

Health Professionals Making a Difference:
Fetal Alcohol Spectrum Disorder, Alcohol and
Substance Use in Pregnancy, and Breastfeeding

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Alcohol and other drugs and breastfeeding

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Drugs and breast milk

Amount of any drug excreted to milk depends on the:

- Lipid solubility of the drug
- Molecular size of the drug
- Protein binding in the maternal circulation
- Oral availability in the infant and the mother
- Half-life in the mother's and infant's plasma compartments

Drugs and breast milk *continued ...*

- Drugs enter breast milk primarily by diffusion between maternal plasma and maternal milk.
- Pass from maternal plasma through capillary walls into the alveolar cell lining of the milk buds.
- As levels of drugs in maternal plasma rise, concentration in milk will also rise.
- Drugs enter milk, and in almost all cases, exit milk as a function of maternal plasma levels.

Drugs and breast milk *continued ...*

- As maternal drug plasma levels fall equilibrium forces drive the drug out of the milk compartment back into the maternal plasma for elimination.
- Drugs ingested via milk must traverse the infants GI tract prior to absorption.
- In general, less than 1% of maternal dose of a drug will end up in breast milk (wide variations).

(Hale, 2006)

Pregnancy risk categories

Category A

Controlled studies fail to demonstrate risk to the fetus.

Category B

Animal studies have not demonstrated fetal risk but no controlled studies in humans have been conducted.

Category C

Animal studies have reported adverse effects to the fetus but no controlled human studies have been done.

Pregnancy risk categories *continued ...*

Category D

Possible evidence of human fetal risk but benefits for user in pregnancy may be acceptable i.e. life threatening situations.

Category X

Studies in animals and humans have demonstrated fetal abnormalities. Contraindicated for use by women who are, or planning to become pregnant.

Lactation risk categories

L1 SAFEST

Controlled studies fail to demonstrate a risk to infant or drug is not bioavailable to infant.

LS SAFE

No adverse effects detected or there is a remote risk to the infant.

L3 MODERATELY SAFE

Controlled studies show only minimal adverse effects. Drugs should be given only when potential benefits justifies potential risks to the infant.

Lactation risk categories *continued ...*

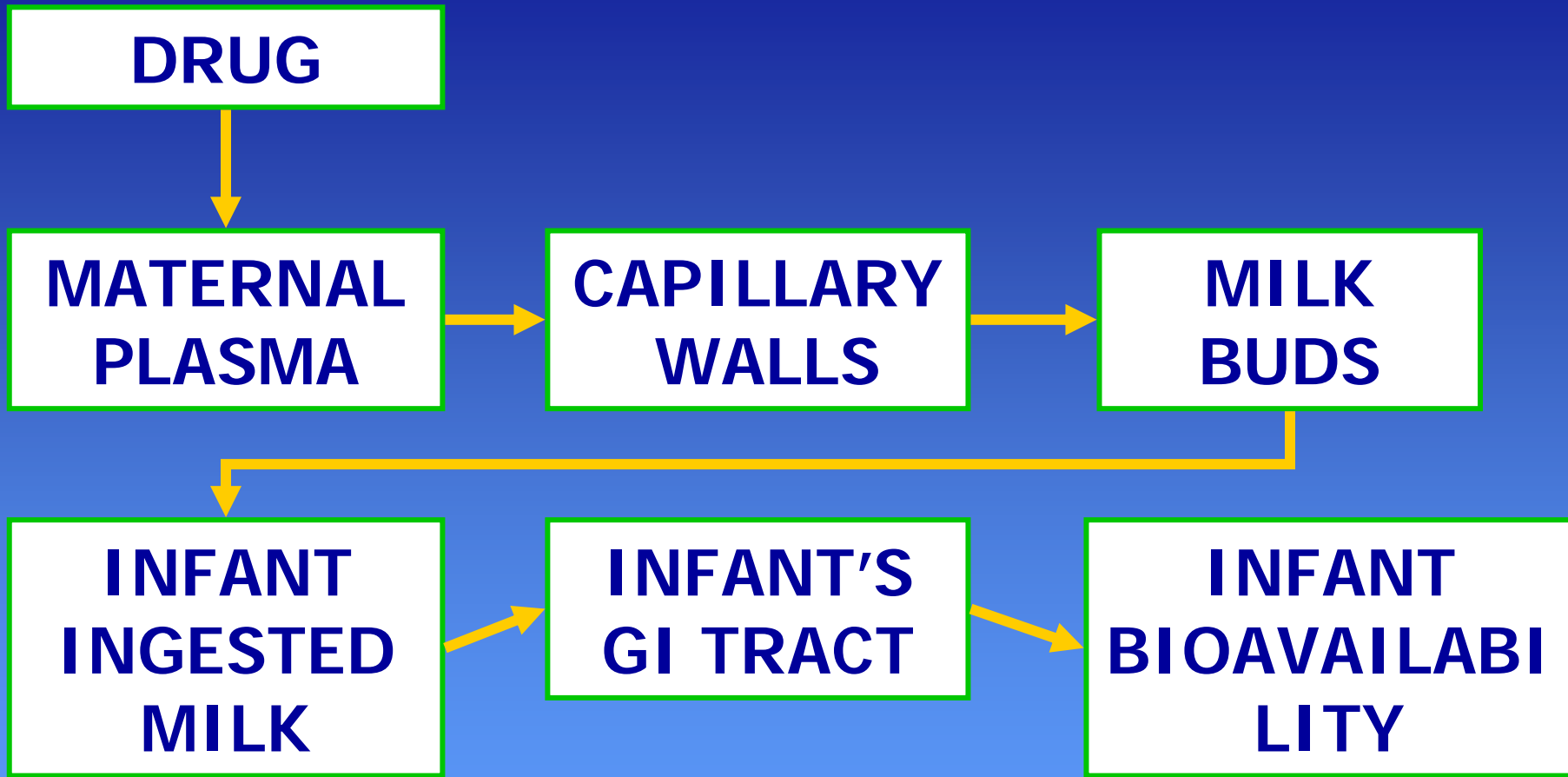
L4 HAZARDOUS

Evidence of risk to infant. Benefit for use by mother may be justified if need is great.

L5 CONTRAINDICTED

High risk of causing harm to an infant.

(Hale, 2006)



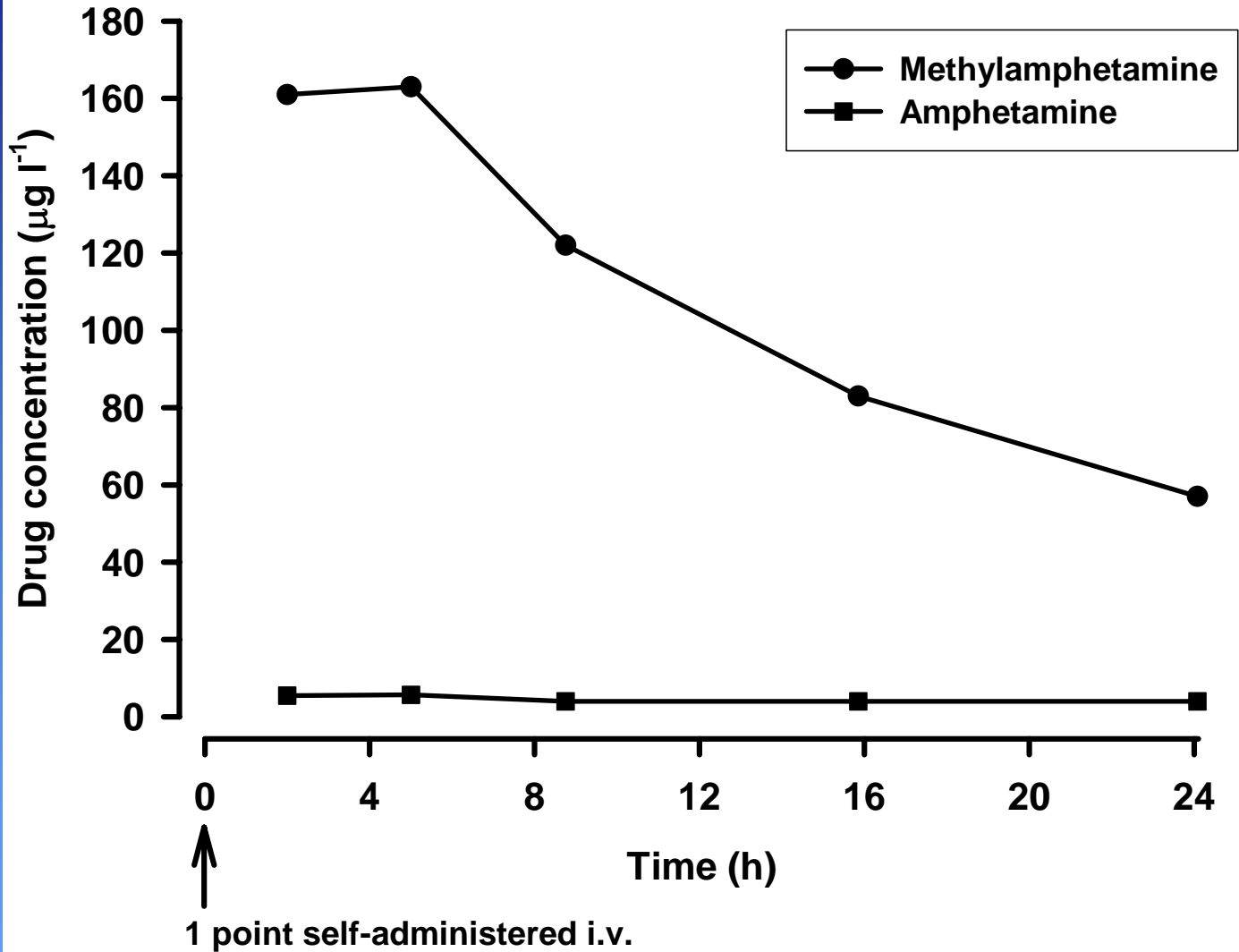
Maternal – Infant Drug Pathway

Drugs

- Alcohol
- Amphetamines
- Cannabis
- Heroin
- Methadone
- Buprenorphine

Drug	T ¹ / ₂	PR/LRC	Recommendation
Alcohol	0-24 hrs	D/3	Avoid breast feeding for 2-3 hrs after drinking alcohol
Amphetamines for	< 8 hrs	C/4	Withhold breast feeding 24 hours after last dose
Cannabis	25-57 hrs	C/5	Contraindicated in nursing mothers
Heroin	1.5-2 hrs	B/5	Dependent users should not breastfeed
Methadone	13-55 hrs	B/3	Breast feeding recommended
Buprenorphine	1.2-7.2 hrs	C/2	Probably safe
Suboxone		/3	Unlikely that breast milk levels will be significant

Methylamphetamine case #1



Patterns of use

- Regular
- Binge
- Intoxification

Conclusion

- Breast milk and breast feeding are known to have important health and cognitive benefits for infants and mothers.
- Natural form of self immunisation for infants.
- Breast feeding has important economic benefits for women of low socio-economic status.
- WHO recommends that babies should be breast fed until they reach 6 months.
- NMHRC states that breast milk should be the preferred food for infants up to 12 months and continue into second year of life.

Conclusion *continued ...*

- In WA, the goal is for 95% of infants to be breast fed from birth and 60% to still be breast fed at 6 months.
- Breast feeding should be encouraged but patterns of drug use and contextual factors should be taken into account.
- Breast feeding reduces the incidence of major newborn illnesses.
- Before recommending that a mother stop breast feeding there must be evidence that it poses a real and substantial risk to the infant.