exercise to
 - Increase insulin sensitivity
 - Lower blood glucose
 - Lower blood insulin levels
 - Improve lipid profile

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PKU (PHENYLKETONURIA) MOTHER

- Inherited disorder
- Phenylalanine accumulates in the bloodstream
- Embryo will have central nervous system and heart damage



<https://twitter.com/pkuawareness>

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- An untreated PKU mother
 - 92% chance of mental disability in newborn
 - 73% chance of microcephaly



<http://www.childrenwithpku.org/pictures3.html>

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• Intervention

- Must happen prior to conception
- Very restrictive, complicated diet
- Women who comply with diet are likely to have babies with normal intelligence



<http://stores.pkuperspectives.com/Detail.asp?top=305>

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HERBAL SUPPLEMENTS

- Used to relieve PMS, increase fertility in both men and women
- Some work; some don't
- Definitely should be reported to health care provider.



<http://www.drholodine.com/blog/herbal-and-natural-supplements-to-enhance-sexual-passion>

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