

EXPOSURES TO AVOID IN PREGNANCY

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POWER OF THE M.D.

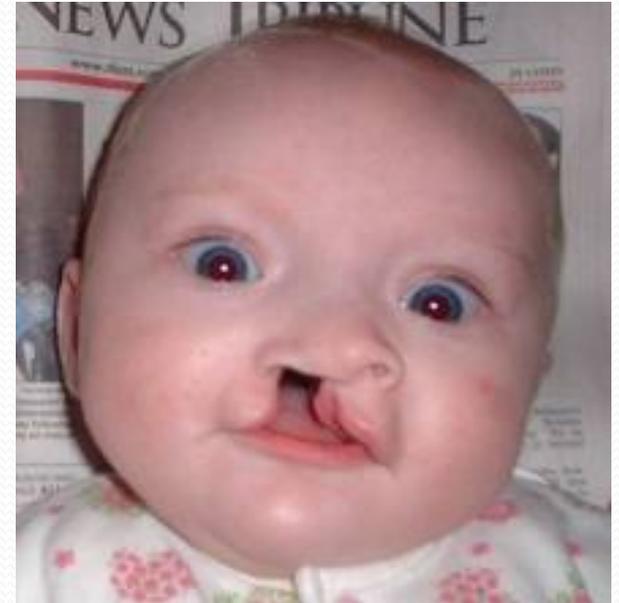


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POTENTIAL FOR HARM



Thalidomide



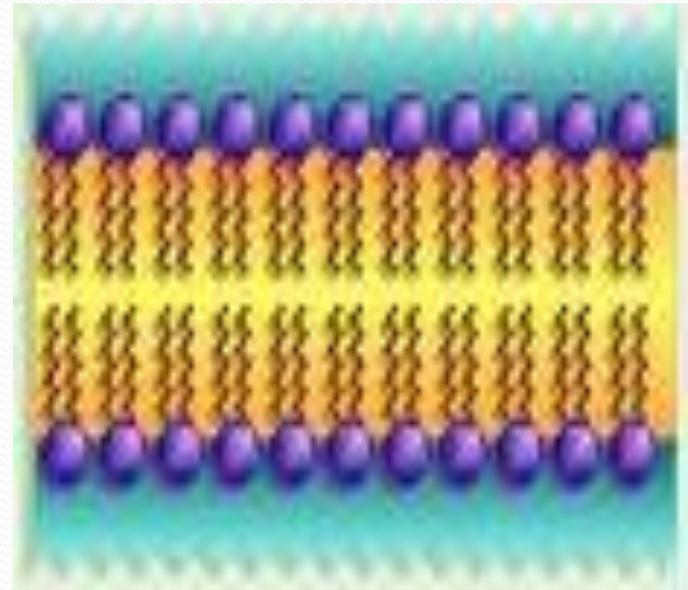
Topiramate

Valproic acid



MECHANISMS OF PLACENTAL TRANSFER

- Simple diffusion
- Facilitated diffusion
- Active transport
- Pinocytosis



POSSIBLE TERATOGENIC EFFECTS

- Anatomic abnormality
- Impaired growth



TYPES OF TERATOGENS

- Medications
 - Thalidomide
- Environmental agents
 - Irradiation
 - Heat
 - Chemicals
 - Smoking
 - Microorganisms
 - Maternal diabetes



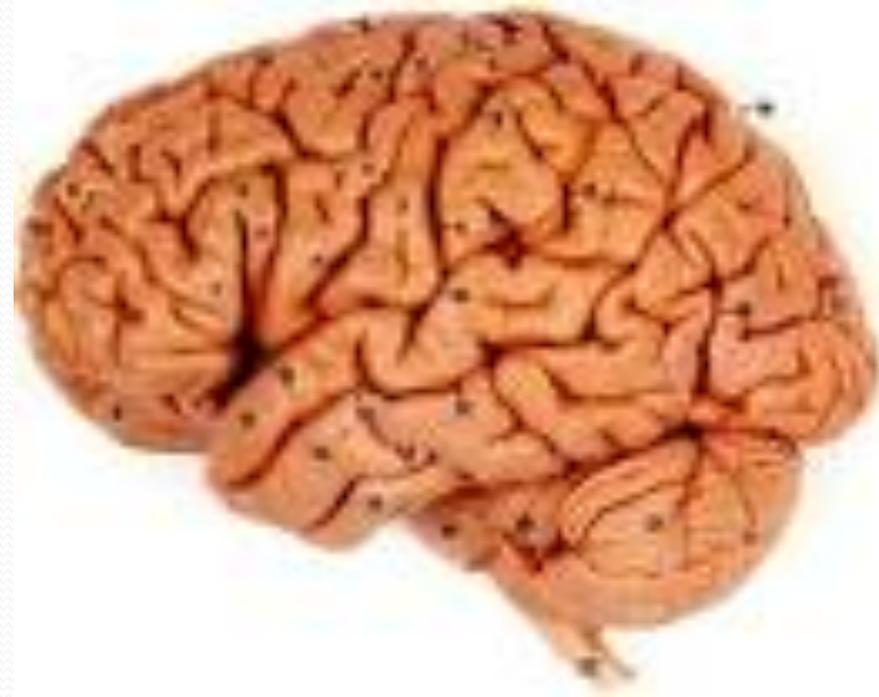
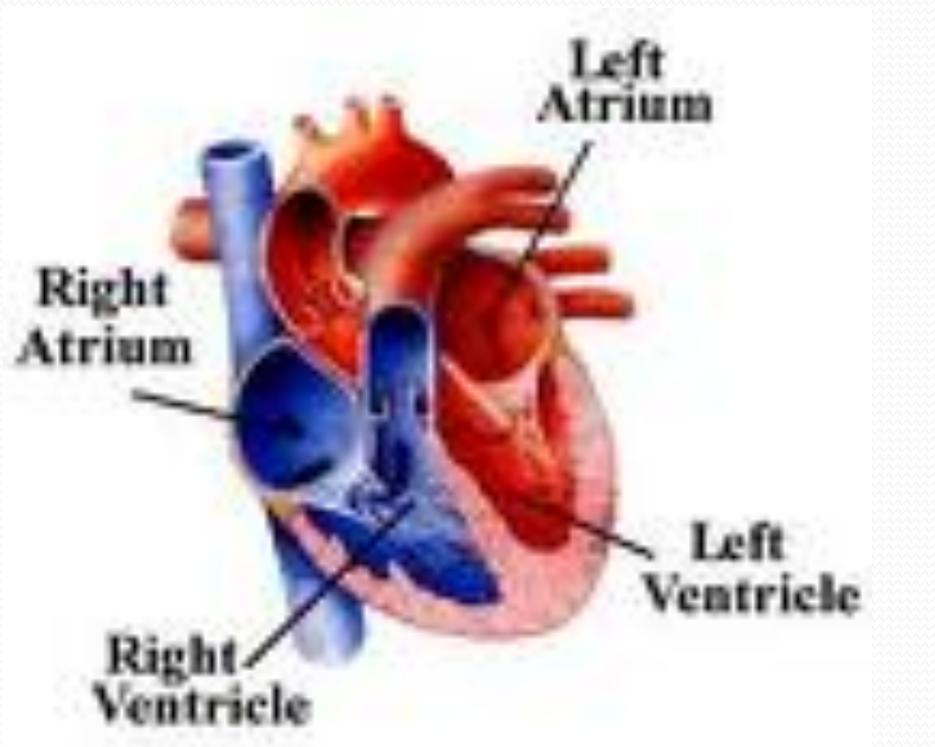
TRIMESTER OF GREATEST FETAL VULNERABILITY

1

2

3

MOST LIKELY ORGAN SYSTEMS AFFECTED



ANIMAL MODELS TO ASSESS TERATOGENECITY



ORIGINAL FDA CLASSIFICATION OF DRUGS IN PREGNANCY

FDA CLASS	EXPLANATION
A	No harm
B	No harm but limited human studies
C	Animal studies suggest risk
D	Harmful
X	Absolutely contraindicated

Discontinued in the summer of 2015

ACE INHIBITORS AND ARBs

- Most likely adverse fetal effect?
- Is the effect reversible?
- Is there a safe period in pregnancy to use these drugs?



BETA BLOCKERS



- Usual indications?
- Adverse fetal effects?

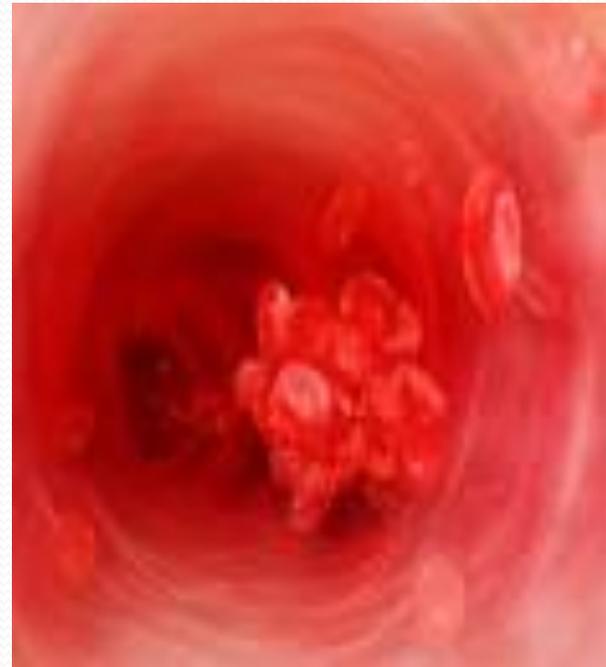
CARBEMAZEPINE

- Possible indications in the mother?
- Most likely harmful effects in the baby?



COUMADIN

- Most likely adverse effect in the fetus?
- Alternative agents for anticoagulation in pregnancy?



HEAT

- How does the fetus dissipate heat?
- Critical time of exposure?
- Most likely adverse fetal effect?



ISOTRETINOIN

- Most likely prescriber?
- Indication?
- Adverse fetal effects?



LITHIUM

- Usual indication in the mother?
- Most likely harmful effect in the fetus?



METHAMPHETAMINE

- Most likely adverse fetal effect?
- Most likely adverse neonatal effect?
- Effect on breast feeding?



NARCOTICS

- Two most likely sources of exposure?
- Most likely adverse fetal effects?
- Most likely adverse neonatal effect?



NSAIDS



- Usual indications?
- Adverse maternal effects?
- Adverse fetal effects?

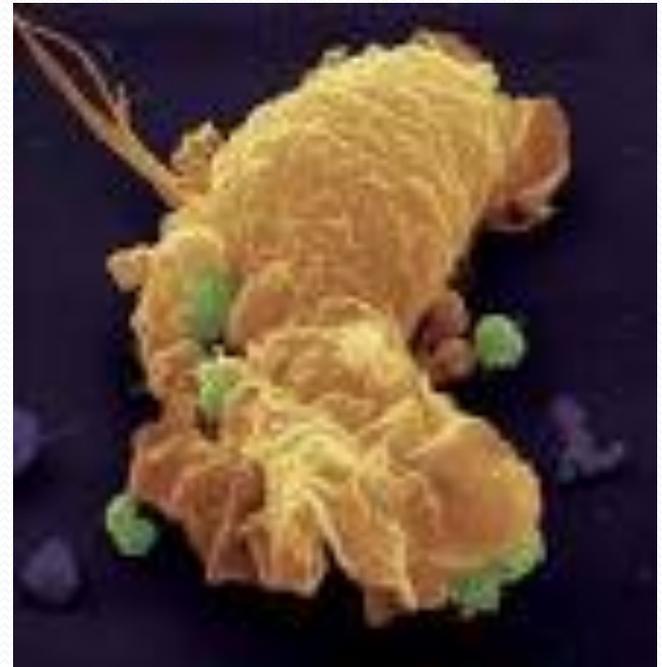
PHENYTOIN

- Usual indication?
- Most likely adverse fetal effects?



QUINOLONES

- Usual indications?
- Most likely harmful effect in the fetus?
- Acceptable indications in pregnancy?



RADIATION

- Dose threshold?
- Most likely adverse fetal effect?



SSRIs

- Usual indication?
- Most dangerous of the SSRIs in pregnancy?
- Most likely adverse fetal effect?



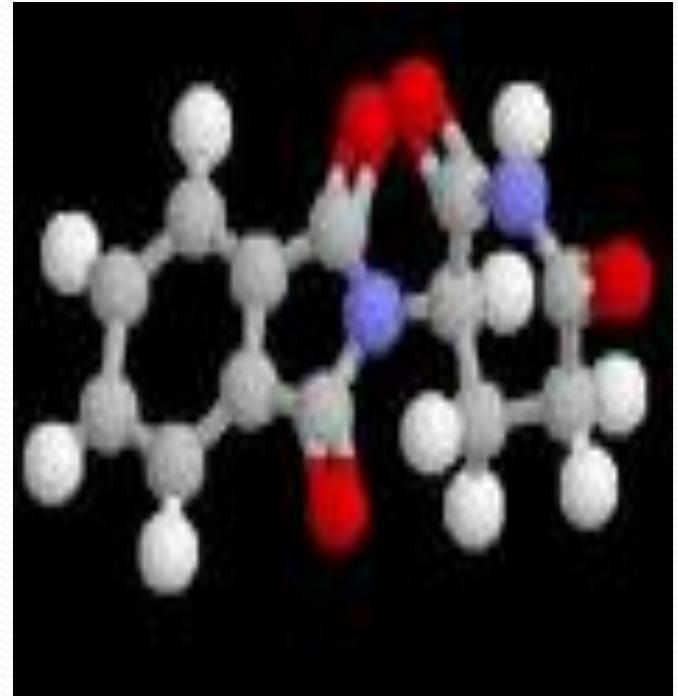
TETRACYCLINE/DOXYCYCLINE

- Possible harmful effect in the mother?
- Most likely adverse effect in the fetus?



THALIDOMIDE

- Original indication?
- Adverse fetal effects?



TOBACCO

- Most likely adverse fetal effects?
- Most serious maternal complication?



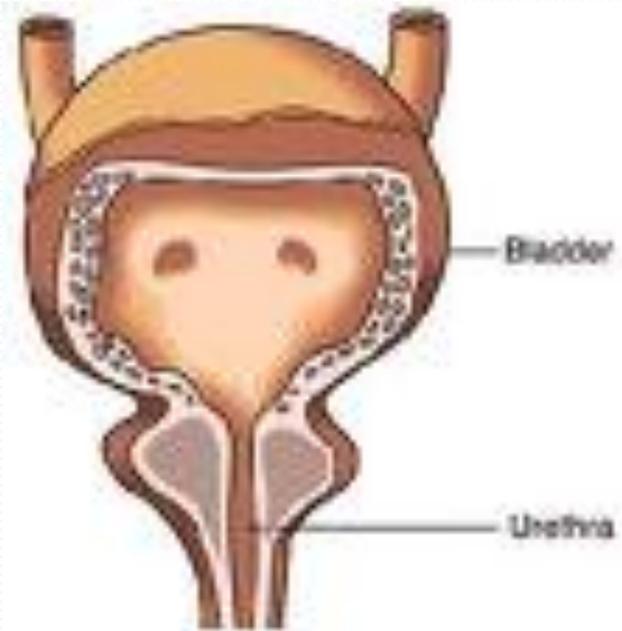
TOPIRAMATE

- Possible indications?
- Newly described adverse fetal effect?



TRIMETHOPRIM- SULFAMETHOXAZOLE

- Most likely adverse fetal effect with first trimester exposure?
- Potential neonatal effect with exposure just prior to delivery?



VALPROIC ACID

- Usual indications?
- Most likely adverse fetal effect?



MICROORGANISMS

MICROBE	TERATOGENIC EFFECTS
Rubella	
Varicella	
CMV	
Parvovirus	
Toxoplasmosis	

EXPOSURE TO TERATOGENS

CONCLUSIONS

- Think carefully before prescribing any drug in pregnancy, especially in the first trimester
- If you are unsure about the safety of a drug, ask for consultation from your obstetric colleague