Hur påverkas foster när modern dricker under graviditeten?

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Alkoholpolitiskt forum
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Exponering för toxiska substanser under fosterlivet riskerar barnets utveckling

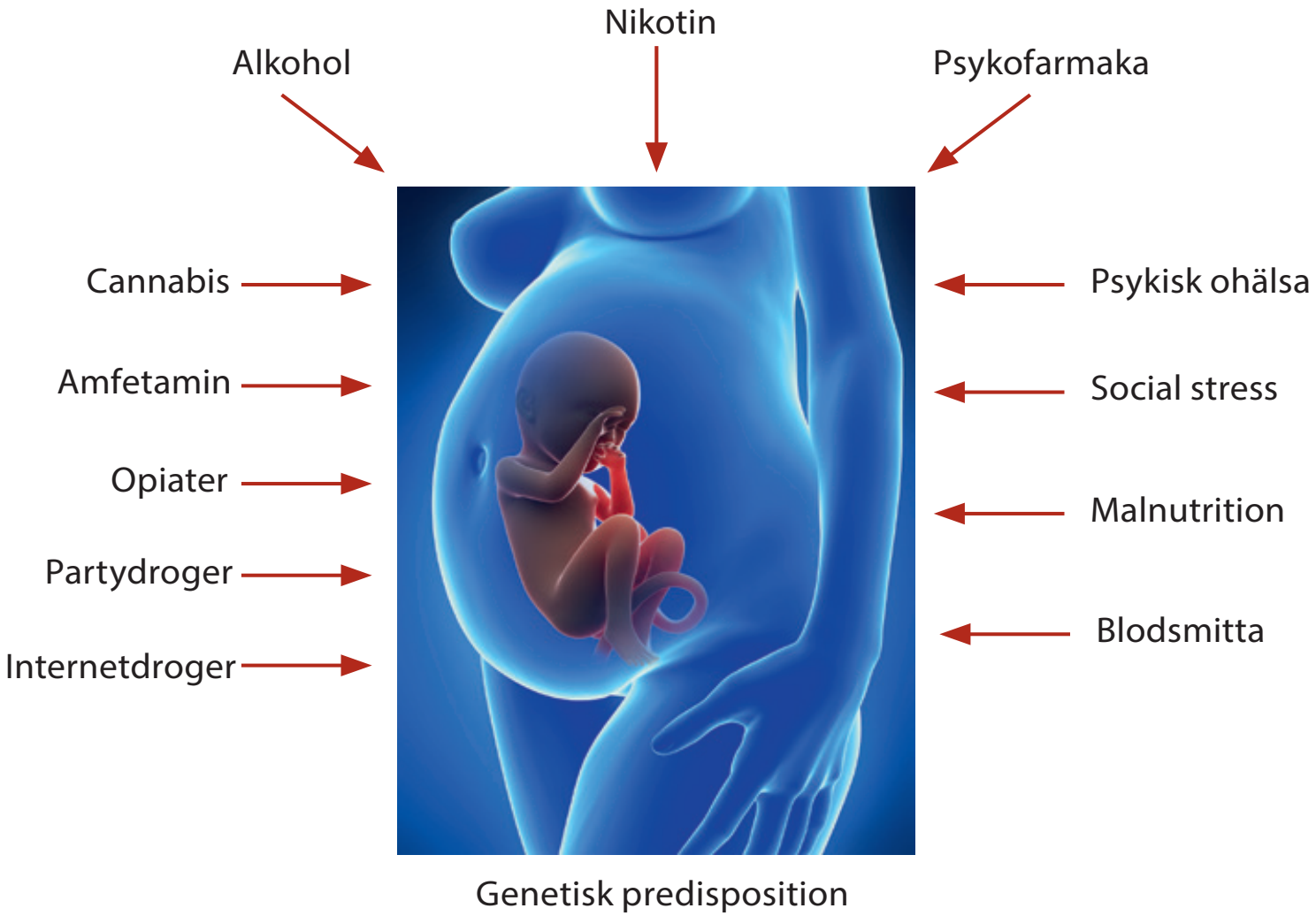


Table 1: Health harms associated with substance use during pregnancy

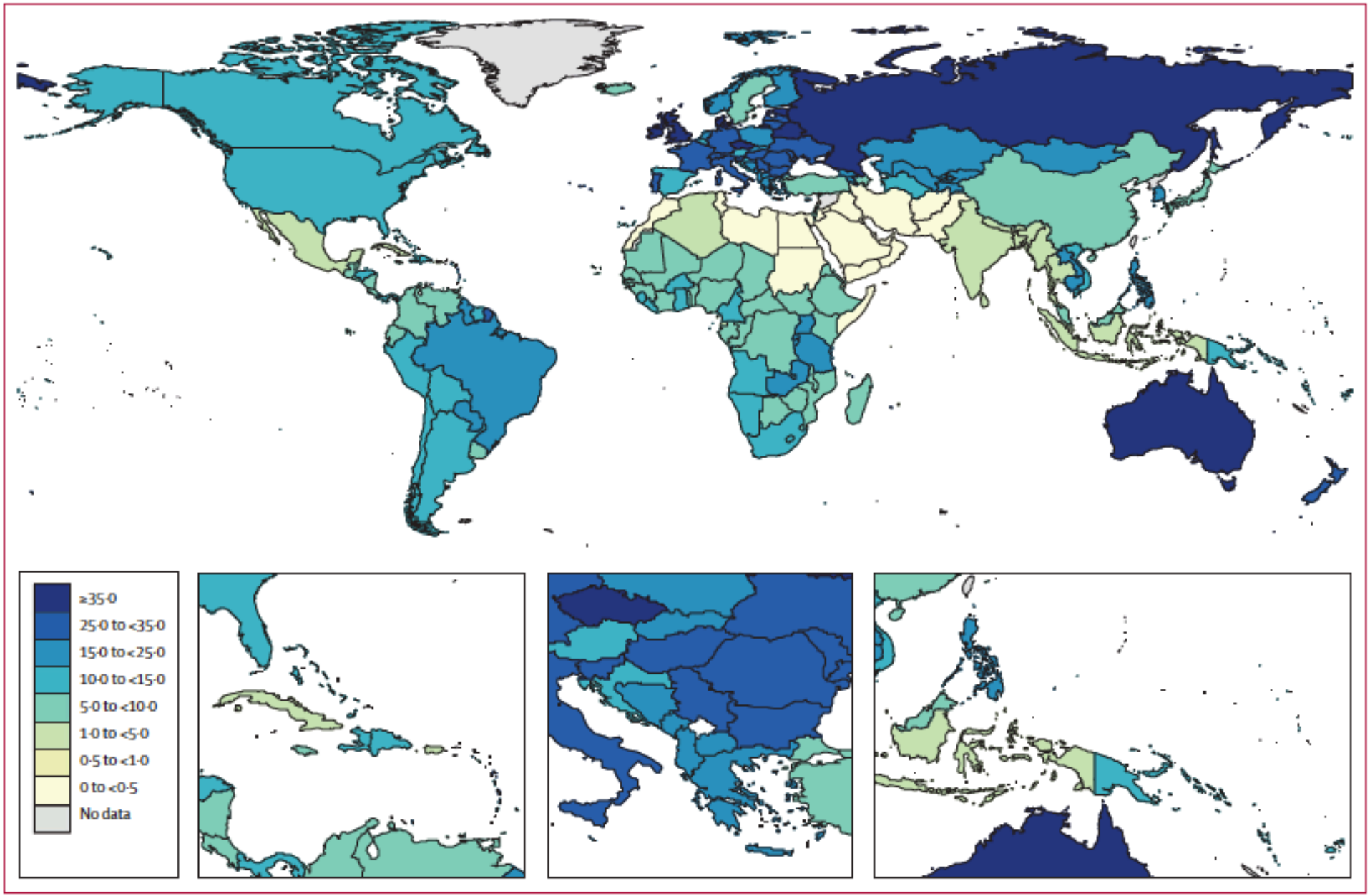
	Alcohol	Tobacco	Cannabis	Amphetamines	Cocaine	Opioids
Low birth weight	+	+	+	+		+
Miscarriage	+	+	+	+	+	
Perinatal mortality	+	+				+ (a)
Developmental problems in childhood	+		+		+	
Foetal morbidity	+		+	+	+	
Premature birth	+			+		+
Decreased foetal growth	+					
Impaired intrauterine growth	+					+
Neonatal withdrawal symptoms	+					+
Premature rupture of membranes, placental abruption				+	+	
Preterm delivery	+					
Respiratory depression						+

(a) Related to withdrawal.

NB: The effect of these drugs may be confounded by polydrug use and/or other health and lifestyle factors associated with drug use.

Source: *A summary of the health harms of drugs,* The Centre for Public Health, Faculty of Health & Applied Social Science, Liverpool John Moore's University, on behalf of the Department of Health and National Treatment Agency for Substance Misuse (2011).

Global prevalence (%) alcohol use (any amount) during preganancy in the general population 2012; *(Popova et al Lancet Glob Health 2017)*



"During my first pregnancy I drank lot of wine. Some days I drank 2 bottles of wine. I stopped drinking during my second pregnancy "

Karakteristiskt ansiktsutseende vid FAS

- Mindre skallomfång
- Bred näsrot
- Små ögonspringor
- Epikantala veck
- Uppåt riktad näsöppning
- Utslätad filtrum
- Tunn överläpp
- Mindre haka
- Öronbroskasymmetrier

FAS

- tillväxthämning
- missbildningar
- ansiktsavvikelser
- intellektuell handikapp

Övriga, med alkoholskador

Utan

- tillväxthämning
- ansiktsavvikelser

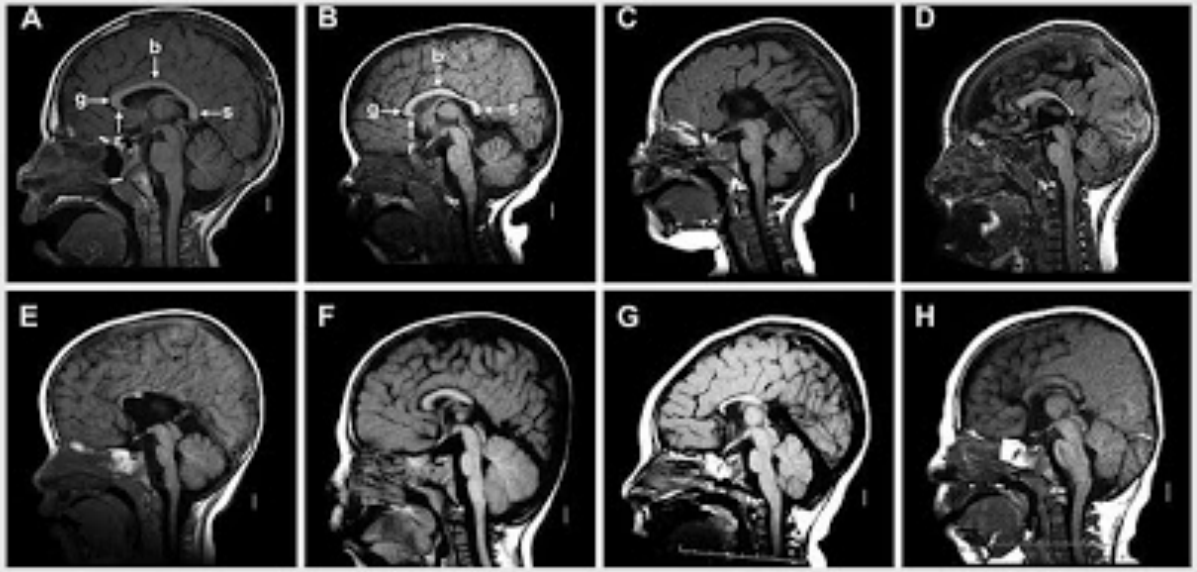
Men störningar i

- kognitiva och/eller neuropsykologiska funktioner

Bertrand, et al US Dept of Health 2005

Exempel på strukturella missbildningar

the disorders of the corpus callosum



MRI images of different disorders of the corpus callosum

A + B show a normally developed corpus callosum idnetifying the different segments (r = rostrum, g = genu, b = body, s = splenium)

C is an example of complete agenesis

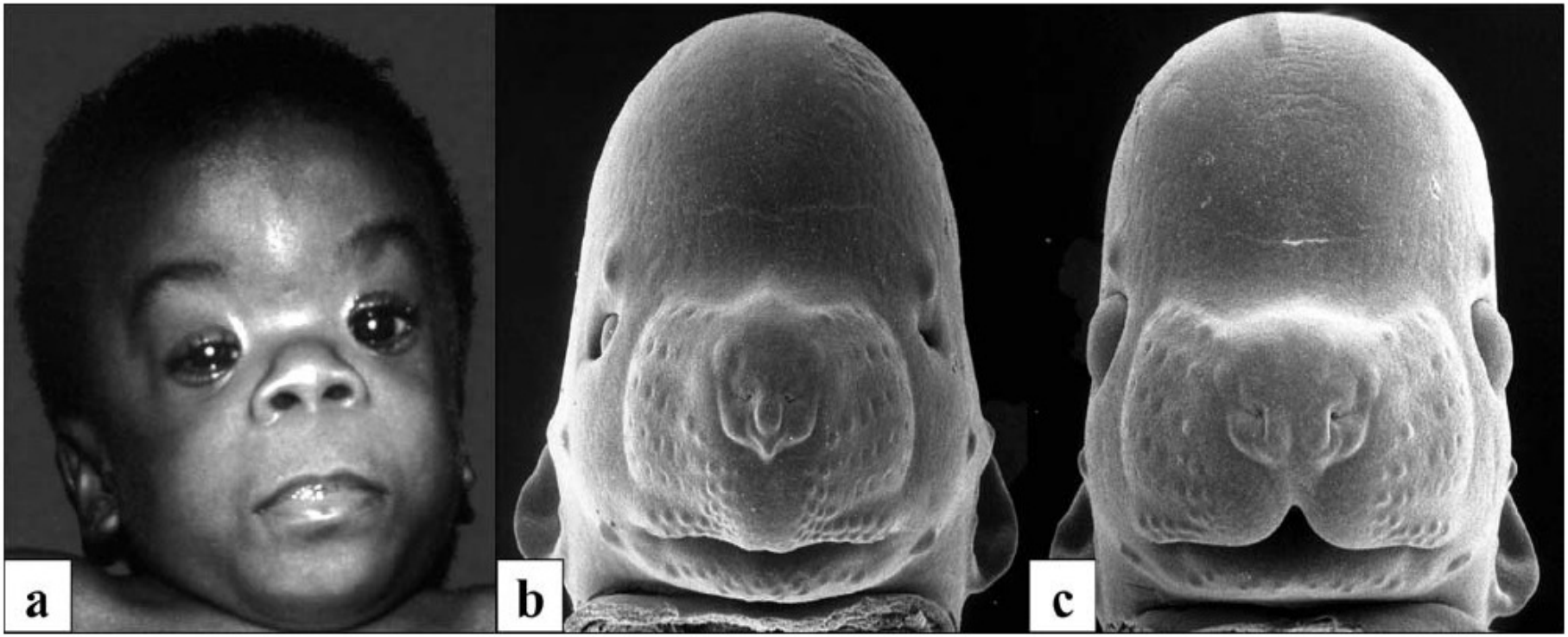
D is an example of hypoplasia

E - H are examples of partial agenesis/ hypogenesis and different severities of this

O'Driscoll, M.C., Black, G.C.M., Clayton-Smith, J., Sherr, E.H., & Dobyns, W.B. (2010). Identification of genomic loci contributing to agenesis of the corpus callosum. American Journal of Medical Genetics Part A, 152A(9), p2148. doi: 10.1002/ajmg.a.33558

Djurmodeller för förståelsen av alkoholens skadeeffekt

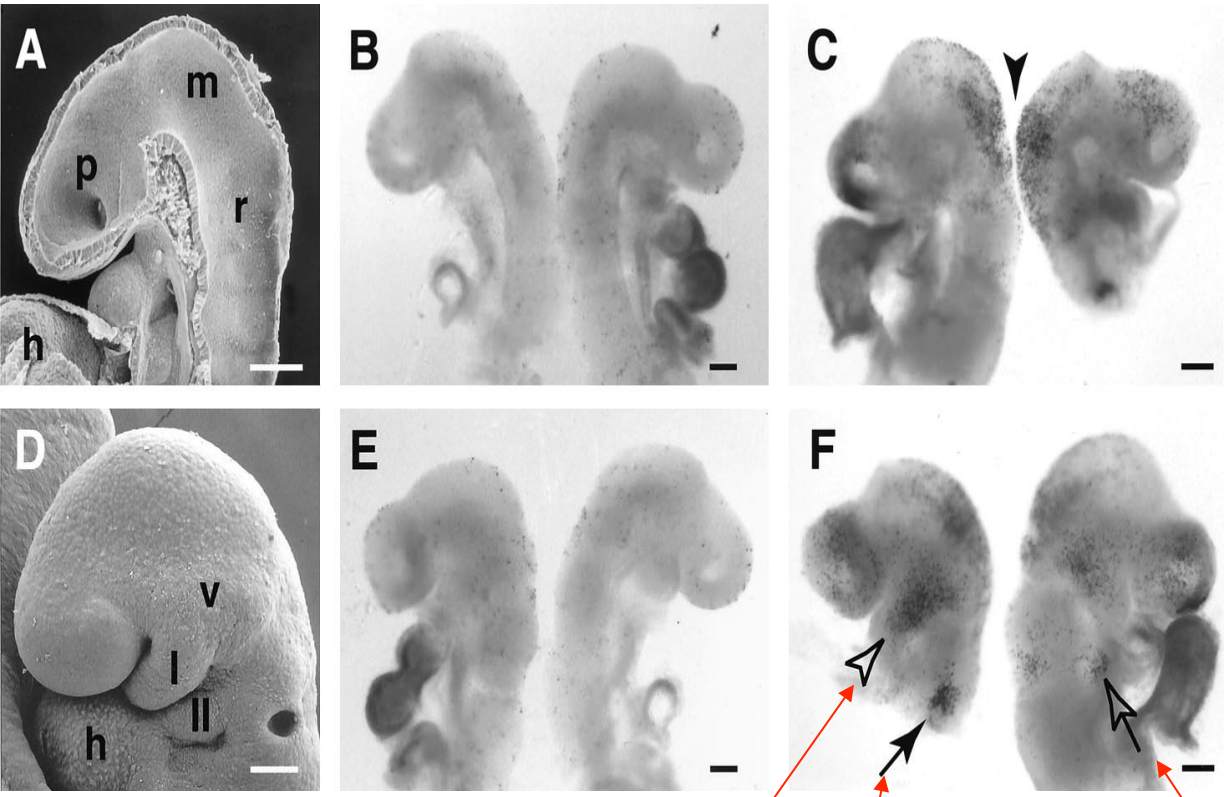
Genesis of Alcohol-Induced Craniofacial Dysmorphism
Sulik K Exp Biol Med 2005



alkohololexponering dag 7

ej alkohol exponerad

Celldöd via apoptos i embryonala cellpopulationer Sulik et al 2001



Mus embryo GD 9

kontroll

Alkohol

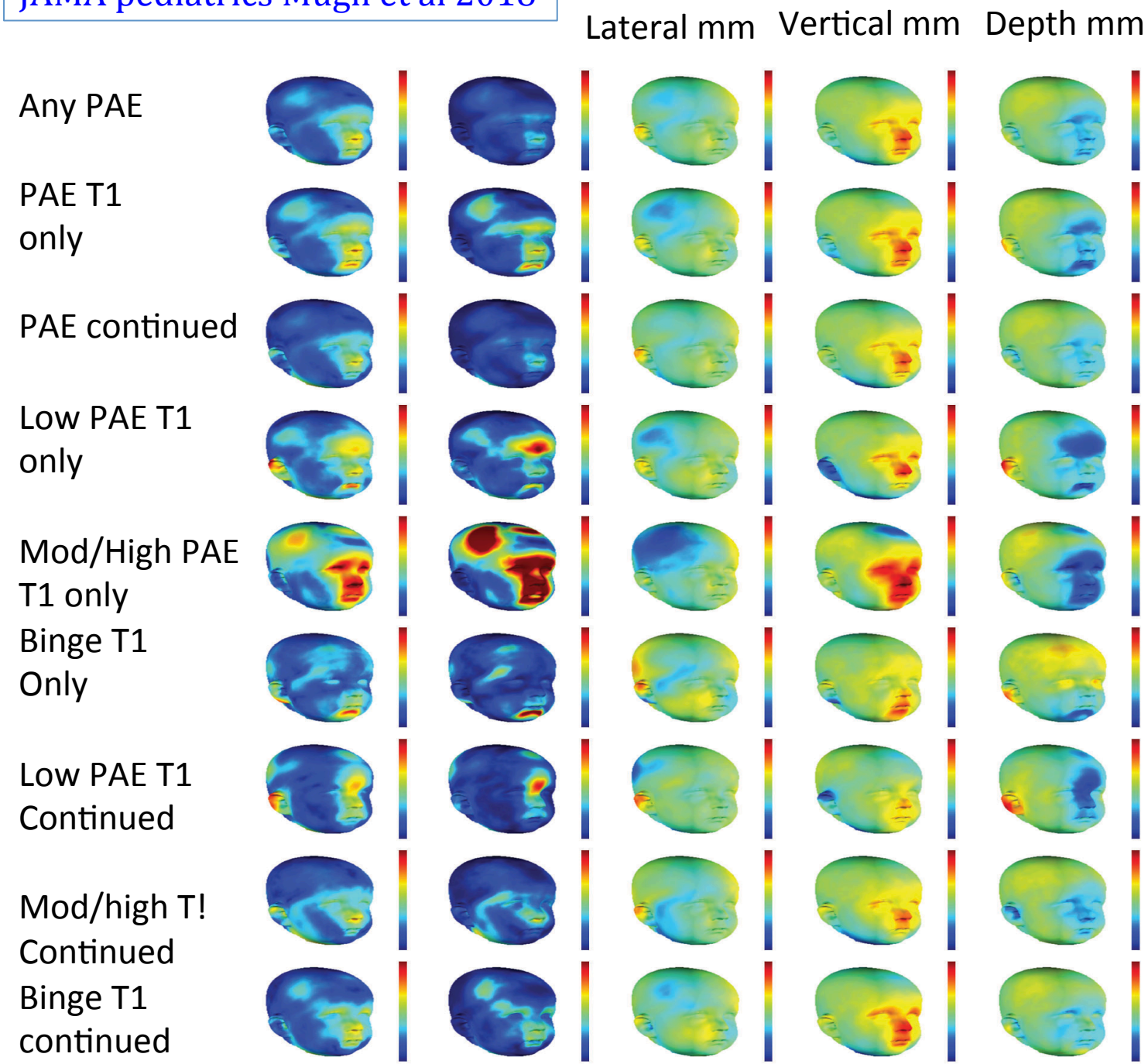
Första gälbågen

Örongrop

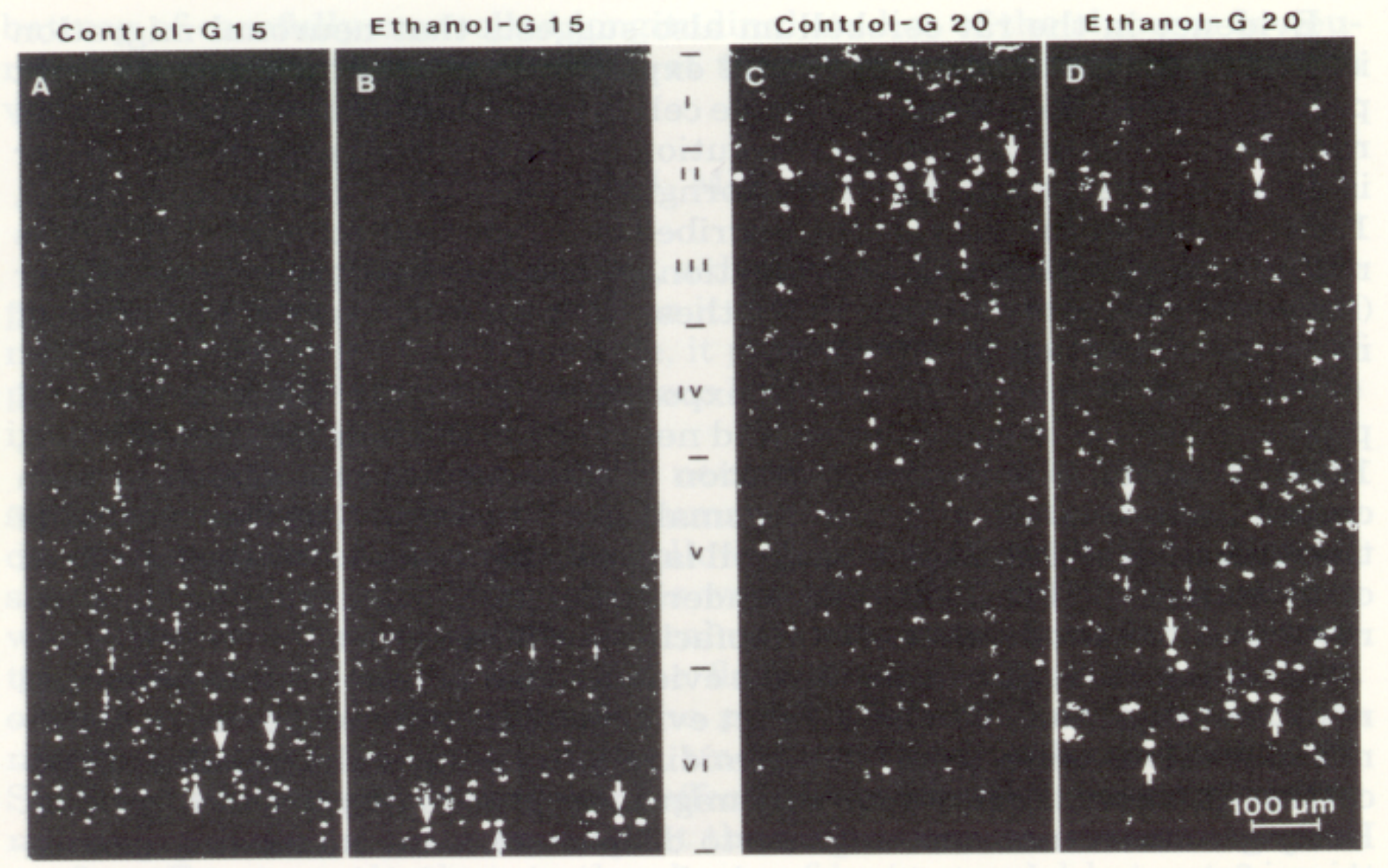
Placode för Kranial n IX och X

Apoptos :
GD 7.5: neuroectoderm
GD 8: neuralplatta och primitiv stråk
GD 9:presumptiva nervlist i rostral hindbrain
GD 9.5–10: gälbågar
GD 11: diencephalon, basal ganglia, pons, cerebellum.

JAMA pediatrics Mugli et al 2018



Alkohol påverkar nervcellernas migration

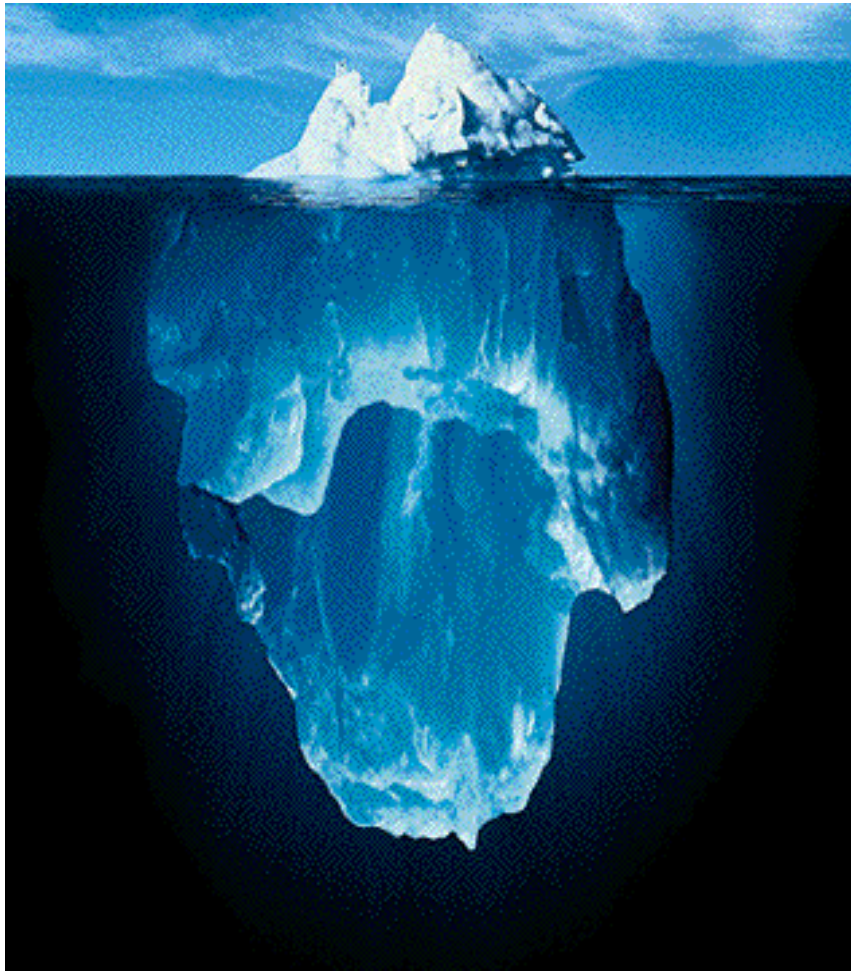


Distributions of early and late generated neurons.
Development of the central nervous system. Effects of alcohol and opiates. Miller, ed. 1992. Wiley-Liss

Prevalens av FAS och FASD- antal per 1000

	FAS	FASD
2011, Italien May et al	4-12	23-63 (2-6 %)
2018, USA May et al	10	48 (≈5 %)
2017, Sydafrika May et al	89-129	196-276 (≈20-28 %)

Isberget FASD
(Fetala alkoholspektrum störningar)



FAS

Övriga alkohol-skador hos barn