

Appendix Table D1 -

IESAST - Meta-analysis of Maternal In Utero Exposure (irrespective of in life exposure) : Low Dose
Lifetime Asthma (or Current if Lifetime not available)

This analysis is restricted to results for:

- 1) Exposure during pregnancy
- 2) Exposure from mother smoking or ETS exposed
- 3) Results for low amount of exposure
- 4) Results complete enough for use in metaanalysis

Within each study, results are then selected (in the following order of preference, within each sex) for:

- 5) ASTHMA : lifetime, current
- 6) MEASEX : number of cigarettes, number of persons, other
- 7) UNEXSO : not specific parent, neither parent, none in household, none
- 8) UNEXHI : not exposed defined as smoked none, or smoked none+low
- 9) RACE : all in study or nearest available, otherwise by race
- 10) ONSET : yes, no (prevalence)
- 11) For overlapping studies: principal rather than subsidiary studies, and for prospective studies, most recent follow-up

Finally by Age: whole study if available, otherwise by widest available age group
and then for single sex results (m, f) in preference to results for both sexes combined (b).

Results adjusted for the most potential confounders are then chosen in Sections -1 to -3
and results adjusted for the least confounders in Sections -4 to -6. (Those least adjusted results which
actually differ from the most adjusted are marked 'x' in column X in Section -4)

Section -7 shows excluded studies, together with the stage (as above) at which no qualifying
results were found.

Section -8 lists the potentially overlapping studies which have been included (1=principal, 2=subsidiary),
and any results which would have been included in preference except that they had data not complete enough
for use in metaanalysis. It also lists their significance (yes/no), if known.

Appendix Table D1 - 1

IESTAST - Meta-analysis of Maternal In Utero Exposure (irrespective of in life exposure) : Low Dose
Lifetime Asthma (or Current if Lifetime not available)
Adjusted

REF	NRR	SEX	AST	AGEL	AGEH	RACE	LOC	BEGYR	PUBYR	STTYP	ADJ	EXP-sou	UNEXsrce	UNEXTI	MEAS	LO	HI
OLIVET	2	b	c	4	9	all	NAmer	1993	1996	CC	0	Mother	NotMothr	non	cigs	1	10
WEITZ1	7	b	1	0	0	all	NAmer	1981	1990	CS	6	Mother	NotMothr	non	cigs	1	9
ZHENG	14	b	c	6	10	all	As:FE	1999	2002	CC	6	MothETS	NotMothr	non	persn	1	1

Appendix Table D1 - 2

IESAST - Meta-analysis of Maternal In Utero Exposure (irrespective of in life exposure) : Low Dose
Lifetime Asthma (or Current if Lifetime not available)
Adjusted

REF	NRR	SEX	ADJ	Numbers Exposed		Non-exposed		RR	95.00%CI
				Case	Cont	Case	Cont		
OLIVET 2	b 0			13	20	65	96	0.96	(0.45- 2.07)
WEITZ1 7	b 6			-	-	51	-	0.85	(0.59- 1.23)
ZHENG 14	b 6			128	-	128	-	1.10	(0.80- 1.50)
Partial Totals				141	20	244	96		

*prospective study

REF	NRR	SEX	ADJ	Ys	Ws	Qs	Ps
OLIVET 2	b 0			-0.04	6.55	0.00	0.9168
WEITZ1 7	b 6			-0.16	28.47	0.61	0.3859
ZHENG 14	b 6			0.10	38.89	0.48	0.5523

RR data

N	3
NS	3

Wt	73.90
Het Chi	1.10
Het df	2
Het P	N.S.
Fixed RR	0.98
RRl	0.78
RRu	1.24
P	N.S.
Random RR	0.98
RRl	0.78
RRu	1.24
P	N.S.
Asymm P	N.S.

Appendix Table D1 - 3

IESAST - Meta-analysis of Maternal In Utero Exposure (irrespective of in life exposure) : Low Dose
Lifetime Asthma (or Current if Lifetime not available)
Adjusted

RR data

N	3		
NS	3		
Wt	73.90		
Het Chi	1.10		
Het df	2		
Het P	N.S.		
Fixed RR	0.98		
RRl	0.78		
RRu	1.24		
P	N.S.		
Random RR	0.98		
RRl	0.78		
RRu	1.24		
P	N.S.		
Asymm P	N.S.		
 <u>Sex</u>			
both	male	female	Total
N	3		3
NS	3		3
Wt	73.90		73.90
Het Chi	1.10		1.10
Het df	2		2
Het P	N.S.		N.S.
Fixed RR	0.98		0.98
RRl	0.78		0.78
RRu	1.24		1.24
P	N.S.		N.S.
Random RR	0.98		0.98
RRl	0.78		0.78
RRu	1.24		1.24
P	N.S.		N.S.
Between Chi			
Between df			
Between P			N.S.
 <u>Measure of exposure</u>			
cigs	persn	other	Total
N	2	1	3
NS	2	1	3
Wt	35.02	38.89	73.90
Het Chi	0.08	0.00	1.10
Het df	1	0	2
Het P	N.S.	N.S.	N.S.
Fixed RR	0.87	1.10	0.98
RRl	0.62	0.80	0.78
RRu	1.21	1.51	1.24
P	N.S.	N.S.	N.S.
Random RR	0.87	1.10	0.98
RRl	0.62	0.80	0.78
RRu	1.21	1.51	1.24
P	N.S.	N.S.	N.S.
Between Chi			1.02
Between df			1
Between P			N.S.

Appendix Table D1 - 4

IESAST - Meta-analysis of Maternal In Utero Exposure (irrespective of in life exposure) : Low Dose
Lifetime Asthma (or Current if Lifetime not available)
Unadjusted

REF NRR X SEX AST AGEL AGEH RACE	LOC BEGYR PUBYR STTYP ADJ EXP-sou UNEXsrce UNEXTI MEAS LO HI
OLIVET 2 b c 4 9 all NAmer 1993 1996 CC 0 Mother NotMothr non cigs 1 10	
WEITZ1 7 b l 0 0 all NAmer 1981 1990 CS 6 Mother NotMothr non cigs 1 9	
ZHENG 2 x b c 6 10 all As:FE 1999 2002 CC 0 MothETS NotMothr non persn 1 1	

Appendix Table D1 - 5

IESAST - Meta-analysis of Maternal In Utero Exposure (irrespective of in life exposure) : Low Dose
Lifetime Asthma (or Current if Lifetime not available)
Unadjusted

REF	NRR	SEX	ADJ	Numbers Exposed		Non-exposed		RR	95.00%CI
				Case	Cont	Case	Cont		
OLIVET 2	b 0			13	20	65	96	0.96	(0.45- 2.07)
WEITZ1 7	b 6			-	-	51	-	0.85	(0.59- 1.23)
ZHENG 2	b 0			128	265	128	299	1.13	(0.84- 1.52)
Partial Totals				141	285	244	395		

*prospective study

REF	NRR	SEX	ADJ	Ys	Ws	Qs	Ps
OLIVET 2	b 0			-0.04	6.55	0.01	0.9168
WEITZ1 7	b 6			-0.16	28.47	0.80	0.3859
ZHENG 2	b 0			0.12	43.97	0.59	0.4235

RR data

N	3
NS	3

Wt	78.99
Het Chi	1.40
Het df	2
Het P	N.S.
Fixed RR	1.01
RRl	0.81
RRu	1.25
P	N.S.
Random RR	1.01
RRl	0.81
RRu	1.25
P	N.S.
Asymm P	N.S.

Appendix Table D1 - 6

IESAST - Meta-analysis of Maternal In Utero Exposure (irrespective of in life exposure) : Low Dose
Lifetime Asthma (or Current if Lifetime not available)
Unadjusted

RR data

N	3		
NS	3		
Wt	78.99		
Het Chi	1.40		
Het df	2		
Het P	N.S.		
Fixed RR	1.01		
RRl	0.81		
RRu	1.25		
P	N.S.		
Random RR	1.01		
RRl	0.81		
RRu	1.25		
P	N.S.		
Asymm P	N.S.		
 <u>Sex</u>			
both	male	female	Total
N	3		3
NS	3		3
Wt	78.99		78.99
Het Chi	1.40		1.40
Het df	2		2
Het P	N.S.		N.S.
Fixed RR	1.01		1.01
RRl	0.81		0.81
RRu	1.25		1.25
P	N.S.		N.S.
Random RR	1.01		1.01
RRl	0.81		0.81
RRu	1.25		1.25
P	N.S.		N.S.
Between Chi			
Between df			
Between P			N.S.
 <u>Measure of exposure</u>			
cigs	persn	other	Total
N	2	1	3
NS	2	1	3
Wt	35.02	43.97	78.99
Het Chi	0.08	0.00	1.40
Het df	1	0	2
Het P	N.S.	N.S.	N.S.
Fixed RR	0.87	1.13	1.01
RRl	0.62	0.84	0.81
RRu	1.21	1.52	1.25
P	N.S.	N.S.	N.S.
Random RR	0.87	1.13	1.01
RRl	0.62	0.84	0.81
RRu	1.21	1.52	1.25
P	N.S.	N.S.	N.S.
Between Chi			1.32
Between df			1
Between P			N.S.

Appendix Table D1 - 7

IESAST - Meta-analysis of Maternal In Utero Exposure (irrespective of in life exposure) : Low Dose
Lifetime Asthma (or Current if Lifetime not available)
Excluded studies (and stage at which they were excluded)

	1	2	3	4	5	6	7	8	9	10	11	12	13	14	15	16
1	ADDOYO	AKCAKA	ALBA	ALDAWO	ALFRA1	ALFRA2	ANDRAE	ARSHAD	AZIZI	BARRET	BECKET	BENER	BRABIN	BURCHF	BURR	BUTZ
	CALL	CHEN1	CHEN2	CHHABR	CHINN	CLARK	DAIGLE	DEKKER	DEKOK	DIJKST	DODGE	DOLD	DOTTER	ECE	FAGBUL	FARBE1
	FARBE2	FARBE3	FAROOQ	FERGUS	FIELDE	FLYNN1	FLYNN2	FORAST	FORSB1	FORSB2	FORSB3	FUJI	GOLD	GOREN1	GOREN2	GOREN3
	GOREN4	GOREN5	GOREN6	GORTM1	GORTM2	GUPTA	GURKAN	HAJNAL	HJERN1	HJERN2	HOST	HU2	HUGHES	INFANT	JAAKKO	JENKIN
	KALYO1	KALYO2	KARUNA	KAY	KEARNE	KENDIR	KERSHA	KIVITY	KNIGHT	KUHR	LAM1	LAM2	LAU	LEE1	LEE2	LEEDER
	LEEN	LEROUX	LILLJE	LINDFO	LIS	LISTER	MAIER	MARTIN	MCCON1	MCCON2	MCKEEV	MELIA	MELSM	MOHAME	MONTEF	MOUSSA
	MOYES1	MOYES2	MUMCUO	MURRAY	NITTA	OCONNE	ODDY	OHARA	PALMIE	PETERS	PIC	POKHAR	RASANE	RATAGE	RENNIE	RIBEIR
	RONCH1	RONCH2	RONCH3	RONMAR	ROSASV	RUDNIK	SANZOR	SARRAZ	SCHENK	SCHMIT	SELCUK	SENNHA	SHAMSS	SHERMA	SHOHAT	SIGURS
	SOMERV	SOTOQU	SPIEKE	SQUILL	STANHO	STERN1	STODDA	STRACH	TIMONE	TOMINA	TSIMOV	ULRIK	VARELA	VAVILI	VENNER	VERHOE
	VOLKME	VONMAF	WANG	WILLE1	WILLE2	WITHER	WOLFO1	WOLFO2	YANG	ZEIGER	ZEJDA					
3	AGABI1	AGABI2	ANNESI	BALL	BERGMA	CSONKA	CUNNI1	CUNNI2	DEBENE	DELL	EHRLI1	EHRLI2	GILLIL	HABY	HU1	JONES
	KAPLAN	KELLY	KUEHR	LOPEZC	NHANE3	NILSSO	NYSTAD	PONSON	SOYSET	STAIZI	STERN2	TARIQ	WEITZ2	XU		
4	TAYLOR															

Appendix Table D1 - 8

Adjusted - insufficient data for metaanalysis

REF NRR SEX AST AGEL AGEH RACE	LOC BEGYR PUBYR STTYP ADJ EXP-sou UNEXsrce UNEXTI	MEAS	LO	HI	RR SIG														
TAYLOR	2	b	1	0	5	all	Eu:UK	1970	1983	Pr	0	Mother	NotMothr	non	cigs	1	14	1.29	?

Appendix Table D2 -

IESAST - Meta-analysis of Maternal In Utero Exposure (irrespective of in life exposure) : High Dose
Lifetime Asthma (or Current if Lifetime not available)

This analysis is restricted to results for:

- 1) Exposure during pregnancy
- 2) Exposure from mother smoking or ETS exposed
- 3) Results for high amount of exposure
- 4) Results complete enough for use in metaanalysis

Within each study, results are then selected (in the following order of preference, within each sex) for:

- 5) ASTHMA : lifetime, current
- 6) MEASEX : number of cigarettes, number of persons, other
- 7) UNEXSO : not specific parent, neither parent, none in household, none
- 8) UNEXHI : not exposed defined as smoked none, or smoked none+low
- 9) RACE : all in study or nearest available, otherwise by race
- 10) ONSET : yes, no (prevalence)
- 11) For overlapping studies: principal rather than subsidiary studies, and for prospective studies, most recent follow-up

Finally by Age: whole study if available, otherwise by widest available age group
and then for single sex results (m, f) in preference to results for both sexes combined (b).

Results adjusted for the most potential confounders are then chosen in Sections -1 to -3
and results adjusted for the least confounders in Sections -4 to -6. (Those least adjusted results which
actually differ from the most adjusted are marked 'x' in column X in Section -4)

Section -7 shows excluded studies, together with the stage (as above) at which no qualifying
results were found.

Section -8 lists the potentially overlapping studies which have been included (1=principal, 2=subsidiary),
and any results which would have been included in preference except that they had data not complete enough
for use in metaanalysis. It also lists their significance (yes/no), if known.

Appendix Table D2 - 1

IESAST - Meta-analysis of Maternal In Utero Exposure (irrespective of in life exposure) : High Dose
Lifetime Asthma (or Current if Lifetime not available)
Adjusted

REF	NRR	SEX	AST	AGEL	AGEH	RACE	LOC	BEGYR	PUBYR	STTYP	ADJ	EXP-sou	UNEXsrce	UNEXTI	MEAS	LO	HI
OLIVET	4	b	c	4	9	all	NAmer	1993	1996	CC	0	Mother	NotMothr	non	cigs	21	999
WEITZ1	8	b	1	0	0	all	NAmer	1981	1990	CS	6	Mother	NotMothr	non	cigs	10	999
ZHENG	16	b	c	6	10	all	As:FE	1999	2002	CC	6	MothETS	NotMothr	non	persn	4	999

Appendix Table D2 - 2

IESAST - Meta-analysis of Maternal In Utero Exposure (irrespective of in life exposure) : High Dose
Lifetime Asthma (or Current if Lifetime not available)
Adjusted

REF	NRR	SEX	ADJ	Numbers Exposed		Non-exposed		RR	95.00%CI
				Case	Cont	Case	Cont		
OLIVET 4	b 0			23	3	65	96	11.32	(3.26- 39.27)
WEITZL 8	b 6			25	-	51	-	2.60	(1.51- 4.49)
ZHENG 16	b 6			34	-	128	-	3.30	(1.90- 5.90)
Partial Totals				82	3	244	96		

*prospective study

REF	NRR	SEX	ADJ	Ys	Ws	Qs	Ps
OLIVET 4	b 0			2.43	2.48	3.78	0.0001
WEITZL 8	b 6			0.96	12.94	0.73	0.0006
ZHENG 16	b 6			1.19	11.97	0.00	0.0000

RR data

N	3
NS	3

Wt	27.39
Het Chi	4.51
Het df	2
Het P	N.S.
Fixed RR	3.30
RRl	2.27
RRu	4.80
P	+++
Random RR	3.71
RRl	2.00
RRu	6.86
P	+++
Asymm P	N.S.

Appendix Table D2 - 3

IESAST - Meta-analysis of Maternal In Utero Exposure (irrespective of in life exposure) : High Dose
Lifetime Asthma (or Current if Lifetime not available)
Adjusted

RR data

N	3		
NS	3		
Wt	27.39		
Het Chi	4.51		
Het df	2		
Het P	N.S.		
Fixed RR	3.30		
RRl	2.27		
RRu	4.80		
P	+++		
Random RR	3.71		
RRl	2.00		
RRu	6.86		
P	+++		
Asymm P	N.S.		
<u>Sex</u>			
both	male	female	Total
N	3		3
NS	3		3
Wt	27.39		27.39
Het Chi	4.51		4.51
Het df	2		2
Het P	N.S.		N.S.
Fixed RR	3.30		3.30
RRl	2.27		2.27
RRu	4.80		4.80
P	+++		+++
Random RR	3.71		3.71
RRl	2.00		2.00
RRu	6.86		6.86
P	+++		+++
Between Chi			
Between df			
Between P			N.S.
<u>Measure of exposure</u>			
	cigs	persn	Total
N	2	1	3
NS	2	1	3
Wt	15.42	11.97	27.39
Het Chi	4.51	0.00	4.51
Het df	1	0	2
Het P	*	N.S.	N.S.
Fixed RR	3.30	3.30	3.30
RRl	2.00	1.87	2.27
RRu	5.43	5.82	4.80
P	+++	+++	+++
Random RR	4.86	3.30	3.71
RRl	1.17	1.87	2.00
RRu	20.21	5.82	6.86
P	+	+++	+++
Between Chi			0.00
Between df			1
Between P			N.S.

Appendix Table D2 - 4

IESAST - Meta-analysis of Maternal In Utero Exposure (irrespective of in life exposure) : High Dose
Lifetime Asthma (or Current if Lifetime not available)
Unadjusted

REF NRR X SEX AST AGEH RACE	LOC BEGYR PUBYR STTYP ADJ EXP-sou UNEXsrce UNEXTI MEAS LO HI
OLIVET 4 b c 4 9 all NAmer 1993 1996 CC 0 Mother NotMothr non cigs 21 999	
WEITZL 12 x b l 0 0 all NAmer 1981 1990 CS 0 Mother NotMothr non cigs 10 999	
ZHENG 4 x b c 6 10 all As:FE 1999 2002 CC 0 MothETS NotMothr non persn 4 999	

Appendix Table D2 - 5

IESAST - Meta-analysis of Maternal In Utero Exposure (irrespective of in life exposure) : High Dose
Lifetime Asthma (or Current if Lifetime not available)
Unadjusted

REF	NRR	SEX	ADJ	Numbers Exposed		Non-exposed		RR	95.00%CI
				Case	Cont	Case	Cont		
OLIVET	4	b	0	23	3	65	96	11.32	(3.26- 39.27)
WEITZL	12	b	0	25	522	51	3159	2.97	(1.82- 4.83)
ZHENG	4	b	0	34	23	128	299	3.45	(1.96- 6.10)
Totals				82	548	244	3554		

*prospective study

REF	NRR	SEX	ADJ	Ys	Ws	Qs	Ps
OLIVET	4	b	0	2.43	2.48	3.41	0.0001
WEITZL	12	b	0	1.09	16.17	0.46	0.0000
ZHENG	4	b	0	1.24	11.90	0.00	0.0000

RR data

N	3
NS	3

Wt	30.55
Het Chi	3.87
Het df	2
Het P	N.S.
Fixed RR	3.51
RRl	2.46
RRu	5.00
P	+++
Random RR	3.86
RRl	2.24
RRu	6.64
P	+++
Asymm P	**

Appendix Table D2 - 6

IESAST - Meta-analysis of Maternal In Utero Exposure (irrespective of in life exposure) : High Dose
Lifetime Asthma (or Current if Lifetime not available)
Unadjusted

RR data

N	3		
NS	3		
Wt	30.55		
Het Chi	3.87		
Het df	2		
Het P	N.S.		
Fixed RR	3.51		
RRl	2.46		
RRu	5.00		
P	+++		
Random RR	3.86		
RRl	2.24		
RRu	6.64		
P	+++		
Asymm P	**		
 <u>Sex</u>			
both	male	female	Total
N	3		3
NS	3		3
Wt	30.55		30.55
Het Chi	3.87		3.87
Het df	2		2
Het P	N.S.		N.S.
Fixed RR	3.51		3.51
RRl	2.46		2.46
RRu	5.00		5.00
P	+++		+++
Random RR	3.86		3.86
RRl	2.24		2.24
RRu	6.64		6.64
P	+++		+++
Between Chi			
Between df			
Between P			N.S.
 <u>Measure of exposure</u>			
cigs	persn	other	Total
N	2	1	3
NS	2	1	3
Wt	18.65	11.90	30.55
Het Chi	3.86	0.00	3.87
Het df	1	0	2
Het P	*	N.S.	N.S.
Fixed RR	3.55	3.45	3.51
RRl	2.25	1.96	2.46
RRu	5.58	6.10	5.00
P	+++	+++	+++
Random RR	5.10	3.45	3.86
RRl	1.41	1.96	2.24
RRu	18.52	6.10	6.64
P	+	+++	+++
Between Chi			0.01
Between df			1
Between P			N.S.

Appendix Table D2 - 7

IESAST - Meta-analysis of Maternal In Utero Exposure (irrespective of in life exposure) : High Dose
Lifetime Asthma (or Current if Lifetime not available)
Excluded studies (and stage at which they were excluded)

	1	2	3	4	5	6	7	8	9	10	11	12	13	14	15	16
1	ADDOYO	AKCAKA	ALBA	ALDAWO	ALFRA1	ALFRA2	ANDRAE	ARSHAD	AZIZI	BARRET	BECKET	BENER	BRABIN	BURCHF	BURR	BUTZ
	CALL	CHEN1	CHEN2	CHHABR	CHINN	CLARK	DAIGLE	DEKKER	DEKOK	DIJKST	DODGE	DOLD	DOTTER	ECE	FAGBUL	FARBE1
	FARBE2	FARBE3	FAROOQ	FERGUS	FIELDE	FLYNN1	FLYNN2	FORAST	FORSB1	FORSB2	FORSB3	FUJI	GOLD	GOREN1	GOREN2	GOREN3
	GOREN4	GOREN5	GOREN6	GORTM1	GORTM2	GUPTA	GURKAN	HAJNAL	HJERN1	HJERN2	HOST	HU2	HUGHES	INFANT	JAAKKO	JENKIN
	KALYO1	KALYO2	KARUNA	KAY	KEARNE	KENDIR	KERSHA	KIVITY	KNIGHT	KUHR	LAM1	LAM2	LAU	LEE1	LEE2	LEEDER
	LEEN	LEROUX	LILLJE	LINDFO	LIS	LISTER	MAIER	MARTIN	MCCON1	MCCON2	MCKEEV	MELIA	MELSM	MOHAME	MONTEF	MOUSSA
	MOYES1	MOYES2	MUMCUO	MURRAY	NITTA	OCONNE	ODDY	OHARA	PALMIE	PETERS	PIC	POKHAR	RASANE	RATAGE	RENNIE	RIBEIR
	RONCH1	RONCH2	RONCH3	RONMAR	ROSASV	RUDNIK	SANZOR	SARRAZ	SCHENK	SCHMIT	SELCUK	SENNHA	SHAMSS	SHERMA	SHOHAT	SIGURS
	SOMERV	SOTOQU	SPIKE	SQUILL	STANHO	STERN1	STODDA	STRACH	TIMONE	TOMINA	TSIMOV	ULRIK	VARELA	VAVILI	VENNER	VERHOE
	VOLKME	VONMAF	WANG	WILLE1	WILLE2	WITHER	WOLFO1	WOLFO2	YANG	ZEIGER	ZEJDA					
3	AGABI1	AGABI2	ANNESI	BALL	BERGMA	CSONKA	CUNNI1	CUNNI2	DEBENE	DELL	EHRLI1	EHRLI2	GILLIL	HABY	HU1	JONES
	KAPLAN	KELLY	KUEHR	LOPEZC	NHANE3	NILSSO	NYSTAD	PONSON	SOYSET	STAIZI	STERN2	TARIQ	WEITZ2	XU		
4	TAYLOR															

Appendix Table D2 - 8

Adjusted - insufficient data for metaanalysis

REF NRR SEX AST AGEL AGEH RACE	LOC BEGYR PUBYR STTYP ADJ EXP-sou UNEXsrce UNEXTI	MEAS	LO	HI	RR SIG
TAYLOR 3 b 1 0 5 all Eu:UK 1970 1983 Pr 0 Mother NotMothr		non cigs	15	999	1.71 ?