

TEDX

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EXPOSURE PATTERNS for the PRENATAL ORIGINS OF CANCER SPREADSHEET October, 2007

1. This is a cross-section of the literature searched from 1945 to 2007. Due to the absence or unavailability of abstracts or the articles, many early studies were not included. There are also many more studies not in the spreadsheet, such as research on the effects of smoking. As such, this is not a complete review of the literature and the ratios and numbers cited in the analysis reflect only what is in the spreadsheet.
2. Studies cover the period from 1972 to 2006. All review and theory articles were eliminated from the pattern analysis, as well as the *in-vitro* studies.
3. All articles appeared in peer reviewed journals. Data were used as published; the studies were not critiqued.

	Number of Studies		Animal		Humans		Cancer		No Cancer		Increased Risk of Cancer	
	#	#	%	#	%	#	%	#	%	#	%	
Smoking	58	14	24%	44	76%	25	43%	13	22%	20	34%	
Cigarette smoking (tobacco)	44	6	14%	38	86%	20	45%	12	27%	12	27%	
PAH	14	8	57%	6	43%	5	36%	1	7%	8	57%	
Air pollution	24	11	46%	13	54%	14	58%	1	4%	9	38%	
PAH	7	1	14%	6	86%	0	0%	1	14%	6	86%	
MC	4	4	100%	0	0%	3	75%	0	0%	1	25%	
Other	13	6	46%	7	54%	11	85%	0	0%	2	15%	
Pesticides	42	11	26%	31	74%	36	86%	2	5%	4	10%	
Dieldrin	1	1	100%	0	0%	0	0%	0	0%	1	100%	
DMBA	4	3	75%	1	25%	4	100%	0	0%	0	0%	
Heptachlor	1	0	0%	1	100%	1	100%	0	0%	0	0%	
Mancozeb	1	1	100%	0	0%	1	100%	0	0%	0	0%	
2,4-D	1	1	100%	0	0%	0	0%	1	100%	0	0%	
DDT & DDE	3	1	33%	2	67%	2	67%	0	0%	1	33%	
Aroclor	1	1	100%	0	0%	0	0%	1	100%	0	0%	
High risk pesticides	1	0	0%	1	100%	1	100%	0	0%	0	0%	
Flea & tick pesticides	1	0	0%	1	100%	1	100%	0	0%	0	0%	
Organochlorides	2	1	50%	1	50%	0	0%	0	0%	2	100%	
Baygon	1	0	0%	1	100%	1	100%	0	0%	0	0%	
Unspecified	24	1	4%	23	96%	24	100%	0	0%	0	0%	
Vinclozolin (fungicide)	1	1	100%	0	0%	1	100%	0	0%	0	0%	
Radiation	61	26	43%	35	57%	43	70%	14	23%	4	7%	
Ionizing	38	16	42%	22	58%	30	79%	6	16%	2	5%	
Non-ionizing	23	10	43%	13	57%	13	57%	8	35%	2	9%	
Food & water	54	34	63%	20	37%	37	69%	8	15%	9	17%	
N-nitroso compounds	17	6	35%	11	65%	15	88%	1	6%	1	6%	
Fats	3	3	100%	0	0%	2	67%	1	33%	0	0%	
Phyto estrogens	10	10	100%	0	0%	5	50%	2	20%	3	30%	
Home well	1	0	0%	1	100%	1	100%	0	0%	0	0%	
DNAI2	1	0	0%	1	100%	1	100%	0	0%	0	0%	
NaS	1	1	100%	0	0%	1	100%	0	0%	0	0%	
Sodium ascorbate	1	1	100%	0	0%	1	100%	0	0%	0	0%	
IQ	2	2	100%	0	0%	1	50%	1	50%	0	0%	
PhIP	4	4	100%	0	0%	4	100%	0	0%	0	0%	
MeIQx	1	1	100%	0	0%	0	0%	0	0%	1	100%	
Trihalomethanes	2	0	0%	2	100%	1	50%	1	50%	0	0%	
Food toxins	5	3	60%	2	40%	1	20%	0	0%	4	80%	
Nutrition	6	3	50%	3	50%	4	67%	2	33%	0	0%	

Industrial chemicals	71	38	54%	33	46%	50	70%	3	4%	18	25%
PCB	9	5	56%	4	44%	6	67%	1	11%	2	22%
TCDD	5	5	100%	0	0%	2	40%	1	20%	2	40%
TCDD & other chemicals	1	1	100%	0	0%	1	100%	0	0%	0	0%
Urethane	5	5	100%	0	0%	5	100%	0	0%	0	0%
BPA	14	13	93%	1	7%	4	29%	0	0%	10	71%
NDMA & NDEA	1	1	100%	0	0%	1	100%	0	0%	0	0%
1,3 butadiene	4	2	50%	2	50%	3	75%	0	0%	1	25%
3-Me-DAB	1	1	100%	0	0%	1	100%	0	0%	0	0%
NiAct	1	1	100%	0	0%	1	100%	0	0%	0	0%
TRI chemicals	3	0	0%	3	100%	3	100%	0	0%	0	0%
HCB	2	0	0%	2	100%	1	50%	0	0%	1	50%
TCE	1	0	0%	1	100%	1	100%	0	0%	0	0%
Solvents	6	0	0%	6	100%	5	83%	1	17%	0	0%
Occupational exposure	9	0	0%	9	100%	9	100%	0	0%	0	0%
Sulphur dioxide	1	0	0%	1	100%	1	100%	0	0%	0	0%
OP	1	1	100%	0	0%	1	100%	0	0%	0	0%
Mono-n-butyl phthalate	1	1	100%	0	0%	0	0%	0	0%	1	100%
Dibutyl phthalate & plastics	2	1	50%	1	50%	1	50%	0	0%	1	50%
Benzene	3	0	0%	3	100%	3	100%	0	0%	0	0%
Nickel Acetate	1	1	100%	0	0%	1	100%	0	0%	0	0%
Medication	97	37	38%	60	62%	67	69%	13	13%	17	18%
DES	50	19	38%	31	62%	36	72%	5	10%	9	18%
Progestins	2	0	0%	2	100%	1	50%	1	50%	0	0%
Estradiols	5	4	80%	1	20%	2	40%	0	0%	3	60%
Anesthesia	5	0	0%	5	100%	5	100%	0	0%	0	0%
AZT,TAM, CP	14	11	79%	3	21%	10	71%	2	14%	2	14%
Cisplatin	2	2	100%	0	0%	0	0%	0	0%	2	100%
Anticonvulsants	2	1	50%	1	50%	1	50%	1	50%	0	0%
Nitrosatable drugs	3	0	0%	3	100%	1	33%	2	67%	0	0%
Others	14	0	0%	14	100%	11	79%	2	14%	1	7%
Alcohol & Recreational Drugs	13	1	8%	12	92%	8	62%	4	31%	1	8%
Alcohol	6	1	17%	5	83%	3	50%	2	33%	1	17%
Recreational drugs	7	0	0%	7	100%	5	71%	2	29%	0	0%
Maternal and Birth Factors	107	12	11%	95	89%	87	81%	12	11%	8	7%
Illness	13	1	8%	12	92%	12	92%	1	8%	0	0%
Hormones	36	11	31%	25	69%	22	61%	7	19%	7	19%
Birth weight	27	0	0%	27	100%	25	93%	1	4%	1	4%
General	31	0	0%	31	100%	28	90%	3	10%	0	0%
Research chemicals	53	53	100%	0	0%	49	92%	0	0%	4	8%
ENU	33	33	100%	0	0%	29	88%	0	0%	4	12%
NEU & NMU	5	5	100%	0	0%	5	100%	0	0%	0	0%
DEN	4	4	100%	0	0%	4	100%	0	0%	0	0%
MC	3	3	100%	0	0%	3	100%	0	0%	0	0%
BOP	2	2	100%	0	0%	2	100%	0	0%	0	0%
BrdUrd	4	4	100%	0	0%	4	100%	0	0%	0	0%
Other	2	2	100%	0	0%	2	100%	0	0%	0	0%
Metals	23	12	52%	11	48%	16	70%	4	17%	3	13%
Lead	5	1	20%	4	80%	4	80%	1	20%	0	0%
Arsenic	8	7	88%	1	13%	8	100%	0	0%	0	0%
Copper	1	0	0%	1	100%	1	100%	0	0%	0	0%
Cadmium	1	0	0%	1	100%	1	100%	0	0%	0	0%
Mercury	1	0	0%	1	100%	0	0%	0	0%	1	100%
Nickel	1	1	100%	0	0%	0	0%	0	0%	1	100%
Potassium	1	0	0%	1	100%	1	100%	0	0%	0	0%
Chromium	5	3	60%	2	40%	1	20%	3	60%	1	20%
Fuels	4	1	25%	3	75%	4	100%	0	0%	0	0%
Genetic/Chromosomal	19	1	5%	18	95%	16	84%	2	11%	0	0%

	Number of studies with positive findings of cancer																		
	♀ Repro	♂ Repro	Leukemias & Lymphomas	Brain & Nervous System	Breast	Lung & Respiratory	Liver	Kidney	Pituitary	Thyroid	Adrenal	Spleen	Digestive	Mouth, Larynx, Nasal, Trachea, Esophagus	Colon & Urinary	Bone	Eye	Skin	Other
Smoking	0	1	6	10	1	6	5	0	0	0	0	0	0	0	1	1	0	0	2
Cigarette smoking (tobacco)		1	6	8	1	4	4								1	1			2
PAH				2		2	1												
Air pollution	2	2	9	1	0	6	7	1	0	0	0	0	0	0	0	1	0	0	3
PAH																			
MC						3	2												
Other	2	2	9	1		3	5	1								1			3
Pesticides	1	2	12	12	4	4	2	5	0	0	0	0	1	0	0	3	3	2	1
Dieldrin																			
DMBA				1		3	2						1				1		
Heptachlor				1															
Mancozeb																			1
2,4-D																			
DDT & DDE		1			1			1											
Aroclor																			
High risk pesticides			1																
Flea & tick pesticides				1															
Organochlorides					1														
Baygon			1																
Unspecified	1	1	10	9	1			4								3	2		1
Vinclozolin (fungicide)					1	1													1
Radiation	7	1	21	5	3	7	5	2	2	0	0	2	2	2	0	3	0	1	0
Ionizing	7	1	12	2	3	7	5		2			2	1	2		2			1
Non-ionizing			9	3				2					1			1			
Food & water	3	1	4	12	12	1	0	3	0	0	0	0	3	1	2	1	0	1	0
N-nitroso compounds				12		1		3						1					1
Fats		1			1														
Phyto estrogens	3				5														
Home well			1																
DNAT2			1																
NaS															1				
Sodium ascorbate															1				
IQ													1						
PhIP					2								2						
MelQx																			
Trihalomethanes			1																
Food toxins					1														
Nutrition			1		3											1			

	♀ Repro	♂ Repro	Leukemias & Lymphomas	Brain & Nervous System	Breast	Lung & Respiratory	Liver	Kidney	Pituitary	Thyroid	Adrenal	Spleen	Digestive	Mouth, Larynx, Nasal, Trachea, Esophagus	Colon & Urinary	Bone	Eye	Skin	Other
Industrial chemicals	2	10	16	14	7	5	6	3	2	1	1	0	1	0	0	3	2	0	0
PCB		3			3		1												
TCDD	1				1														
TCDD & other chemicals					1														
Urethane		1	2	1		4	1			1	1		1				1		
BPA		2			2														
NDMA & NDEA			1	1		1	1												
1,3 butadiene			2	1			1									1			
3-Me-DAB							1												
NiAct								1	1										
TRI chemicals				2															
HCB		1																	
TCE			1																
Solvents		1	2	1												1			
Occupational exposure		2	3	5															
Sulphur dioxide			1	1				1									1		
OP	1																		
Mono-n-butyl phthalate																			
Dibutyl phthalate & plastics			1																
Benzene			3	2			1									1			
Nickel Acetate								1	1										
Medication	36	14	12	10	12	8	4	2	1	2	2	0	1	1	0	0	0	2	0
DES	27	12	1	1	9	2			1										
Progestins		1																	
Estradiols	1				1														
Anesthesia			2	3															
AZT,TAM, CP	8	1	4	1	2	5	3			1									
Cisplatin				1			1	1											
Anticonvulsants											1								1
Nitrosatable drugs				1															
Others			5	3		1		1		1	1		1	1					1
Alcohol & Recreational Drugs	0	0	3	3	1	0	0	0	0	0	0	0	0	0	1	0	1	1	1
Alcohol			1	1	1														
Recreational drugs			2	2											1		1	1	1
Maternal and Birth Factors	3	13	22	17	33	3	1	3	1	1	1	0	4	2	3	0	1	2	6
Illness		3	3	5				1											
Hormones	3	6	2	2	12														
Birth weight		1	6	3	12	3	1	1	1	1	1		3	1	3			2	3
General		3	11	7	9			1					1	1			1		3

	♀ Repro	♂ Repro	Leukemias & Lymphomas	Brain & Nervous System	Breast	Lung & Respiratory	Liver	Kidney	Pituitary	Thyroid	Adrenal	Spleen	Digestive	Mouth, Larynx, Nasal, Trachea, Esophagus	Colon & Urinary	Bone	Eye	Skin	Other
Research chemicals	5	3	1	20	2	17	5	7	1	1	1	0	2	3	0	1	0	0	0
ENU				18		7	2	4											
NEU & NMU				2				2					1			1			
DEN	2					4								2					
MC						3	2												
BOP	2	1								1									
BrdUrd	1	2	1		2	1		1	1		1								
Other						2	1						1	1					
Metals	5	0	7	6	0	4	5	7	1	1	4	0	1	0	2	0	5	0	0
Lead			2	1				3									1		
Arsenic	5		2	1		3	5	1			3				2		1		
Copper			1	1				1									1		
Cadmium			1	1				1									1		
Mercury																			
Nickel								1	1										
Potassium				1															
Chromium			1	1		1				1	1		1				1		
Fuels			1	3		1													
Genetic/Chromosomal		2	8	2	1			1					4	2	1	1			1