

Appendix Table E1 -

IESAST - Meta-analysis of In Utero Only Exposure (vs No Exposure In Utero or In Life)
Lifetime Asthma (or Current if Lifetime not available)

This analysis is restricted to results for:

- 1) Exposure in utero only (i.e. no in life exposure)
- 2) Results not by amount of exposure
- 3) Results complete enough for use in metaanalysis

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

- 4) ASTHMA : lifetime, current
- 5) EXPOS : in life element of exposure/non-exposure refers to Biochemical, Household (overall), Parent (mother), Parent (father)
- 6) RACE : all in study or nearest available, otherwise by race
- 7) ONSET : yes, no (prevalence)
- 8) 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 E1 - 1

IESAST - Meta-analysis of In Utero Only Exposure (vs No Exposure In Utero or In Life)
Lifetime Asthma (or Current if Lifetime not available)
Adjusted

REF NRR SEX AST AGEL AGEH RACE	LOC BEGYR PUBYR STTYP ADJ	EXPOS	EXPOS-time UNEXsource UNEXTI BIOMEA
AGABI1 59 b c 6 7 all Eu:Ita 1994 1999 CC 11 Mother current NotMothr non -			
AGABI2 59 b c 13 14 all Eu:Ita 1994 1999 CC 12 Mother current NotMothr non -			
CUNNI1 15 b c 8 11 all NAmer 1988 1996 CS 9 AnyHh lifenotcurr NoHhMemb othr -			
GILLIL 2 m 1 7 19 all NAmer 1993 2001 CS 3 AnyHh in life NoHhMemb non -			
GILLIL 10 f 1 7 19 all NAmer 1993 2001 CS 3 AnyHh in life NoHhMemb non -			
NHANE3 30 b 1 4 6 w+b NAmer 1988 2001 CS 4 Biochem - Low - blood			
TARIQ 8 b c 4 4 all Eu:UK 1989 2000 Pr 0 Mother in life NotMothr non -			

Appendix Table E1 - 2

IESAST - Meta-analysis of In Utero Only Exposure (vs No Exposure In Utero or In Life)
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		
AGABI1	59	b	11	26	-	536	-	1.72 (1.13- 2.63)	
AGABI2	59	b	12	24	-	780	-	0.69 (0.45- 1.05)	
CUNNI1	15	b	9	-	-	-	-	2.70 (1.13- 6.45)	
GILLIL	2	m	3	-	-	-	-	1.70 (1.10- 2.90)	
GILLIL	10	f	3	-	-	-	-	1.90 (1.10- 3.50)	
Subtotal GILLIL								1.78 (1.23- 2.58)	
NHANE3	30	b	4	-	-	-	-	2.63 (0.30- 25.12)	
TARIQ	8	b	0	12	46	121	732	1.58 (0.81- 3.07)	
Partial Totals				62	46	1437	732		

*prospective study

REF	NRR	SEX	ADJ	Ys	Ws	Qs	Ps
AGABI1	59	b	11	0.54	21.53	0.83	0.0119
AGABI2	59	b	12	-0.37	21.40	11.01	0.0860
CUNNI1	15	b	9	0.99	5.06	2.12	0.0254
GILLIL	2	m	3	0.53	16.35	0.56	0.0319
GILLIL	10	f	3	0.64	11.47	1.00	0.0297
Subtotal GILLIL				0.48	27.82	1.56	
NHANE3	30	b	4	0.97	0.78	0.30	0.3919
TARIQ	8	b	0	0.46	8.72	0.11	0.1779

RR data

N	7
NS	6
Wt	85.32
Het Chi	15.93
Het df	6
Het P	*
Fixed RR	1.41
RRl	1.14
RRu	1.75
P	++
Random RR	1.53
RRl	1.05
RRu	2.23
P	+
Asymm P	N.S.

Appendix Table E1 - 3

IESAST - Meta-analysis of In Utero Only Exposure (vs No Exposure In Utero or In Life)
Lifetime Asthma (or Current if Lifetime not available)
Adjusted

RR data

N	7			
NS	6			
Wt	85.32			
Het Chi	15.93			
Het df	6			
Het P	*			
Fixed RR	1.41			
RRl	1.14			
RRu	1.75			
P	++			
Random RR	1.53			
RRl	1.05			
RRu	2.23			
P	+			
Asymm P	N.S.			
<u>Sex</u>				
both	male female Total			
N	5 1 1 7			
NS	5 1 1 6			
Wt	57.50	16.35	11.47	85.32
Het Chi	13.65	0.00	0.00	15.93
Het df	4	0	0	6
Het P	**	N.S.	N.S.	*
Fixed RR	1.26	1.70	1.90	1.41
RRl	0.98	1.05	1.07	1.14
RRu	1.64	2.76	3.39	1.75
P	(+)	+	+	++
Random RR	1.46	1.70	1.90	1.53
RRl	0.84	1.05	1.07	1.05
RRu	2.53	2.76	3.39	2.23
P	N.S.	+	+	+
Between Chi				2.27
Between df				2
Between P				N.S.

Appendix Table E1 - 4

IESAST - Meta-analysis of In Utero Only Exposure (vs No Exposure In Utero or In Life)
Lifetime Asthma (or Current if Lifetime not available)
Unadjusted

REF NRR X SEX AST AGEL AGEH RACE	LOC BEGYR PUBYR STTYP ADJ	EXPOS	EXPOS-time UNEXsource UNEXTI BIOMEA
AGABI1 52 x b c 6 7 all Eu:Ita 1994 1999 CC 0 Mother current NotMothr non -			
AGABI2 52 x b c 13 14 all Eu:Ita 1994 1999 CC 0 Mother current NotMothr non -			
CUNNI1 15 b c 8 11 all NAmer 1988 1996 CS 9 AnyHh lifenotcurr NoHhMemb othr -			
GILLIL 55 x m 1 7 19 all NAmer 1993 2001 CS 0 AnyHh in life NoHhMemb non -			
GILLIL 64 x f 1 7 19 all NAmer 1993 2001 CS 0 AnyHh in life NoHhMemb non -			
NHANE3 30 b 1 4 6 w+b NAmer 1988 2001 CS 4 Biochem - Low - blood			
TARIQ 8 b c 4 4 all Eu:UK 1989 2000 Pr 0 Mother in life NotMothr non -			

Appendix Table E1 - 5

IESAST - Meta-analysis of In Utero Only Exposure (vs No Exposure In Utero or In Life)
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		
AGABI1	52	b	0	26	252	536	9140	1.76	(1.16- 2.66)
AGABI2	52	b	0	24	376	780	9704	0.79	(0.52- 1.21)
CUNNI1	15	b	9	-	-	-	-	2.70	(1.13- 6.45)
GILLIL	55	m	0	19	56	247	1183	1.63	(0.95- 2.78)
GILLIL	64	f	0	13	59	149	1281	1.89	(1.01- 3.54)
Subtotal GILLIL								1.73	(1.15- 2.61)
NHANE3	30	b	4	-	-	-	-	2.63	(0.30- 25.12)
TARIQ	8	b	0	12	46	121	732	1.58	(0.81- 3.07)
Partial Totals				94	789	1833	22040		

*prospective study

REF	NRR	SEX	ADJ	Ys	Ws	Qs	Ps
AGABI1	52	b	0	0.56	22.52	0.88	0.0073
AGABI2	52	b	0	-0.23	21.88	7.83	0.2809
CUNNI1	15	b	9	0.99	5.06	1.98	0.0254
GILLIL	55	m	0	0.49	13.27	0.18	0.0770
GILLIL	64	f	0	0.64	9.87	0.73	0.0448
Subtotal GILLIL				0.39	23.13	0.91	
NHANE3	30	b	4	0.97	0.78	0.28	0.3919
TARIQ	8	b	0	0.46	8.72	0.07	0.1779

RR data

N	7
NS	6
Wt	82.09
Het Chi	11.95
Het df	6
Het P	(*)
Fixed RR	1.44
RR1	1.16
RRu	1.79
P	+++
Random RR	1.54
RR1	1.11
RRu	2.14
P	+
Asymm P	N.S.

Appendix Table E1 - 6

IESAST - Meta-analysis of In Utero Only Exposure (vs No Exposure In Utero or In Life)
Lifetime Asthma (or Current if Lifetime not available)
Unadjusted

RR data

N	7			
NS	6			
Wt	82.09			
Het Chi	11.95			
Het df	6			
Het P	(*)			
Fixed RR	1.44			
RRl	1.16			
RRu	1.79			
P	+++			
Random RR	1.54			
RRl	1.11			
RRu	2.14			
P	+			
Asymm P	N.S.			
<u>Sex</u>				
both	male female Total			
N	5	1	1	7
NS	5	1	1	6
Wt	58.96	13.27	9.87	82.09
Het Chi	10.73	0.00	0.00	11.95
Het df	4	0	0	6
Het P	*	N.S.	N.S.	(*)
Fixed RR	1.34	1.63	1.89	1.44
RRl	1.04	0.95	1.01	1.16
RRu	1.74	2.78	3.54	1.79
P	+	(+)	+	+++
Random RR	1.49	1.63	1.89	1.54
RRl	0.92	0.95	1.01	1.11
RRu	2.42	2.78	3.54	2.14
P	N.S.	(+)	+	+
Between Chi				1.21
Between df				2
Between P				N.S.

Appendix Table E1 - 7

IESAST - Meta-analysis of In Utero Only Exposure (vs No Exposure In Utero or In Life)
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 ANNESI ARSHAD AZIZI BALL BARRET BECKET BENER BERGMA BRABIN BURCHF BURR BUTZ CALL CHEN1 CHEN2 CHHABR CHINN CLARK CSONKA CUNNI2 DAIGLE DEBENE DEKKER DEKOK DELL DIJKST DODGE DOLD DOTTER ECE EHRLII EHRLI2 FAGBUL FARBE1 FARBE2 FARBE3 FAROOQ FERGUS FIELDIE FLYNN1 FLYNN2 FORAST FORSB1 FORSB2 FORSB3 FUJI GOLD GOREN1 GOREN2 GOREN3 GOREN4 GOREN5 GOREN6 GORTM1 GORTM2 GUPTA GURKAN HABY HAJNAL HJERN1 HJERN2 HOST HU1 HU2 HUGHES INFANT JAAKKO JENKIN JONES KALYO1 KALYO2 KAPLAN KARUNA KAY KEARNE KELLY KENDIR KERSHA KIVITY KNIGHT KUEHR KUHR LAM1 LAM2 LAU LEE1 LEE2 LEEDER LEEN LEROUX LILLJE LINDFO LIS LISTER LOPEZC MAIER MARTIN MCCON1 MCCON2 MCKEEV MELIA MELSON MOHAME MONTEF MOUSSA MOYES1 MOYES2 MUMCUO MURRAY NILSSO NITTA NYSTAD OCONNE ODDY OHARA OLIVET PALMIE PETERS PIC POKHAR PONSON RASANE RATAGE RENNIE RIBEIR RONCH1 RONCH2 RONCH3 RONMAR ROSASV RUDNIK SANZOR SARRAZ SCHENK SCHMIT SELCUK SENNHA SHAMSS SHERMA SHOHAT SIGURS SOMERV SOTOQU SOYSET SPIKE SQUILL STANHO STAZI STERN1 STERN2 STODDA STRACH TAYLOR TIMONE TOMINA TSIMOV ULRIK VARELA VAVILI VENNER VERHOE VOLKME VONMAF WANG WEITZ1 WEITZ2 WILLE1 WILLE2 WITHER WOLFO1 WOLFO2 WOLFO3 XU YANG ZEIGER ZEJDA ZHENG															

Appendix Table E1 - 8

IESAST - Meta-analysis of In Utero Only Exposure (vs No Exposure In Utero or In Life)
Lifetime Asthma (or Current if Lifetime not available)
Potentially overlapping studies

REF	REFGP	PRINC	OVERLAP											RR SIG
GILLIL GILLIL	1	MCCON1/GILLIL												*
				Adjusted - insufficient data for metaanalysis										n
REF NRR SEX AST AGEL AGEH RACE	LOC BEGYR PUBYR STTYP ADJ	EXPOS EXPOS-time UNEXsource UNEXTI BIOMEA	NHANE3 33 b 1 7 11 w+b NAmer 1988 2001 CS 4 Biochem	-	Low	-	blood							

Appendix Table E2 -

IESAST - Meta-analysis of In Life Only Exposure (vs No Exposure In Utero or In Life)
Lifetime Asthma (or Current if Lifetime not available)

This analysis is restricted to results for:

- 1) Exposure in life only (i.e. no in utero exposure)
- 2) Results not by amount of exposure
- 3) Results complete enough for use in metaanalysis

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

- 4) ASTHMA : lifetime, current
- 5) EXPOS : in life element of exposure/non-exposure refers to Biochemical, Household (overall), Parent (mother), Parent (father)
- 6) RACE : all in study or nearest available, otherwise by race
- 7) ONSET : yes, no (prevalence)
- 8) 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 E2 - 1

IESAST - Meta-analysis of In Life Only Exposure (vs No Exposure In Utero or In Life)
Lifetime Asthma (or Current if Lifetime not available)
Adjusted

REF NRR SEX AST AGEL AGEH RACE	LOC BEGYR PUBYR STTYP ADJ	EXPOS	EXPOS-time UNEXsource UNEXTI BIOMEA
AGABI1 58 b c 6 7 all Eu:Ita 1994 1999 CC 11 Mother current NotMothr non -			
AGABI2 58 b c 13 14 all Eu:Ita 1994 1999 CC 12 Mother current NotMothr non -			
CUNNI1 14 b c 8 11 all NAmer 1988 1996 CS 9 AnyHh lifenotcurr NoHhMemb othr -			
GILLIL 1 m 1 7 19 all NAmer 1993 2001 CS 3 AnyHh in life NoHhMemb non -			
GILLIL 9 f 1 7 19 all NAmer 1993 2001 CS 3 AnyHh in life NoHhMemb non -			
NHANE3 31 b 1 4 6 w+b NAmer 1988 2001 CS 4 Biochem - Low - blood			
TARIQ 7 b c 4 4 all Eu:UK 1989 2000 Pr 0 Mother in life NotMothr non -			

Appendix Table E2 - 2

IESAST - Meta-analysis of In Life Only Exposure (vs No Exposure In Utero or In Life)
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		
AGABI1	58	b	11	172	-	536	-	1.05	(0.88- 1.26)
AGABI2	58	b	12	282	-	780	-	1.14	(0.99- 1.33)
CUNN11	14	b	9	-	-	-	-	0.99	(0.78- 1.25)
GILLIL	1	m	3	-	-	-	-	1.00	(0.80- 1.30)
GILLIL	9	f	3	-	-	-	-	1.10	(0.80- 1.40)
Subtotal GILLIL								1.04	(0.87- 1.25)
NHANE3	31	b	4	-	-	-	-	2.29	(0.91- 5.01)
TARIQ	7	b	0	16	99	121	732	0.98	(0.56- 1.72)
Partial Totals				470	99	1437	732		

*prospective study

REF	NRR	SEX	ADJ	Ys	Ws	Qs	Ps
AGABI1	58	b	11	0.05	119.26	0.08	0.5942
AGABI2	58	b	12	0.13	176.29	0.56	0.0819
CUNN11	14	b	9	-0.01	69.09	0.49	0.9334
GILLIL	1	m	3	0.00	65.19	0.36	1.0000
GILLIL	9	f	3	0.10	49.07	0.02	0.5044
Subtotal GILLIL				-0.05	114.25	0.38	
NHANE3	31	b	4	0.83	5.28	3.00	0.0569
TARIQ	7	b	0	-0.02	12.16	0.11	0.9373

RR data

N	7
NS	6
Wt	496.34
Het Chi	4.64
Het df	6
Het P	N.S.
Fixed RR	1.08
RR1	0.99
RRu	1.18
P	(+)
Random RR	1.08
RR1	0.99
RRu	1.18
P	(+)
Asymm P	N.S.

Appendix Table E2 - 3

IESAST - Meta-analysis of In Life Only Exposure (vs No Exposure In Utero or In Life)
Lifetime Asthma (or Current if Lifetime not available)
Adjusted

RR data

N	7			
NS	6			
Wt	496.34			
Het Chi	4.64			
Het df	6			
Het P	N.S.			
Fixed RR	1.08			
RRl	0.99			
RRu	1.18			
P	(+)			
Random RR	1.08			
RRl	0.99			
RRu	1.18			
P	(+)			
Asymm P	N.S.			
<u>Sex</u>				
both	male female Total			
N	5 1 1 7			
NS	5 1 1 6			
Wt	382.08	65.19	49.07	496.34
Het Chi	4.21	0.00	0.00	4.64
Het df	4	0	0	6
Het P	N.S.	N.S.	N.S.	N.S.
Fixed RR	1.09	1.00	1.10	1.08
RRl	0.98	0.78	0.83	0.99
RRu	1.20	1.27	1.46	1.18
P	(+)	N.S.	N.S.	(+)
Random RR	1.09	1.00	1.10	1.08
RRl	0.98	0.78	0.83	0.99
RRu	1.21	1.27	1.46	1.18
P	N.S.	N.S.	N.S.	(+)
Between Chi				0.42
Between df				2
Between P				N.S.

Appendix Table E2 - 4

IESAST - Meta-analysis of In Life Only Exposure (vs No Exposure In Utero or In Life)
Lifetime Asthma (or Current if Lifetime not available)
Unadjusted

REF NRR X SEX AST AGEL AGEH RACE	LOC BEGYR PUBYR STTYP ADJ	EXPOS	EXPOS-time UNEXsource UNEXTI BIOMEA
AGABI1 51 x b c 6 7 all Eu:Ita 1994 1999 CC 0 Mother current NotMothr non -			
AGABI2 51 x b c 13 14 all Eu:Ita 1994 1999 CC 0 Mother current NotMothr non -			
CUNNI1 14 b c 8 11 all NAmer 1988 1996 CS 9 AnyHh lifenotcurr NoHhMemb othr -			
GILLIL 54 x m 1 7 19 all NAmer 1993 2001 CS 0 AnyHh in life NoHhMemb non -			
GILLIL 63 x f 1 7 19 all NAmer 1993 2001 CS 0 AnyHh in life NoHhMemb non -			
NHANE3 31 b 1 4 6 w+b NAmer 1988 2001 CS 4 Biochem - Low - blood			
TARIQ 7 b c 4 4 all Eu:UK 1989 2000 Pr 0 Mother in life NotMothr non -			

Appendix Table E2 - 5

IESAST - Meta-analysis of In Life Only Exposure (vs No Exposure In Utero or In Life)
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		
AGABI1	51	b	0	172	2841	536	9140	1.03	(0.87- 1.23)
AGABI2	51	b	0	282	2969	780	9704	1.18	(1.02- 1.36)
CUNN11	14	b	9	-	-	-	-	0.99	(0.78- 1.25)
GILLIL	54	m	0	87	424	247	1183	0.98	(0.75- 1.29)
GILLIL	63	f	0	67	528	149	1281	1.09	(0.80- 1.48)
Subtotal GILLIL								1.03	(0.84- 1.26)
NHANE3	31	b	4	-	-	-	-	2.29	(0.91- 5.01)
TARIQ	7	b	0	16	99	121	732	0.98	(0.56- 1.72)
Partial Totals				624	6861	1833	22040		

*prospective study

REF	NRR	SEX	ADJ	Ys	Ws	Qs	Ps
AGABI1	51	b	0	0.03	122.83	0.34	0.7240
AGABI2	51	b	0	0.17	189.82	1.29	0.0215
CUNN11	14	b	9	-0.01	69.09	0.62	0.9334
GILLIL	54	m	0	-0.02	53.34	0.55	0.8988
GILLIL	63	f	0	0.09	41.13	0.00	0.5767
Subtotal GILLIL				-0.10	94.48	0.55	
NHANE3	31	b	4	0.83	5.28	2.92	0.0569
TARIQ	7	b	0	-0.02	12.16	0.14	0.9373

RR data

N	7
NS	6

Wt	493.66
Het Chi	5.86
Het df	6
Het P	N.S.
Fixed RR	1.09
RR1	1.00
RRu	1.19
P	(+)
Random RR	1.09
RR1	1.00
RRu	1.19
P	(+)
Asymm P	N.S.

Appendix Table E2 - 6

IESAST - Meta-analysis of In Life Only Exposure (vs No Exposure In Utero or In Life)
Lifetime Asthma (or Current if Lifetime not available)
Unadjusted

RR data

N	7			
NS	6			
Wt	493.66			
Het Chi	5.86			
Het df	6			
Het P	N.S.			
Fixed RR	1.09			
RRl	1.00			
RRu	1.19			
P	(+)			
Random RR	1.09			
RRl	1.00			
RRu	1.19			
P	(+)			
Asymm P	N.S.			
<u>Sex</u>				
both		male	female	Total
N	5	1	1	7
NS	5	1	1	6
Wt	399.19	53.34	41.13	493.66
Het Chi	5.24	0.00	0.00	5.86
Het df	4	0	0	6
Het P	N.S.	N.S.	N.S.	N.S.
Fixed RR	1.10	0.98	1.09	1.09
RRl	1.00	0.75	0.80	1.00
RRu	1.22	1.29	1.48	1.19
P	(+)	N.S.	N.S.	(+)
Random RR	1.10	0.98	1.09	1.09
RRl	0.97	0.75	0.80	1.00
RRu	1.24	1.29	1.48	1.19
P	N.S.	N.S.	N.S.	(+)
Between Chi				0.62
Between df				2
Between P				N.S.

Appendix Table E2 - 7

IESAST - Meta-analysis of In Life Only Exposure (vs No Exposure In Utero or In Life)
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 ANNESI ARSHAD AZIZI BALL BARRET BECKET BENER BERGMA BRABIN BURCHF BURR BUTZ CALL CHEN1 CHEN2 CHHABR CHINN CLARK CSONKA CUNNI2 DAIGLE DEBENE DEKKER DEKOK DELL DIJKST DODGE DOLD DOTTER ECE EHRLII EHRLI2 FAGBUL FARBE1 FARBE2 FARBE3 FAROOQ FERGUS FIELDIE FLYNN1 FLYNN2 FORAST FORSB1 FORSB2 FORSB3 FUJI GOLD GOREN1 GOREN2 GOREN3 GOREN4 GOREN5 GOREN6 GORTM1 GORTM2 GUPTA GURKAN HABY HAJNAL HJERN1 HJERN2 HOST HU1 HU2 HUGHES INFANT JAAKKO JENKIN JONES KALYO1 KALYO2 KAPLAN KARUNA KAY KEARNE KELLY KENDIR KERSHA KIVITY KNIGHT KUEHR KUHR LAM1 LAM2 LAU LEE1 LEE2 LEEDER LEEN LEROUX LILLJE LINDFO LIS LISTER LOPEZC MAIER MARTIN MCCON1 MCCON2 MCKEEV MELIA MELSON MOHAME MONTEF MOUSSA MOYES1 MOYES2 MUMCUO MURRAY NILSSO NITTA NYSTAD OCONNE ODDY OHARA OLIVET PALMIE PETERS PIC POKHAR PONSON RASANE RATAGE RENNIE RIBEIR RONCH1 RONCH2 RONCH3 RONMAR ROSASV RUDNIK SANZOR SARRAZ SCHENK SCHMIT SELCUK SENNHA SHAMSS SHERMA SHOHAT SIGURS SOMERV SOTOQU SOYSET SPIKE SQUILL STANHO STAZI STERN1 STERN2 STODDA STRACH TAYLOR TIMONE TOMINA TSIMOV ULRIK VARELA VAVILI VENNER VERHOE VOLKME VONMAF WANG WEITZ1 WEITZ2 WILLE1 WILLE2 WITHER WOLFO1 WOLFO2 WOLFO3 XU YANG ZEIGER ZEJDA ZHENG															

Appendix Table E2 - 8

IESAST - Meta-analysis of In Life Only Exposure (vs No Exposure In Utero or In Life)
Lifetime Asthma (or Current if Lifetime not available)
Potentially overlapping studies

REF	REFGP	PRINC	OVERLAP											RR SIG
GILLIL GILLIL	1	MCCON1/GILLIL												*
				Adjusted - insufficient data for metaanalysis										n
REF NRR SEX AST AGEL AGEH RACE	LOC BEGYR PUBYR STTYP ADJ	EXPOS EXPOS-time UNEXsource UNEXTI BIOMEA	NHANE3 34 b 1 7 11 w+b NAmer 1988 2001 CS 4 Biochem	-	Low	-	blood							

Appendix Table E3 -

IESAST - Meta-analysis of Both In Utero and In Life Exposure (vs No Exposure In Utero or In Life)
Lifetime Asthma (or Current if Lifetime not available)

This analysis is restricted to results for:

- 1) Exposure both in utero and in life
- 2) Results not by amount of exposure
- 3) Results complete enough for use in metaanalysis

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

- 4) ASTHMA : lifetime, current
- 5) EXPOS : in life element of exposure/non-exposure refers to Biochemical, Household (overall), Parent (mother), Parent (father)
- 6) RACE : all in study or nearest available, otherwise by race
- 7) ONSET : yes, no (prevalence)
- 8) 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 E3 - 1

IESAST - Meta-analysis of Both In Utero and In Life Exposure (vs No Exposure In Utero or In Life)
Lifetime Asthma (or Current if Lifetime not available)
Adjusted

REF NRR SEX AST AGEL RACE	LOC BEGYR PUBYR STTYP ADJ	EXPOS	EXPOS-time UNEXsource UNEXTI BIOMEA
AGABI1 60 b c 6 7 all Eu:Ita 1994 1999 CC 11 Mother current NotMothr non -			
AGABI2 60 b c 13 14 all Eu:Ita 1994 1999 CC 12 Mother current NotMothr non -			
CUNNI1 16 b c 8 11 all NAmer 1988 1996 CS 9 AnyHh lifenotcurr NoHhMemb othr -			
GILLIL 3 m 1 7 19 all NAmer 1993 2001 CS 3 AnyHh in life NoHhMemb non -			
GILLIL 11 f 1 7 19 all NAmer 1993 2001 CS 3 AnyHh in life NoHhMemb non -			
HAJNAL 4 b 1 6 14 all Eu:wst 1992 1999 CS 13 Mother current NotMothr non -			
NHANE3 29 b 1 4 6 w+b NAmer 1988 2001 CS 4 Biochem - Low - blood			
STERN2 1 b 1 7 12 all NAmer * 1989 CS 0 Mother <2y NotMothr non -			
TARIQ 9 b c 4 4 all Eu:UK 1989 2000 Pr 0 Mother in life NotMothr non -			

Appendix Table E3 - 2

IESAST - Meta-analysis of Both In Utero and In Life Exposure (vs No Exposure In Utero or In Life)
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		
AGAB11	60	b	11	178	-	536	-	1.52	(1.27- 1.83)
AGAB12	60	b	12	172	-	780	-	1.21	(1.02- 1.45)
CUNN11	16	b	9	-	-	-	-	0.96	(0.63- 1.48)
GILLIL	3	m	3	-	-	-	-	1.10	(0.80- 1.40)
GILLIL	11	f	3	-	-	-	-	1.60	(1.20- 2.20)
Subtotal GILLIL								1.31	(1.06- 1.61)
HAJNAL	4	b	13	-	-	-	-	1.31	(0.92- 1.85)
NHANE3	29	b	4	-	-	-	-	3.16	(1.10- 9.12)
STERN2	1	b	0	-	-	-	-	1.43	(1.09- 1.88)
TARIQ	9	b	0	32	160	121	732	1.21	(0.79- 1.85)
Partial Totals				382	160	1437	732		

*prospective study

REF	NRR	SEX	ADJ	Ys	Ws	Qs	Ps
AGAB11	60	b	11	0.42	115.15	2.09	0.0000
AGAB12	60	b	12	0.19	124.18	1.08	0.0337
CUNN11	16	b	9	-0.04	21.06	2.22	0.8514
GILLIL	3	m	3	0.10	49.07	1.75	0.5044
GILLIL	11	f	3	0.47	41.82	1.45	0.0024
Subtotal GILLIL				-0.00	90.89	3.19	
HAJNAL	4	b	13	0.27	31.49	0.01	0.1297
NHANE3	29	b	4	1.15	3.43	2.58	0.0330
STERN2	1	b	0	0.36	51.71	0.28	0.0101
TARIQ	9	b	0	0.19	21.22	0.18	0.3801

RR data

N	9
NS	8

Wt	459.14
Het Chi	11.64
Het df	8
Het P	N.S.
Fixed RR	1.33
RR1	1.21
RRu	1.46
P	+++
Random RR	1.32
RR1	1.18
RRu	1.49
P	+++
Asymm P	N.S.

Appendix Table E3 - 3

IESAST - Meta-analysis of Both In Utero and In Life Exposure (vs No Exposure In Utero or In Life)
Lifetime Asthma (or Current if Lifetime not available)
Adjusted

RR data

N	9			
NS	8			
Wt	459.14			
Het Chi	11.64			
Het df	8			
Het P	N.S.			
Fixed RR	1.33			
RRl	1.21			
RRu	1.46			
P	+++			
Random RR	1.32			
RRl	1.18			
RRu	1.49			
P	+++			
Asymm P	N.S.			
<u>Sex</u>				
both		male	female	Total
N	7	1	1	9
NS	7	1	1	8
Wt	368.25	49.07	41.82	459.14
Het Chi	8.44	0.00	0.00	11.64
Het df	6	0	0	8
Het P	N.S.	N.S.	N.S.	N.S.
Fixed RR	1.33	1.10	1.60	1.33
RRl	1.20	0.83	1.18	1.21
RRu	1.48	1.46	2.17	1.46
P	+++	N.S.	++	+++
Random RR	1.33	1.10	1.60	1.32
RRl	1.16	0.83	1.18	1.18
RRu	1.52	1.46	2.17	1.49
P	+++	N.S.	++	+++
Between Chi				3.20
Between df				2
Between P				N.S.

Appendix Table E3 - 4

IESAST - Meta-analysis of Both In Utero and In Life Exposure (vs No Exposure In Utero or In Life)
Lifetime Asthma (or Current if Lifetime not available)
Unadjusted

REF NRR X SEX AST AGEH RACE	LOC BEGYR PUBYR STTYP ADJ	EXPOS	EXPOS-time UNEXsource UNEXTI BIOMEA
AGABI1 53 x b c 6 7 all Eu:Ita 1994 1999 CC 0 Mother current NotMothr non -			
AGABI2 53 x b c 13 14 all Eu:Ita 1994 1999 CC 0 Mother current NotMothr non -			
CUNNI1 16 b c 8 11 all NAmer 1988 1996 CS 9 AnyHh lifenotcurr NoHhMemb othr -			
GILLIL 56 x m 1 7 19 all NAmer 1993 2001 CS 0 AnyHh in life NoHhMemb non -			
GILLIL 65 x f 1 7 19 all NAmer 1993 2001 CS 0 AnyHh in life NoHhMemb non -			
HAJNAL 4 b 1 6 14 all Eu:wst 1992 1999 CS 13 Mother current NotMothr non -			
NHANE3 29 b 1 4 6 w+b NAmer 1988 2001 CS 4 Biochem - Low - blood			
STERN2 1 b 1 7 12 all NAmer * 1989 CS 0 Mother <2y NotMothr non -			
TARIQ 9 b c 4 4 all Eu:UK 1989 2000 Pr 0 Mother in life NotMothr non -			

Appendix Table E3 - 5

IESAST - Meta-analysis of Both In Utero and In Life Exposure (vs No Exposure In Utero or In Life)
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		
AGAB11	53	b	0	178	1989	536	9140	1.53	(1.28- 1.82)
AGAB12	53	b	0	172	1653	780	9704	1.29	(1.09- 1.54)
CUNN11	16	b	9	-	-	-	-	0.96	(0.63- 1.48)
GILLIL	56	m	0	62	301	247	1183	0.99	(0.73- 1.34)
GILLIL	65	f	0	63	337	149	1281	1.61	(1.17- 2.21)
Subtotal GILLIL								1.25	(1.00- 1.55)
HAJNAL	4	b	13	-	-	-	-	1.31	(0.92- 1.85)
NHANE3	29	b	4	-	-	-	-	3.16	(1.10- 9.12)
STERN2	1	b	0	-	-	-	-	1.43	(1.09- 1.88)
TARIQ	9	b	0	32	160	121	732	1.21	(0.79- 1.85)
Partial Totals				507	4440	1833	22040		

*prospective study

REF	NRR	SEX	ADJ	Ys	Ws	Qs	Ps
AGAB11	53	b	0	0.42	123.52	1.93	0.0000
AGAB12	53	b	0	0.26	128.14	0.20	0.0035
CUNN11	16	b	9	-0.04	21.06	2.42	0.8514
GILLIL	56	m	0	-0.01	41.08	3.98	0.9308
GILLIL	65	f	0	0.47	37.98	1.19	0.0035
Subtotal GILLIL				-0.13	79.05	5.17	
HAJNAL	4	b	13	0.27	31.49	0.02	0.1297
NHANE3	29	b	4	1.15	3.43	2.50	0.0330
STERN2	1	b	0	0.36	51.71	0.19	0.0101
TARIQ	9	b	0	0.19	21.22	0.24	0.3801

RR data

N	9
NS	8

Wt	459.63
Het Chi	12.66
Het df	8
Het P	N.S.
Fixed RR	1.35
RR1	1.23
RRu	1.48
P	+++
Random RR	1.33
RR1	1.17
RRu	1.51
P	+++
Asymm P	N.S.

Appendix Table E3 - 6

IESAST - Meta-analysis of Both In Utero and In Life Exposure (vs No Exposure In Utero or In Life)
Lifetime Asthma (or Current if Lifetime not available)
Unadjusted

RR data

N	9			
NS	8			
Wt	459.63			
Het Chi	12.66			
Het df	8			
Het P	N.S.			
Fixed RR	1.35			
RRl	1.23			
RRu	1.48			
P	+++			
Random RR	1.33			
RRl	1.17			
RRu	1.51			
P	+++			
Asymm P	N.S.			
<u>Sex</u>				
both		male	female	Total
N	7	1	1	9
NS	7	1	1	8
Wt	380.58	41.08	37.98	459.63
Het Chi	7.40	0.00	0.00	12.66
Het df	6	0	0	8
Het P	N.S.	N.S.	N.S.	N.S.
Fixed RR	1.37	0.99	1.61	1.35
RRl	1.24	0.73	1.17	1.23
RRu	1.51	1.34	2.21	1.48
P	+++	N.S.	++	+++
Random RR	1.36	0.99	1.61	1.33
RRl	1.21	0.73	1.17	1.17
RRu	1.53	1.34	2.21	1.51
P	+++	N.S.	++	+++
Between Chi				5.27
Between df				2
Between P				(*)

Appendix Table E3 - 7

IESAST - Meta-analysis of Both In Utero and In Life Exposure (vs No Exposure In Utero or In Life)

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 ANNESI ARSHAD AZIZI BALL BARRET BECKET BENER BERGMA BRABIN BURCHF BURR BUTZ CALL CHEN1 CHEN2 CHHABR CHINN CLARK CSONKA CUNNI2 DAIGLE DEBENE DEKKER DEKOK DELL DIJKST DODGE DOLD DOTTER ECE EHRLII EHRLI2 FAGBUL FARBE1 FARBE2 FARBE3 FAROOQ FERGUS FIELDIE FLYNN1 FLYNN2 FORAST FORSB1 FORSB2 FORSB3 FUJI GOLD GOREN1 GOREN2 GOREN3 GOREN4 GOREN5 GOREN6 GORTM1 GORTM2 GUPTA GURKAN HABY HJERN1 HJERN2 HOST HU1 HU2 HUGHES INFANT JAAKKO JENKIN JONES KALYO1 KALYO2 KAFLAN KARUNA KAY KEARNE KELLY KENDIR KERSHA KIVITY KNIGHT KUEHR KUHR LAM1 LAM2 LAU LEE1 LEE2 LEEDER LEEN LEROUX LILLJE LINDFO LIS LISTER LOPEZC MAIER MARTIN MCCON1 MCCON2 MCKEEV MELIA MELSON MOHAME MONTEF MOUSSA MOYES1 MOYES2 MUMCUO MURRAY NILSSO NITTA NYSTAD OCONNE ODDY OHARA OLIVET PALMIE PETERS PIC POKHAR PONSON RASANE RATAGE RENNIE RIBEIR RONCH1 RONCH2 RONCH3 RONMAR ROSAV RUDNIK SANZOR SARRAZ SCHENK SCHMIT SELCUK SENNAH SHAMSS SHERMA SHOHAT SIGURS SOMERV SOTOQU SOYSET SPIKE SQUILL STANHO STAZI STERN1 STODDA STRACH TAYLOR TIMONE TOMINA TSIMOV ULRIK VARELA VAVILI VENNER VERHOE VOLKME VONMAF WANG WEITZ1 WEITZ2 WILLE1 WILLE2 WITHER WOLFO1 WOLFO2 WOLFO3 XU YANG ZEIGER ZEJDA ZHENG															

Appendix Table E3 - 8

IESAST - Meta-analysis of Both In Utero and In Life Exposure (vs No Exposure In Utero or In Life)
Lifetime Asthma (or Current if Lifetime not available)
Potentially overlapping studies

REF	REFGP	PRINC	OVERLAP	Adjusted - insufficient data for metaanalysis												RR SIG					
				REF	NRR	SEX	AST	AGEI	AGEH	RACE	LOC	BEGYR	PUBYR	STTYP	ADJ	EXPOS	EXPOS-time	UNEXsource	UNEXTI	BIOMEA	
NHANE3	32	b	1	7	11	w+b	NAmer	1988	2001	CS	4	Biochem	-	-	Low	-	blood	*	n		
STERN2	3	b	1	7	12	all	NAmer	*	1989	CS	3	Mother	<2y	NotMothr	non	-	*	y			

Appendix Table E4 -

IESAST - Meta-analysis of In Utero Only Exposure (vs No Exposure In Utero or In Life)
Lifetime Asthma (or Current if Lifetime not available)

This analysis is restricted to results for:

- 1) Exposure in utero only (i.e. no in life exposure)
- 2) Results not by amount of exposure
- 3) Results complete enough for use in metaanalysis

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

- 4) ASTHMA : lifetime, current
- 5) EXPOS : in life element of exposure/nonexposure refers to Biochemical, Household (overall), Parent (father), Parent (mother)
- 6) RACE : all in study or nearest available, otherwise by race
- 7) ONSET : yes, no (prevalence)
- 8) 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 those which actually differ from the adjusted results in Appendix Table E1 - 1 are marked 'x' in Section -1)
(Sections 4-6 not presented)

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 E4 - 1

IESAST - Meta-analysis of In Utero Only Exposure (vs No Exposure In Utero or In Life)
Lifetime Asthma (or Current if Lifetime not available)
Adjusted

REF NRR CompE1 SEX AST AGEL AGEH RACE	LOC BEGYR PUBYR STTYP ADJ	EXPOS	EXPOS-time UNEXsource UNEXTI BIOMEA
AGABI1 73 x b c 6 7 all Eu:Ita 1994 1999 CC 11 Father current NotFathr non -			
AGABI2 73 x b c 13 14 all Eu:Ita 1994 1999 CC 12 Father current NotFathr non -			
CUNNI1 15 b c 8 11 all NAmer 1988 1996 CS 9 AnyHh lifenotcurr NoHhMemb othr -			
GILLIL 2 m 1 7 19 all NAmer 1993 2001 CS 3 AnyHh in life NoHhMemb non -			
GILLIL 10 f 1 7 19 all NAmer 1993 2001 CS 3 AnyHh in life NoHhMemb non -			
NHANE3 30 b 1 4 6 w+b NAmer 1988 2001 CS 4 Biochem - Low - blood			
TARIQ 8 b c 4 4 all Eu:UK 1989 2000 Pr 0 Mother in life NotMothr non -			

Appendix Table E4 - 2

IESAST - Meta-analysis of In Utero Only Exposure (vs No Exposure In Utero or In Life)
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		
AGABI1	73	b	11	82	-	383	-	1.23	(0.96- 1.58)
AGABI2	73	b	12	222	-	475	-	1.20	(1.02- 1.41)
CUNN11	15	b	9	-	-	-	-	2.70	(1.13- 6.45)
GILLIL	2	m	3	-	-	-	-	1.70	(1.10- 2.90)
GILLIL	10	f	3	-	-	-	-	1.90	(1.10- 3.50)
Subtotal GILLIL								1.78	(1.23- 2.58)
NHANE3	30	b	4	-	-	-	-	2.63	(0.30- 25.12)
TARIQ	8	b	0	12	46	121	732	1.58	(0.81- 3.07)
Partial Totals				316	46	979	732		

*prospective study

REF	NRR	SEX	ADJ	Ys	Ws	Qs	Ps
AGABI1	73	b	11	0.21	61.90	0.18	0.1034
AGABI2	73	b	12	0.18	146.57	0.90	0.0273
CUNN11	15	b	9	0.99	5.06	2.72	0.0254
GILLIL	2	m	3	0.53	16.35	1.19	0.0319
GILLIL	10	f	3	0.64	11.47	1.67	0.0297
Subtotal GILLIL				0.65	27.82	2.86	
NHANE3	30	b	4	0.97	0.78	0.39	0.3919
TARIQ	8	b	0	0.46	8.72	0.33	0.1779

RR data

N	7
NS	6

Wt	250.85
Het Chi	7.38
Het df	6
Het P	N.S.
Fixed RR	1.30
RR1	1.15
RRu	1.47
P	+++
Random RR	1.36
RR1	1.15
RRu	1.61
P	+++
Asymm P	**

Appendix Table E4 - 3

IESAST - Meta-analysis of In Utero Only Exposure (vs No Exposure In Utero or In Life)
Lifetime Asthma (or Current if Lifetime not available)
Adjusted

RR data

N	7			
NS	6			
Wt	250.85			
Het Chi	7.38			
Het df	6			
Het P	N.S.			
Fixed RR	1.30			
RRl	1.15			
RRu	1.47			
P	+++			
Random RR	1.36			
RRl	1.15			
RRu	1.61			
P	+++			
Asymm P	**			
<u>Sex</u>				
both		male	female	Total
N	5	1	1	7
NS	5	1	1	6
Wt	223.03	16.35	11.47	250.85
Het Chi	4.17	0.00	0.00	7.38
Het df	4	0	0	6
Het P	N.S.	N.S.	N.S.	N.S.
Fixed RR	1.25	1.70	1.90	1.30
RRl	1.09	1.05	1.07	1.15
RRu	1.42	2.76	3.39	1.47
P	+++	+	+	+++
Random RR	1.25	1.70	1.90	1.36
RRl	1.09	1.05	1.07	1.15
RRu	1.45	2.76	3.39	1.61
P	++	+	+	+++
Between Chi				3.21
Between df				2
Between P				N.S.

Appendix Table E4 - 7

IESAST - Meta-analysis of In Utero Only Exposure (vs No Exposure In Utero or In Life)
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 ANNESI ARSHAD AZIZI BALL BARRET BECKET BENER BERGMA BRABIN BURCHF BURR BUTZ CALL CHEN1 CHEN2 CHHABR CHINN CLARK CSONKA CUNNI2 DAIGLE DEBENE DEKKER DEKOK DELL DIJKST DODGE DOLD DOTTER ECE EHRLII EHRLI2 FAGBUL FARBE1 FARBE2 FARBE3 FAROOQ FERGUS FIELDIE FLYNN1 FLYNN2 FORAST FORSB1 FORSB2 FORSB3 FUJI GOLD GOREN1 GOREN2 GOREN3 GOREN4 GOREN5 GOREN6 GORTM1 GORTM2 GUPTA GURKAN HABY HAJNAL HJERN1 HJERN2 HOST HU1 HU2 HUGHES INFANT JAAKKO JENKIN JONES KALYO1 KALYO2 KAPLAN KARUNA KAY KEARNE KELLY KENDIR KERSHA KIVITY KNIGHT KUEHR KUHR LAM1 LAM2 LAU LEE1 LEE2 LEEDER LEEN LEROUX LILLJE LINDFO LIS LISTER LOPEZC MAIER MARTIN MCCON1 MCCON2 MCKEEV MELIA MELSON MOHAME MONTEF MOUSSA MOYES1 MOYES2 MUMCUO MURRAY NILSSO NITTA NYSTAD OCONNE ODDY OHARA OLIVET PALMIE PETERS PIC POKHAR PONSON RASANE RATAGE RENNIE RIBEIR RONCH1 RONCH2 RONCH3 RONMAR ROSAV RUDNIK SANZOR SARRAZ SCHENK SCHMIT SELCUK SENNHA SHAMSS SHERMA SHOHAT SIGURS SOMERV SOTOQU SOYSET SPIKE SQUILL STANHO STAZI STERN1 STERN2 STODDA STRACH TAYLOR TIMONE TOMINA TSIMOV ULRIK VARELA VAVILI VENNER VERHOE VOLKME VONMAF WANG WEITZ1 WEITZ2 WILLE1 WILLE2 WITHER WOLFO1 WOLFO2 WOLFO3 XU YANG ZEIGER ZEJDA ZHENG															

Appendix Table E4 - 8

IESAST - Meta-analysis of In Utero Only Exposure (vs No Exposure In Utero or In Life)
Lifetime Asthma (or Current if Lifetime not available)
Potentially overlapping studies

REF	REFGP	PRINC	OVERLAP											RR SIG
GILLIL GILLIL	1	MCCON1/GILLIL												*
				Adjusted - insufficient data for metaanalysis										n
REF NRR SEX AST AGEL AGEH RACE	LOC BEGYR PUBYR STTYP ADJ	EXPOS EXPOS-time UNEXsource UNEXTI BIOMEA	NHANE3 33 b 1 7 11 w+b NAmer 1988 2001 CS 4 Biochem	-	Low	-	blood							

Appendix Table E5 -

IESAST - Meta-analysis of In Life Only Exposure (vs No Exposure In Utero or In Life)
Lifetime Asthma (or Current if Lifetime not available)

This analysis is restricted to results for:

- 1) Exposure in life only (i.e. no in utero exposure)
- 2) Results not by amount of exposure
- 3) Results complete enough for use in metaanalysis

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

- 4) ASTHMA : lifetime, current
- 5) EXPOS : in life element of exposure/nonexposure refers to Biochemical, Household (overall), Parent (father), Parent (mother)
- 6) RACE : all in study or nearest available, otherwise by race
- 7) ONSET : yes, no (prevalence)
- 8) 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 those which actually differ from the adjusted results in Appendix Table E2 - 1 are marked 'x' in Section -1)
(Sections 4-6 not presented)

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 E5 - 1

IESAST - Meta-analysis of In Life Only Exposure (vs No Exposure In Utero or In Life)
Lifetime Asthma (or Current if Lifetime not available)
Adjusted

REF NRR CompE2 SEX AST AGEL AGEH RACE	LOC BEGYR PUBYR STTYP ADJ	EXPOS	EXPOS-time UNEXsource UNEXTI BIOMEA
AGABI1 72 x b c 6 7 all Eu:Ita 1994 1999 CC 11 Father current NotFathr non -			
AGABI2 72 x b c 13 14 all Eu:Ita 1994 1999 CC 12 Father current NotFathr non -			
CUNNI1 14 b c 8 11 all NAmer 1988 1996 CS 9 AnyHh lifenotcurr NoHhMemb othr -			
GILLIL 1 m 1 7 19 all NAmer 1993 2001 CS 3 AnyHh in life NoHhMemb non -			
GILLIL 9 f 1 7 19 all NAmer 1993 2001 CS 3 AnyHh in life NoHhMemb non -			
NHANE3 31 b 1 4 6 w+b NAmer 1988 2001 CS 4 Biochem - Low - blood			
TARIQ 7 b c 4 4 all Eu:UK 1989 2000 Pr 0 Mother in life NotMothr non -			

Appendix Table E5 - 2

IESAST - Meta-analysis of In Life Only Exposure (vs No Exposure In Utero or In Life)
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		
AGABI1	72	b	11	78	-	383	-	1.18	(0.92- 1.52)
AGABI2	72	b	12	83	-	475	-	0.97	(0.76- 1.24)
CUNN11	14	b	9	-	-	-	-	0.99	(0.78- 1.25)
GILLIL	1	m	3	-	-	-	-	1.00	(0.80- 1.30)
GILLIL	9	f	3	-	-	-	-	1.10	(0.80- 1.40)
Subtotal GILLIL								1.04	(0.87- 1.25)
NHANE3	31	b	4	-	-	-	-	2.29	(0.91- 5.01)
TARIQ	7	b	0	16	99	121	732	0.98	(0.56- 1.72)
Partial Totals				177	99	979	732		

*prospective study

REF	NRR	SEX	ADJ	Ys	Ws	Qs	Ps
AGABI1	72	b	11	0.17	60.95	0.82	0.1963
AGABI2	72	b	12	-0.03	64.12	0.41	0.8073
CUNN11	14	b	9	-0.01	69.09	0.25	0.9334
GILLIL	1	m	3	0.00	65.19	0.16	1.0000
GILLIL	9	f	3	0.10	49.07	0.10	0.5044
Subtotal GILLIL				-0.00	114.25	0.26	
NHANE3	31	b	4	0.83	5.28	3.20	0.0569
TARIQ	7	b	0	-0.02	12.16	0.06	0.9373

RR data

N	7
NS	6

Wt	325.85
Het Chi	5.01
Het df	6
Het P	N.S.
Fixed RR	1.05
RR1	0.94
RRu	1.17
P	N.S.
Random RR	1.05
RR1	0.94
RRu	1.17
P	N.S.
Asymm P	N.S.

Appendix Table E5 - 3

IESAST - Meta-analysis of In Life Only Exposure (vs No Exposure In Utero or In Life)
Lifetime Asthma (or Current if Lifetime not available)
Adjusted

RR data

N	7			
NS	6			
Wt	325.85			
Het Chi	5.01			
Het df	6			
Het P	N.S.			
Fixed RR	1.05			
RRl	0.94			
RRu	1.17			
P	N.S.			
Random RR	1.05			
RRl	0.94			
RRu	1.17			
P	N.S.			
Asymm P	N.S.			
<u>Sex</u>				
both	male female Total			
N	5 1 1 7			
NS	5 1 1 6			
Wt	211.60	65.19	49.07	325.85
Het Chi	4.74	0.00	0.00	5.01
Het df	4	0	0	6
Het P	N.S.	N.S.	N.S.	N.S.
Fixed RR	1.06	1.00	1.10	1.05
RRl	0.92	0.78	0.83	0.94
RRu	1.21	1.27	1.46	1.17
P	N.S.	N.S.	N.S.	N.S.
Random RR	1.06	1.00	1.10	1.05
RRl	0.91	0.78	0.83	0.94
RRu	1.24	1.27	1.46	1.17
P	N.S.	N.S.	N.S.	N.S.
Between Chi			0.27	
Between df			2	
Between P			N.S.	

Appendix Table E5 - 7

IESAST - Meta-analysis of In Life Only Exposure (vs No Exposure In Utero or In Life)
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 ANNESI ARSHAD AZIZI BALL BARRET BECKET BENER BERGMA BRABIN BURCHF BURR BUTZ CALL CHEN1 CHEN2 CHHABR CHINN CLARK CSONKA CUNNI2 DAIGLE DEBENE DEKKER DEKOK DELL DIJKST DODGE DOLD DOTTER ECE EHRLII EHRLI2 FAGBUL FARBE1 FARBE2 FARBE3 FAROOQ FERGUS FIELDIE FLYNN1 FLYNN2 FORAST FORSB1 FORSB2 FORSB3 FUJI GOLD GOREN1 GOREN2 GOREN3 GOREN4 GOREN5 GOREN6 GORTM1 GORTM2 GUPTA GURKAN HABY HAJNAL HJERN1 HJERN2 HOST HU1 HU2 HUGHES INFANT JAAKKO JENKIN JONES KALYO1 KALYO2 KAPLAN KARUNA KAY KEARNE KELLY KENDIR KERSHA KIVITY KNIGHT KUEHR KUHR LAM1 LAM2 LAU LEE1 LEE2 LEEDER LEEN LEROUX LILLJE LINDFO LIS LISTER LOPEZC MAIER MARTIN MCCON1 MCCON2 MCKEEV MELIA MELSON MOHAME MONTEF MOUSSA MOYES1 MOYES2 MUMCUO MURRAY NILSSO NITTA NYSTAD OCONNE ODDY OHARA OLIVET PALMIE PETERS PIC POKHAR PONSON RASANE RATAGE RENNIE RIBEIR RONCH1 RONCH2 RONCH3 RONMAR ROSAV RUDNIK SANZOR SARRAZ SCHENK SCHMIT SELCUK SENNHA SHAMSS SHERMA SHOHAT SIGURS SOMERV SOTOQU SOYSET SPIKE SQUILL STANHO STAZI STERN1 STERN2 STODDA STRACH TAYLOR TIMONE TOMINA TSIMOV ULRIK VARELA VAVILI VENNER VERHOE VOLKME VONMAF WANG WEITZ1 WEITZ2 WILLE1 WILLE2 WITHER WOLFO1 WOLFO2 WOLFO3 XU YANG ZEIGER ZEJDA ZHENG															

Appendix Table E5 - 8

IESAST - Meta-analysis of In Life Only Exposure (vs No Exposure In Utero or In Life)
Lifetime Asthma (or Current if Lifetime not available)
Potentially overlapping studies

REF	REFGP	PRINC	OVERLAP											RR SIG
GILLIL GILLIL	1	MCCON1/GILLIL												*
				Adjusted - insufficient data for metaanalysis										n
REF NRR SEX AST AGEL AGEH RACE	LOC BEGYR PUBYR STTYP ADJ	EXPOS EXPOS-time UNEXsource UNEXTI BIOMEA	NHANE3 34 b 1 7 11 w+b NAmer 1988 2001 CS 4 Biochem	-	Low	-	blood							

Appendix Table E6 -

IESAST - Meta-analysis of Both In Utero and In Life Exposure (vs No Exposure In Utero or In Life)
Lifetime Asthma (or Current if Lifetime not available)

This analysis is restricted to results for:

- 1) Exposure both in utero and in life
- 2) Results not by amount of exposure
- 3) Results complete enough for use in metaanalysis

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

- 4) ASTHMA : lifetime, current
- 5) EXPOS : in life element of exposure/nonexposure refers to Biochemical, Household (overall), Parent (father), Parent (mother)
- 6) RACE : all in study or nearest available, otherwise by race
- 7) ONSET : yes, no (prevalence)
- 8) 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 those which actually differ from the adjusted results in Appendix Table E3 - 1 are marked 'x' in Section -1)
(Sections 4-6 not presented)

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 E6 - 1

IESAST - Meta-analysis of Both In Utero and In Life Exposure (vs No Exposure In Utero or In Life)
Lifetime Asthma (or Current if Lifetime not available)
Adjusted

REF NRR CompE3 SEX AST AGEL AGEH RACE	LOC BEGYR PUBYR STTYP ADJ	EXPOS	EXPOS-time UNEXsource UNEXTI BIOMEA
AGABI1 74 x b c 6 7 all Eu:Ita 1994 1999 CC 11 Father current NotFathr non -			
AGABI2 74 x b c 13 14 all Eu:Ita 1994 1999 CC 12 Father current NotFathr non -			
CUNNI1 16 b c 8 11 all NAmer 1988 1996 CS 9 AnyHh lifenotcurr NoHhMemb othr -			
GILLIL 3 m 1 7 19 all NAmer 1993 2001 CS 3 AnyHh in life NoHhMemb non -			
GILLIL 11 f 1 7 19 all NAmer 1993 2001 CS 3 AnyHh in life NoHhMemb non -			
HAJNAL 4 b 1 6 14 all Eu:wst 1992 1999 CS 13 Mother current NotMothr non -			
NHANE3 29 b 1 4 6 w+b NAmer 1988 2001 CS 4 Biochem - Low - blood			
STERN2 1 b 1 7 12 all NAmer * 1989 CS 0 Mother <2y NotMothr non -			
TARIQ 9 b c 4 4 all Eu:UK 1989 2000 Pr 0 Mother in life NotMothr non -			

Appendix Table E6 - 2

IESAST - Meta-analysis of Both In Utero and In Life Exposure (vs No Exposure In Utero or In Life)
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		
AGAB11	74	b	11	350	-	383	-	1.19	(1.02- 1.39)
AGAB12	74	b	12	444	-	475	-	1.10	(0.86- 1.40)
CUNN11	16	b	9	-	-	-	-	0.96	(0.63- 1.48)
GILLIL	3	m	3	-	-	-	-	1.10	(0.80- 1.40)
GILLIL	11	f	3	-	-	-	-	1.60	(1.20- 2.20)
Subtotal GILLIL								1.31	(1.06- 1.61)
HAJNAL	4	b	13	-	-	-	-	1.31	(0.92- 1.85)
NHANE3	29	b	4	-	-	-	-	3.16	(1.10- 9.12)
STERN2	1	b	0	-	-	-	-	1.43	(1.09- 1.88)
TARIQ	9	b	0	32	160	121	732	1.21	(0.79- 1.85)
Partial Totals				826	160	979	732		

*prospective study

REF	NRR	SEX	ADJ	Ys	Ws	Qs	Ps
AGAB11	74	b	11	0.17	160.41	0.19	0.0276
AGAB12	74	b	12	0.10	64.71	0.82	0.4433
CUNN11	16	b	9	-0.04	21.06	1.30	0.8514
GILLIL	3	m	3	0.10	49.07	0.62	0.5044
GILLIL	11	f	3	0.47	41.82	2.87	0.0024
Subtotal GILLIL				0.15	90.89	3.49	
HAJNAL	4	b	13	0.27	31.49	0.12	0.1297
NHANE3	29	b	4	1.15	3.43	3.05	0.0330
STERN2	1	b	0	0.36	51.71	1.16	0.0101
TARIQ	9	b	0	0.19	21.22	0.01	0.3801

RR data

N	9
NS	8

Wt	444.93
Het Chi	10.14
Het df	8
Het P	N.S.
Fixed RR	1.23
RR1	1.12
RRu	1.35
P	+++
Random RR	1.24
RR1	1.11
RRu	1.39
P	+++
Asymm P	N.S.

Appendix Table E6 - 3

IESAST - Meta-analysis of Both In Utero and In Life Exposure (vs No Exposure In Utero or In Life)
Lifetime Asthma (or Current if Lifetime not available)
Adjusted

RR data

N	9			
NS	8			
Wt	444.93			
Het Chi	10.14			
Het df	8			
Het P	N.S.			
Fixed RR	1.23			
RR1	1.12			
RRu	1.35			
P	+++			
Random RR	1.24			
RR1	1.11			
RRu	1.39			
P	+++			
Asymm P	N.S.			
 <u>Sex</u>				
both		male	female	Total
N	7	1	1	9
NS	7	1	1	8
Wt	354.04	49.07	41.82	444.93
Het Chi	6.57	0.00	0.00	10.14
Het df	6	0	0	8
Het P	N.S.	N.S.	N.S.	N.S.
Fixed RR	1.21	1.10	1.60	1.23
RR1	1.09	0.83	1.18	1.12
RRu	1.35	1.46	2.17	1.35
P	+++	N.S.	++	+++
Random RR	1.22	1.10	1.60	1.24
RR1	1.08	0.83	1.18	1.11
RRu	1.36	1.46	2.17	1.39
P	+++	N.S.	++	+++
Between Chi				3.58
Between df				2
Between P				N.S.

Appendix Table E6 - 7

IESAST - Meta-analysis of Both In Utero and In Life Exposure (vs No Exposure In Utero or In Life)
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 ANNESI ARSHAD AZIZI BALL BARRET BECKET BENER BERGMA BRABIN BURCHF BURR BUTZ CALL CHEN1 CHEN2 CHHABR CHINN CLARK CSONKA CUNNI2 DAIGLE DEBENE DEKKER DEKOK DELL DIJKST DODGE DOLD DOTTER ECE EHRLII EHRLI2 FAGBUL FARBE1 FARBE2 FARBE3 FAROOQ FERGUS FIELDIE FLYNN1 FLYNN2 FORAST FORSB1 FORSB2 FORSB3 FUJI GOLD GOREN1 GOREN2 GOREN3 GOREN4 GOREN5 GOREN6 GORTM1 GORTM2 GUPTA GURKAN HABY HJERN1 HJERN2 HOST HU1 HU2 HUGHES INFANT JAAKKO JENKIN JONES KALYO1 KALYO2 KAFLAN KARUNA KAY KEARNE KELLY KENDIR KERSHA KIVITY KNIGHT KUEHR KUHR LAM1 LAM2 LAU LEE1 LEE2 LEEDER LEEN LEROUX LILLJE LINDFO LIS LISTER LOPEZC MAIER MARTIN MCCON1 MCCON2 MCKEEV MELIA MELSON MOHAME MONTEF MOUSSA MOYES1 MOYES2 MUMCUO MURRAY NILSSO NITTA NYSTAD OCONNE ODDY OHARA OLIVET PALMIE PETERS PIC POKHAR PONSON RASANE RATAGE RENNIE RIBEIR RONCH1 RONCH2 RONCH3 RONMAR ROSAV RUDNIK SANZOR SARRAZ SCHENK SCHMIT SELCUK SENNAH SHAMSS SHERMA SHOHAT SIGURS SOMERV SOTOQU SOYSET SPIKE SQUILL STANHO STAZI STERN1 STODDA STRACH TAYLOR TIMONE TOMINA TSIMOV ULRIK VARELA VAVILI VENNER VERHOE VOLKME VONMAF WANG WEITZ1 WEITZ2 WILLE1 WILLE2 WITHER WOLFO1 WOLFO2 WOLFO3 XU YANG ZEIGER ZEJDA ZHENG															

Appendix Table E6 - 8

IESAST - Meta-analysis of Both In Utero and In Life Exposure (vs No Exposure In Utero or In Life)
Lifetime Asthma (or Current if Lifetime not available)
Potentially overlapping studies

REF	REFGP	PRINC	OVERLAP	Adjusted - insufficient data for metaanalysis												RR SIG	
GILLIL GILLIL	1	MCCON1/GILLIL														*	n
STERN2 STERN2	1	STERN1/STERN2														*	y
NHANE3	32	b	1	7	11	w+b	NAmer	1988	2001	CS	4	Biochem	-	Low	-	blood	
STERN2	3	b	1	7	12	all	NAmer	*	1989	CS	3	Mother	<2y	NotMothr	non	-	

Appendix Table E7 -

IESAST - Meta-analysis of In Utero Only Exposure (vs No Exposure In Utero or In Life)
Current Asthma (or Lifetime if Current not available)

This analysis is restricted to results for:

- 1) Exposure in utero only (i.e. no in life exposure)
- 2) Results not by amount of exposure
- 3) Results complete enough for use in metaanalysis

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

- 4) ASTHMA : current, lifetime
- 5) EXPOS : in life element of exposure/non-exposure refers to Biochemical, Household (overall), Parent (mother), Parent (father)
- 6) RACE : all in study or nearest available, otherwise by race
- 7) ONSET : yes, no (prevalence)
- 8) 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 those which actually differ from the adjusted results in Appendix Table E1 - 1 are marked 'x' in Section -1)
(Sections 4-6 not presented)

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 E7 - 1

IESAST - Meta-analysis of In Utero Only Exposure (vs No Exposure In Utero or In Life)
Current Asthma (or Lifetime if Current not available)
Adjusted

REF NRR CompE1 SEX AST AGEL AGEH RACE	LOC BEGYR PUBYR STTYP ADJ	EXPOS	EXPOS-time UNEXsource UNEXTI BIOMEA
AGABI1 59	b c 6 7 all Eu:Ita 1994 1999 CC 11 Mother current NotMothr non -		
AGABI2 59	b c 13 14 all Eu:Ita 1994 1999 CC 12 Mother current NotMothr non -		
CUNNI1 15	b c 8 11 all NAmer 1988 1996 CS 9 AnyHh lifenotcurr NoHhMemb othr -		
GILLIL 2	m 1 7 19 all NAmer 1993 2001 CS 3 AnyHh in life NoHhMemb non -		
GILLIL 10	f 1 7 19 all NAmer 1993 2001 CS 3 AnyHh in life NoHhMemb non -		
NHANE3 63	x b c 4 6 w+b NAmer 1988 2001 CS 4 Biochem - Low - blood		
TARIQ 8	b c 4 4 all Eu:UK 1989 2000 Pr 0 Mother in life NotMothr non -		

Appendix Table E7 - 2

IESAST - Meta-analysis of In Utero Only Exposure (vs No Exposure In Utero or In Life)
Current Asthma (or Lifetime if Current not available)
Adjusted

REF	NRR	SEX	ADJ	Numbers Exposed		Non-exposed		RR	95.00%CI
				Case	Cont	Case	Cont		
AGABI1	59	b	11	26	-	536	-	1.72	(1.13- 2.63)
AGABI2	59	b	12	24	-	780	-	0.69	(0.45- 1.05)
CUNNI1	15	b	9	-	-	-	-	2.70	(1.13- 6.45)
GILLIL 2	m	3		-	-	-	-	1.70	(1.10- 2.90)
GILLIL 10	f	3		-	-	-	-	1.90	(1.10- 3.50)
Subtotal GILLIL								1.78	(1.23- 2.58)
NHANE3	63	b	4	-	-	-	-	1.74	(0.30- 11.48)
TARIQ	8	b	0	12	46	121	732	1.58	(0.81- 3.07)
Partial Totals				62	46	1437	732		

*prospective study

REF	NRR	SEX	ADJ	Ys	Ws	Qs	Ps
AGABI1	59	b	11	0.54	21.53	0.85	0.0119
AGABI2	59	b	12	-0.37	21.40	10.92	0.0860
CUNNI1	15	b	9	0.99	5.06	2.14	0.0254
GILLIL 2	m	3		0.53	16.35	0.57	0.0319
GILLIL 10	f	3		0.64	11.47	1.02	0.0297
Subtotal GILLIL				0.49	27.82	1.60	
NHANE3	63	b	4	0.55	1.16	0.05	0.5514
TARIQ	8	b	0	0.46	8.72	0.11	0.1779

RR data

N	7
NS	6
Wt	85.70
Het Chi	15.67
Het df	6
Het P	*
Fixed RR	1.41
RRl	1.14
RRu	1.74
P	++
Random RR	1.52
RRl	1.05
RRu	2.20
P	+
Asymm P	N.S.

Appendix Table E7 - 3

IESAST - Meta-analysis of In Utero Only Exposure (vs No Exposure In Utero or In Life)
Current Asthma (or Lifetime if Current not available)
Adjusted

RR data

N	7			
NS	6			
Wt	85.70			
Het Chi	15.67			
Het df	6			
Het P	*			
Fixed RR	1.41			
RRl	1.14			
RRu	1.74			
P	++			
Random RR	1.52			
RRl	1.05			
RRu	2.20			
P	+			
Asymm P	N.S.			
<u>Sex</u>				
both	male female Total			
N	5 1 1 7			
NS	5 1 1 6			
Wt	57.87	16.35	11.47	85.70
Het Chi	13.35	0.00	0.00	15.67
Het df	4	0	0	6
Het P	**	N.S.	N.S.	*
Fixed RR	1.26	1.70	1.90	1.41
RRl	0.97	1.05	1.07	1.14
RRu	1.63	2.76	3.39	1.74
P	(+)	+	+	++
Random RR	1.43	1.70	1.90	1.52
RRl	0.83	1.05	1.07	1.05
RRu	2.45	2.76	3.39	2.20
P	N.S.	+	+	+
Between Chi				2.32
Between df				2
Between P				N.S.

Appendix Table E7 - 7

IESAST - Meta-analysis of In Utero Only Exposure (vs No Exposure In Utero or In Life)
Current Asthma (or Lifetime if Current 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 ANNESI ARSHAD AZIZI BALL BARRET BECKET BENER BERGMA BRABIN BURCHF BURR BUTZ CALL CHEN1 CHEN2 CHHABR CHINN CLARK CSONKA CUNNI2 DAIGLE DEBENE DEKKER DEKOK DELL DIJKST DODGE DOLD DOTTER ECE EHRLII EHRLI2 FAGBUL FARBE1 FARBE2 FARBE3 FAROOQ FERGUS FIELDIE FLYNN1 FLYNN2 FORAST FORSB1 FORSB2 FORSB3 FUJI GOLD GOREN1 GOREN2 GOREN3 GOREN4 GOREN5 GOREN6 GORTM1 GORTM2 GUPTA GURKAN HABY HAJNAL HJERN1 HJERN2 HOST HU1 HU2 HUGHES INFANT JAAKKO JENKIN JONES KALYO1 KALYO2 KAPLAN KARUNA KAY KEARNE KELLY KENDIR KERSHA KIVITY KNIGHT KUEHR KUHR LAM1 LAM2 LAU LEE1 LEE2 LEEDER LEEN LEROUX LILLJE LINDFO LIS LISTER LOPEZC MAIER MARTIN MCCON1 MCCON2 MCKEEV MELIA MELSON MOHAME MONTEF MOUSSA MOYES1 MOYES2 MUMCUO MURRAY NILSSO NITTA NYSTAD OCONNE ODDY OHARA OLIVET PALMIE PETERS PIC POKHAR PONSON RASANE RATAGE RENNIE RIBEIR RONCH1 RONCH2 RONCH3 RONMAR ROSAV RUDNIK SANZOR SARRAZ SCHENK SCHMIT SELCUK SENNHA SHAMSS SHERMA SHOHAT SIGURS SOMERV SOTOQU SOYSET SPIKE SQUILL STANHO STAIZI STERN1 STERN2 STODDA STRACH TAYLOR TIMONE TOMINA TSIMOV ULRIK VARELA VAVILI VENNER VERHOE VOLKME VONMAF WANG WEITZ1 WEITZ2 WILLE1 WILLE2 WITHER WOLFO1 WOLFO2 WOLFO3 XU YANG ZEIGER ZEJDA ZHENG															

Appendix Table E7 - 8

IESAST - Meta-analysis of In Utero Only Exposure (vs No Exposure In Utero or In Life)
Current Asthma (or Lifetime if Current not available)
Potentially overlapping studies

REF	REFGP	PRINC	OVERLAP											RR SIG	
GILLIL GILLIL	1	MCCON1/GILLIL												*	
NHANE3	66	b	c	7	11	w+b	NAmer	1988	2001	CS	4	Biochem	-	Low	- blood
														n	

Appendix Table E8 -

IESAST - Meta-analysis of In Utero Only Exposure (vs No Exposure In Utero or In Life)
Current Asthma (or Lifetime if Current not available)

This analysis is restricted to results for:

- 1) Exposure in life only (i.e. no in utero exposure)
- 2) Results not by amount of exposure
- 3) Results complete enough for use in metaanalysis

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

- 4) ASTHMA : current, lifetime
- 5) EXPOS : in life element of exposure/non-exposure refers to Biochemical, Household (overall), Parent (mother), Parent (father)
- 6) RACE : all in study or nearest available, otherwise by race
- 7) ONSET : yes, no (prevalence)
- 8) 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 those which actually differ from the adjusted results in Appendix Table E2 - 1 are marked 'x' in Section -1)
(Sections 4-6 not presented)

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 E8 - 1

IESAST - Meta-analysis of In Utero Only Exposure (vs No Exposure In Utero or In Life)
Current Asthma (or Lifetime if Current not available)
Adjusted

REF NRR CompE2 SEX AST AGEL AGEH RACE	LOC BEGYR PUBYR STTYP ADJ	EXPOS	EXPOS-time UNEXsource UNEXTI BIOMEA
AGABI1 58	b c 6 7 all Eu:Ita 1994 1999 CC 11 Mother current NotMothr non -		
AGABI2 58	b c 13 14 all Eu:Ita 1994 1999 CC 12 Mother current NotMothr non -		
CUNNI1 14	b c 8 11 all NAmer 1988 1996 CS 9 AnyHh lifenotcurr NoHhMemb othr -		
GILLIL 1	m 1 7 19 all NAmer 1993 2001 CS 3 AnyHh in life NoHhMemb non -		
GILLIL 9	f 1 7 19 all NAmer 1993 2001 CS 3 AnyHh in life NoHhMemb non -		
NHANE3 64	x b c 4 6 w+b NAmer 1988 2001 CS 4 Biochem - Low - blood		
TARIQ 7	b c 4 4 all Eu:UK 1989 2000 Pr 0 Mother in life NotMothr non -		

Appendix Table E8 - 2

IESAST - Meta-analysis of In Utero Only Exposure (vs No Exposure In Utero or In Life)
Current Asthma (or Lifetime if Current not available)
Adjusted

REF	NRR	SEX	ADJ	Numbers Exposed		Non-exposed		RR	95.00%CI
				Case	Cont	Case	Cont		
AGABI1	58	b	11	172	-	536	-	1.05	(0.88- 1.26)
AGABI2	58	b	12	282	-	780	-	1.14	(0.99- 1.33)
CUNN11	14	b	9	-	-	-	-	0.99	(0.78- 1.25)
GILLIL	1	m	3	-	-	-	-	1.00	(0.80- 1.30)
GILLIL	9	f	3	-	-	-	-	1.10	(0.80- 1.40)
Subtotal GILLIL								1.04	(0.87- 1.25)
NHANE3	64	b	4	-	-	-	-	4.57	(1.38- 13.80)
TARIQ	7	b	0	16	99	121	732	0.98	(0.56- 1.72)
Partial Totals				470	99	1437	732		

*prospective study

REF	NRR	SEX	ADJ	Ys	Ws	Qs	Ps
AGABI1	58	b	11	0.05	119.26	0.08	0.5942
AGABI2	58	b	12	0.13	176.29	0.55	0.0819
CUNN11	14	b	9	-0.01	69.09	0.50	0.9334
GILLIL	1	m	3	0.00	65.19	0.37	1.0000
GILLIL	9	f	3	0.10	49.07	0.02	0.5044
Subtotal GILLIL				-0.05	114.25	0.39	
NHANE3	64	b	4	1.52	2.90	6.05	0.0097
TARIQ	7	b	0	-0.02	12.16	0.12	0.9373

RR data

N	7
NS	6
Wt 493.95	
Het Chi 7.69	
Het df 6	
Het P N.S.	
Fixed RR 1.08	
RR1 0.99	
RRu 1.18	
P (+)	
Random RR 1.07	
RR1 0.97	
RRu 1.20	
P N.S.	
Asymm P N.S.	

Appendix Table E8 - 3

IESAST - Meta-analysis of In Utero Only Exposure (vs No Exposure In Utero or In Life)
Current Asthma (or Lifetime if Current not available)
Adjusted

RR data

N	7			
NS	6			
Wt	493.95			
Het Chi	7.69			
Het df	6			
Het P	N.S.			
Fixed RR	1.08			
RRl	0.99			
RRu	1.18			
P	(+)			
Random RR	1.07			
RRl	0.97			
RRu	1.20			
P	N.S.			
Asymm P	N.S.			
<u>Sex</u>				
both	male female Total			
N	5 1 1 7			
NS	5 1 1 6			
Wt	379.70	65.19	49.07	493.95
Het Chi	7.26	0.00	0.00	7.69
Het df	4	0	0	6
Het P	N.S.	N.S.	N.S.	N.S.
Fixed RR	1.09	1.00	1.10	1.08
RRl	0.98	0.78	0.83	0.99
RRu	1.20	1.27	1.46	1.18
P	(+)	N.S.	N.S.	(+)
Random RR	1.09	1.00	1.10	1.07
RRl	0.93	0.78	0.83	0.97
RRu	1.28	1.27	1.46	1.20
P	N.S.	N.S.	N.S.	N.S.
Between Chi				0.43
Between df				2
Between P				N.S.

Appendix Table E8 - 7

IESAST - Meta-analysis of In Utero Only Exposure (vs No Exposure In Utero or In Life)
Current Asthma (or Lifetime if Current 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 ANNESI ARSHAD AZIZI BALL BARRET BECKET BENER BERGMA BRABIN BURCHF BURR BUTZ CALL CHEN1 CHEN2 CHHABR CHINN CLARK CSONKA CUNNI2 DAIGLE DEBENE DEKKER DEKOK DELL DIJKST DODGE DOLD DOTTER ECE EHRLII EHRLI2 FAGBUL FARBE1 FARBE2 FARBE3 FAROOQ FERGUS FIELDIE FLYNN1 FLYNN2 FORAST FORSB1 FORSB2 FORSB3 FUJI GOLD GOREN1 GOREN2 GOREN3 GOREN4 GOREN5 GOREN6 GORTM1 GORTM2 GUPTA GURKAN HABY HAJNAL HJERN1 HJERN2 HOST HU1 HU2 HUGHES INFANT JAAKKO JENKIN JONES KALYO1 KALYO2 KAPLAN KARUNA KAY KEARNE KELLY KENDIR KERSHA KIVITY KNIGHT KUEHR KUHR LAM1 LAM2 LAU LEE1 LEE2 LEEDER LEEN LEROUX LILLJE LINDFO LIS LISTER LOPEZC MAIER MARTIN MCCON1 MCCON2 MCKEEV MELIA MELSON MOHAME MONTEF MOUSSA MOYES1 MOYES2 MUMCUO MURRAY NILSSO NITTA NYSTAD OCONNE ODDY OHARA OLIVET PALMIE PETERS PIC POKHAR PONSON RASANE RATAGE RENNIE RIBEIR RONCH1 RONCH2 RONCH3 RONMAR ROSAV RUDNIK SANZOR SARRAZ SCHENK SCHMIT SELCUK SENNHA SHAMSS SHERMA SHOHAT SIGURS SOMERV SOTOQU SOYSET SPIKE SQUILL STANHO STAZI STERN1 STERN2 STODDA STRACH TAYLOR TIMONE TOMINA TSIMOV ULRIK VARELA VAVILI VENNER VERHOE VOLKME VONMAF WANG WEITZ1 WEITZ2 WILLE1 WILLE2 WITHER WOLFO1 WOLFO2 WOLFO3 XU YANG ZEIGER ZEJDA ZHENG															

Appendix Table E8 - 8

IESAST - Meta-analysis of In Utero Only Exposure (vs No Exposure In Utero or In Life)
Current Asthma (or Lifetime if Current not available)
Potentially overlapping studies

REF	REFGP	PRINC	OVERLAP											RR SIG	
GILLIL GILLIL	1	MCCON1/GILLIL												*	
NHANE3	67	b	c	7	11	w+b	NAmer	1988	2001	CS	4	Biochem	-	Low	- blood
														n	

Appendix Table E9 -

IESAST - Meta-analysis of Both In Utero and In Life Exposure (vs No Exposure In Utero or In Life)
Current Asthma (or Lifetime if Current not available)

This analysis is restricted to results for:

- 1) Exposure both in utero and in life
- 2) Results not by amount of exposure
- 3) Results complete enough for use in metaanalysis

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

- 4) ASTHMA : current, lifetime
- 5) EXPOS : in life element of exposure/non-exposure refers to Biochemical, Household (overall), Parent (mother), Parent (father)
- 6) RACE : all in study or nearest available, otherwise by race
- 7) ONSET : yes, no (prevalence)
- 8) 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 those which actually differ from the adjusted results in Appendix Table E3 - 1 are marked 'x' in Section -1)
(Sections 4-6 not presented)

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 E9 - 1

IESAST - Meta-analysis of Both In Utero and In Life Exposure (vs No Exposure In Utero or In Life)
Current Asthma (or Lifetime if Current not available)
Adjusted

REF NRR CompE3 SEX AST AGEL AGEH RACE	LOC BEGYR PUBYR STTYP ADJ	EXPOS	EXPOS-time UNEXsource UNEXTI BIOMEA
AGABI1 60 b c 6 7 all Eu:Ita 1994 1999 CC 11 Mother current NotMothr non -			
AGABI2 60 b c 13 14 all Eu:Ita 1994 1999 CC 12 Mother current NotMothr non -			
CUNNI1 16 b c 8 11 all NAmer 1988 1996 CS 9 AnyHh lifenotcurr NoHhMemb othr -			
GILLIL 3 m 1 7 19 all NAmer 1993 2001 CS 3 AnyHh in life NoHhMemb non -			
GILLIL 11 f 1 7 19 all NAmer 1993 2001 CS 3 AnyHh in life NoHhMemb non -			
HAJNAL 4 b 1 6 14 all Eu:wst 1992 1999 CS 13 Mother current NotMothr non -			
NHANE3 62 x b c 4 6 w+b NAmer 1988 2001 CS 4 Biochem - Low - blood			
STERN2 2 x b c 7 12 all NAmer * 1989 CS 0 Mother <2y NotMothr non -			
TARIQ 9 b c 4 4 all Eu:UK 1989 2000 Pr 0 Mother in life NotMothr non -			

Appendix Table E9 - 2

IESAST - Meta-analysis of Both In Utero and In Life Exposure (vs No Exposure In Utero or In Life)
Current Asthma (or Lifetime if Current not available)
Adjusted

REF	NRR	SEX	ADJ	Numbers Exposed		Non-exposed		RR	95.00%CI
				Case	Cont	Case	Cont		
AGAB11	60	b	11	178	-	536	-	1.52	(1.27- 1.83)
AGAB12	60	b	12	172	-	780	-	1.21	(1.02- 1.45)
CUNN11	16	b	9	-	-	-	-	0.96	(0.63- 1.48)
GILLIL	3	m	3	-	-	-	-	1.10	(0.80- 1.40)
GILLIL	11	f	3	-	-	-	-	1.60	(1.20- 2.20)
Subtotal GILLIL								1.31	(1.06- 1.61)
HAJNAL	4	b	13	-	-	-	-	1.31	(0.92- 1.85)
NHANE3	62	b	4	-	-	-	-	7.24	(2.51- 20.89)
STERN2	2	b	0	-	-	-	-	0.98	(0.68- 1.41)
TARIQ	9	b	0	32	160	121	732	1.21	(0.79- 1.85)
Partial Totals				382	160	1437	732		

*prospective study

REF	NRR	SEX	ADJ	Ys	Ws	Qs	Ps
AGAB11	60	b	11	0.42	115.15	2.85	0.0000
AGAB12	60	b	12	0.19	124.18	0.62	0.0337
CUNN11	16	b	9	-0.04	21.06	1.93	0.8514
GILLIL	3	m	3	0.10	49.07	1.36	0.5044
GILLIL	11	f	3	0.47	41.82	1.82	0.0024
Subtotal GILLIL				0.04	90.89	3.17	
HAJNAL	4	b	13	0.27	31.49	0.00	0.1297
NHANE3	62	b	4	1.98	3.42	10.10	0.0003
STERN2	2	b	0	-0.02	28.89	2.29	0.9135
TARIQ	9	b	0	0.19	21.22	0.11	0.3801

RR data

N	9
NS	8

Wt	436.31
Het Chi	21.07
Het df	8
Het P	**
Fixed RR	1.30
RR1	1.18
RRu	1.43
P	+++
Random RR	1.29
RR1	1.09
RRu	1.53
P	++
Asymm P	N.S.

Appendix Table E9 - 3

IESAST - Meta-analysis of Both In Utero and In Life Exposure (vs No Exposure In Utero or In Life)
Current Asthma (or Lifetime if Current not available)
Adjusted

RR data

N	9			
NS	8			
Wt	436.31			
Het Chi	21.07			
Het df	8			
Het P	**			
Fixed RR	1.30			
RRl	1.18			
RRu	1.43			
P	+++			
Random RR	1.29			
RRl	1.09			
RRu	1.53			
P	++			
Asymm P	N.S.			
<u>Sex</u>				
both		male	female	Total
N	7	1	1	9
NS	7	1	1	8
Wt	345.42	49.07	41.82	436.31
Het Chi	17.90	0.00	0.00	21.07
Het df	6	0	0	8
Het P	**	N.S.	N.S.	**
Fixed RR	1.30	1.10	1.60	1.30
RRl	1.17	0.83	1.18	1.18
RRu	1.44	1.46	2.17	1.43
P	+++	N.S.	++	+++
Random RR	1.29	1.10	1.60	1.29
RRl	1.04	0.83	1.18	1.09
RRu	1.59	1.46	2.17	1.53
P	+	N.S.	++	++
Between Chi				3.17
Between df				2
Between P				N.S.

Appendix Table E9 - 7

IESAST - Meta-analysis of Both In Utero and In Life Exposure (vs No Exposure In Utero or In Life)
Current Asthma (or Lifetime if Current 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 ANNESI ARSHAD AZIZI BALL BARRET BECKET BENER BERGMA BRABIN BURCHF BURR BUTZ CALL CHEN1 CHEN2 CHHABR CHINN CLARK CSONKA CUNNI2 DAIGLE DEBENE DEKKER DEKOK DELL DIJKST DODGE DOLD DOTTER ECE EHRLII EHRLI2 FAGBUL FARBE1 FARBE2 FARBE3 FAROOQ FERGUS FIELDIE FLYNN1 FLYNN2 FORAST FORSB1 FORSB2 FORSB3 FUJI GOLD GOREN1 GOREN2 GOREN3 GOREN4 GOREN5 GOREN6 GORTM1 GORTM2 GUPTA GURKAN HABY HJERN1 HJERN2 HOST HU1 HU2 HUGHES INFANT JAAKKO JENKIN JONES KALYO1 KALYO2 KAFLAN KARUNA KAY KEARNE KELLY KENDIR KERSHA KIVITY KNIGHT KUEHR KUHR LAM1 LAM2 LAU LEE1 LEE2 LEEDER LEEN LEROUX LILLJE LINDFO LIS LISTER LOPEZC MAIER MARTIN MCCON1 MCCON2 MCKEEV MELIA MELSON MOHAME MONTEF MOUSSA MOYES1 MOYES2 MUMCUO MURRAY NILSSO NITTA NYSTAD OCONNE ODDY OHARA OLIVET PALMIE PETERS PIC POKHAR PONSON RASANE RATAGE RENNIE RIBEIR RONCH1 RONCH2 RONCH3 RONMAR ROSAV RUDNIK SANZOR SARRAZ SCHENK SCHMIT SELCUK SENNAH SHAMSS SHERMA SHOHAT SIGURS SOMERV SOTOQU SOYSET SPIKE SQUILL STANHO STAZI STERN1 STODDA STRACH TAYLOR TIMONE TOMINA TSIMOV ULRIK VARELA VAVILI VENNER VERHOE VOLKME VONMAF WANG WEITZ1 WEITZ2 WILLE1 WILLE2 WITHER WOLFO1 WOLFO2 WOLFO3 XU YANG ZEIGER ZEJDA ZHENG															

Appendix Table E9 - 8

IESAST - Meta-analysis of Both In Utero and In Life Exposure (vs No Exposure In Utero or In Life)
Current Asthma (or Lifetime if Current not available)
Potentially overlapping studies

REF	REFGP	PRINC	OVERLAP	Adjusted - insufficient data for metaanalysis												RR SIG		
GILLIL GILLIL	1	MCCON1/GILLIL														*	n	
STERN2 STERN2	1	STERN1/STERN2														*	n	
NHANE3	65	b	c	7	11	w+b	NAmer	1988	2001	CS	4	Biochem	-	Low	-	blood	*	n
STERN2	4	b	c	7	12	all	NAmer	*	1989	CS	3	Mother	<2y	NotMothr	non	-	*	n