

**Quality Assessment
SELECTION**

Study	Ascertainment of cohort	Method of recruitment	Proportion of children participating	Diagnosis of epilepsy	Ascertainment of non-exposed cohort	Ascertainment of exposure	Prospective determination of exposure
BERLIN-Rating 1982	Maternity Hospital	No description	No information	Clinical, EEG + CT	Not clear	Hospital record, serum samples	prospective
BERLIN-Hattig 1987	Maternity Hospitals	No description	No information	No description	unclear	No description	unclear
BERLIN-Steinhausen 1994	population	No information	No information	Clinical, EEG+CT	Same source	Self report	prospective
BERLIN-Losche 1994	population	No description	No information	Clinical, EEG+CT	Same source	Self report	prospective
BERLIN-Koch 1999	population	No information	41% of original cohort	Clinical, EEG+CT	Same source	Self-report	prospective
D'Souza 1990	Population based	No information	No information	Self report	Same source	Hospital record	prospective
FINLAND-Granstrom 1982	population	No information	No information	unclear	Same source	unclear	unclear
FINLAND-Gaily 1988a	population	consecutive	72.5% of children born to mothers in one area	Clinical history, EEG + CT	Different source	Hospital record	prospective
FINLAND-Gaily 1988b	population	consecutive	72.5% of children born to mothers in one area	Clinical history, EEG + CT	Different source	Hospital record	prospective
FINLAND-Gaily 1989*	population	consecutive	95% of children born to mothers in one hospital	Clinical history, EEG + CT	Same source	Hospital record	prospective

* The studies by Gaily all relate to the same cohort, with a control group of children recruited from the same obstetric hospital. However, in the other reported studies recruited a quarter of the control group from two welfare centres.

Study	Ascertainment of cohort	Method of recruitment	Proportion of eligible participants	Diagnosis of epilepsy	Ascertainment of non-exposed cohort	Ascertainment of exposure	Prospective determination of exposure
FINLAND-Gaily 1990a	population	consecutive	72.5% of children born to mothers in one area	Clinical history, EEG + CT	Different source	Hospital record	prospective
FINLAND-Gaily 1990b	population	consecutive	72.5% of children born to mothers in one area	Clinical history, EEG + CT	Different source	Hospital record	prospective
FINLAND-Gaily 1991	population	No description	72.5% of children born to epileptic mothers	Clinical history, EEG + CT	Different source	Hospital record	prospective
Fujioka 1984	unclear	No description	No information	No description	No description	No description	unclear
HOUSTON-Hill 1974	clinic	No description	No information	No description	Same Source	Hospital record	retrospective
HOUSTON-Hill 1982	clinic	census	unclear	No description	same source	Hospital record	retrospective
Jones 1989	Clinic	census	Unclear	Self report	Different source	Structured interview	Prospective
Latis 1982	unclear	No information	No information	No description	unclear	No description	unclear
Mawer 2002	Clinic	consecutive	100%	Clinical EEG+CT	Same source	No description	prospective with small number retrospective
NCPP USA-Shapiro 1976	population	No description	No information	Hospital records	Same source	Hospital record	prospective
NCPP USA-Hanson 1976	unclear	No description	No information	Hospital records	unclear	Hospital records	prospective

Study	Ascertainment of cohort	Method of recruitment	Proportion of eligible participants	Diagnosis of epilepsy	Ascertainment of non-exposed cohort	Ascertainment of exposure	Prospective determination of exposure
Nomura 1984	clinic	No description	No information	No description	Same source	No description	unclear
Ornoy 1996	Teratogen clinic	census	93% of live births to mothers taking CBZ	Self report	No description	Structured interview	unclear
Perniola 1992	clinic	No description	No information	No description	Same source	No description	retrospective
SWEDEN-Wide 2002	clinic	Consecutive births	50-60% of pregnant women with epilepsy in region	No description	Same source	Hospital record	Prospective
SWEDEN-Wide 2000	clinic	consecutive	No information	No description	Same source	Hospital record	prospective
TORONTO-Rovet 1996	Teratogen clinic	census	90% of eligible mother child pairs	Self report	same	Structured interview	prospective
Van der Pol 1991	clinic	No description	No information	Hospital records	no description	No description	unclear
Vanoverloop 1992	clinic	consecutive	unclear	Self report	same	Hospital record	retrospective
Vert 1982	unclear	No description	No information	No description	No description	No description	Retrospective
WASHINGTON-Leavitt 1992	Clinic	No description	No information	Self report	Different source	Structured interview	prospective

COMPARABILITY

Study	Matched cohort and control groups	Factors matched	Post hoc comparisons of cohort and control group	Factors compared in post hoc comparisons	Exploration of confounding factors in analysis	Factors explored
BERLIN Rating 1982	yes	Socio-economic status, Maternal age, parity, institution of birth, smoking habit	no		no	
BERLIN- Hattig 1987	yes	Socio-economic status, age of both parents, number of abortions, number of children, smoking and ethnic group	no		yes	Seizures during pregnancy, socio-economic status
BERLIN- Steinhausen 1994	yes	Socio-economic status, maternal age, parity, smoking, number of abortions	no		no	
BERLIN- Losche 1994	yes	Socio-economic status, mat age, smoking, number of abortions, sex of child	no		yes	sex; socio-economic status; sibling rank; obstetric score, nicotine use, mothers age; seizure frequency

Study	Matched cohort and control groups	Factors matched	Post hoc comparisons of cohort and control group	Factors compared in post hoc comparisons	Exploration of confounding factors in analysis	Factors explored
BERLIN-Koch 1999	No ^φ		no		no	
D'Souza 1990	Yes	Maternal age, parity, socio-economic status	Yes "Reports that groups were comparable"	Maternal age, mode of delivery, gestational age, birth weight, head circumference, mothers smoking habit, folic acid, neonatal complications	no	
FINLAND-Granstrom 1982	no		yes	socio-economic status	no	
FINLAND-Gaily 1988a	No		no		no	
FINLAND-Gaily 1988b	no		no		yes	Socio-economic status, seizures, AED levels, number of minor anomalies in children
FINLAND-Gaily 1989	Yes	Maternal age, parity, social class, fetal sex	yes	Socio-economic status	no	

^φ original matching not maintained in this follow up study

Study	Matched cohort and control groups	Factors matched	Post hoc comparisons of cohort and control group	Factors compared in post hoc comparisons	Exploration of confounding factors in analysis	Factors explored
FINLAND-Gaily 1990a	no		no		yes	Maternal educational level, child's gender, paternal education, seizure frequency in pregnancy, type of seizures, drug levels
FINLAND-Gaily 1990b	no		no		no	
FINLAND-Gaily 1991	no		no		no	
Fujioka 1984	no		no		yes	Compared mean results for outcomes in maternal seizure type; seizure frequency; maternal educational level. Correlation of duration of AED exposure with outcome
HOUSTON-Hill 1974	no		no		no	
HOUSTON-Hill 1982	no		No		yes	Frequency of predicted confounding factors in those with low IQ or learning disability; IUGR, failure to thrive, major malformation; >9 minor malformations, combined AEDs
Jones 1989	no		yes	Maternal age and socio-economic status	no	

Study	Matched cohort and control groups	Factors matched	Post hoc comparisons of cohort and control group	Factors compared in post hoc comparisons	Exploration of confounding factors in analysis	Factors explored
Latis 1982	No		No		No	
Mawer 2002	No		No		No	
NCPP USA-Shapiro 1976	no		no		yes	Socio-economic status, ethnic group, institution
NCPP USA Hanson 1976	yes	Socio-economic status, maternal age, institution of birth, race	no		no	
Nomura 1984	no		no		yes	Correlation of development and maternal doses of AEDs,
Ornoy 1996	Yes	Socio-economic status, birth weight, gestational age	no		Yes	Correlation between outcome and dose, seizure frequency. decriptive analysis socio-economic status for a particular subgroup
Perniola 1992	No		no		no	
SWEDEN-Wide 2000	yes	Gestational age, mode of delivery, sex of child	No		yes	Results age corrected

Study	Matched cohort and control groups	Factors matched	Post hoc comparisons of cohort and control group	Factors compared in post hoc comparisons	Exploration of confounding factors in analysis	Factors explored
SWEDEN-Wide 2002	yes	Gestational age, mode of delivery, sex of child	yes	Child gender, sibling rank, maternal education level, paternal educational level	no	
TORONTO-Rovet 1996	yes	Socio-economic status, maternal age, gravidity, parity	No		yes	type of epilepsy, Maternal IQ; socio-economic status; seizure frequency; drug type; dose level
Van der Pol 1991	yes	Parity, birth weight, gestational age, age at FU, sex, socio-economic status	No		yes	Maternal epilepsy
Vanoverloop 1992	yes	Socio-economic status, parity, age of child, sex of child	No		No	
Vert 1982	no		no		no	
WASHINGTON-Leavitt 1992	No		Yes	Groups were well matched for age, parity and race	no	

OUTCOME

Study	Assessment of outcome	Same method of assessment in cohort and control group	Prospective determination of outcome	Follow up period	Withdrawals
BERLIN-Rating 1982	no description	unclear	prospective	Not clear	No description
BERLIN-Hattig 1987	Independent assessment with no info re blinding	yes	prospective	2yrs 4-6 yrs	No description
BERLIN-Steinhausen 1994	Independent blind assessment	yes	prospective	4-6yrs	No description
BERLIN-Losche 1994	Independent blind assessment	yes	prospective	4-6yrs	No description
BERLIN-Koch 1999	Independent blind assessment	Yes	prospective	10-19 yrs	<60% with description of some reasons
D'Souza 1990	Independent blind assessment	yes	prospective	2.5 to 3.5yrs	No statement
FINLAND-Granstrom	Independent assessment	yes	prospective	18-19mths	No statement Preliminary report
FINLAND-Gaily 1988a	Independent blind assessment	yes	prospective	5.5yrs	No description

Study	Assessment of outcome	Same method of assessment in cohort and control group	Prospective determination of outcome	Follow up period	Withdrawals
FINLAND-Gaily 1988b	Independent blind assessment	yes	prospective	5.5yrs	60-80% and description of those lost
FINLAND-Gaily 1989	Independent blind assessment	yes	prospective	5.5yrs	No description
FINLAND-Gaily 1990a	Independent blind assessment	yes	prospective	5.5yrs	60-80% and description of those lost
FINLAND-Gaily 1990b	Independent blind assessment	yes	prospective	5.5yrs	No description
FINLAND-Gaily 1991	Independent blind assessment	yes	prospective	5.5yrs	No description
Fujioka 1984	No description	yes	unclear	24 months	No statement
HOUSTON-Hill 1974	Independent blind assessment	Yes	Prospective	Up to 36 months	<60% with no description (preliminary data)
HOUSTON-Hill 1982	Independent blind assessment	Yes	Prospective	Up to 9 years	<60% no description-

Study	Assessment of outcome	Same method of assessment in cohort and control group	Prospective determination of outcome	Follow up period	Withdrawals
Jones 1989	Independent assessment with no description of whether observer was blinded	Unclear	prospective	6-30 mths	60-80% and no description
Latis 1982	Independent assessment with no info re blinding	Yes	unclear	Birth-1yr	<60% no description (preliminary data)
Mawer 2002	Independent assessment with no info regarding blinding	yes	prospective	4mths – 10yrs	>80% FU without description of those lost
NCPP USA-Shapiro 1976	No description	yes	prospective	4 yrs	60-80% and no description of those lost
NCPP USA-Hanson 1976	No description	yes	prospective	7 yrs	>80% FU without description of those lost
Nomura 1984	No description	yes	unclear	Up to 30 months	No statement
Ornoy 1996	Independent blind assessment	yes	No description	6mths- 6yrs	>80% FU with description

Study	Assessment of outcome	Same method of assessment in cohort and control group	Prospective determination of outcome	Follow up period	Withdrawals
Perniola 1992	No description	no	retrospective	18mths – 5.6yrs	No description
SWEDEN-Wide 2000	Independent blind assessment	yes	prospective	9 months	60-80% FU with description
SWEDEN-Wide 2002	Independent blind assessment	yes	prospective	4.5yrs	60 -80% with description
TORONTO-Rovet 1996	Independent blind assessment	yes	prospective	7 – 85 mths	>80% no description
Van der Pol 1991	independent assessment with no description of whether observer was blinded	yes	No descriptions	6yrs	>80% FU with description of those lost
Vanoverloop 1992	Independent blind assessment	yes	prospective	4-7yrs	<60% FU with description of those lost
Vert 1982	No description	unclear	unclear	Up to 6 years	60-80% no description
WASHINGTON-Leavitt 1992	Independent blind assessment	Yes	prospective	1 yr	60-80% and no description