

Data supplement

| Table DS1 Meta-analysis of prenatal risk factors for autism | | | |
|--|---|---|------------------------|
| Prenatal factors (study <i>n</i>) | Results across studies ^a | Summary effect estimate (95% CI) ^b | Heterogeneity <i>P</i> |
| <i>Parental demographics</i> | | | |
| Maternal age (30) | 20 null 8 significant positive* 2 significant negative* | Trend <i>P</i> = 0.02 | |
| 5-year increase (9) | | 1.07 (1.01–1.13) | <0.001 |
| <20 v. 25–29 (6) | | 0.86 (0.51–1.43) | <0.001 |
| 20–24 v. 25–29 (7) | | 0.94 (0.71–1.23) | <0.001 |
| 30–34 v. 25–29 (7) | | 1.27 (1.11–1.44) | 0.03 |
| 35+ v. 25–29 (7) | | 1.42 (1.17–1.72) | 0.002 |
| 40+ v. 25–29 (3) | | 1.43 (1.05–1.96) | 0.63 |
| <20 v. 20–34 (6) | | 0.68 (0.39–1.20) | <0.001 |
| 35+ v. 20–34 (5) | | 1.53 (1.32–1.77) | 0.11 |
| <20 or >30 (6) | | 1.43 (1.30–1.57) | 0.27 |
| 30+ v. <30 (7) | | 1.73 (1.36–2.19) | <0.001 |
| 35+ v. <35 (7) | | 1.60 (1.32–1.95) | <0.001 |
| 40+ v. <30 (4) | | 2.06 (1.48–2.86) | 0.92 |
| Paternal age (9) | 4 null 4 significant positive* 1 significant negative* | Trend <i>P</i> = 0.004 | |
| 5-year increase (4) | | 1.04 (1.01–1.06) | 0.12 |
| <25 v. 25–29 (3) | | 0.74 (0.59–0.92) | 0.49 |
| 30–34 v. 25–29 (3) | | 1.07 (0.94–1.21) | 0.85 |
| 35+ v. 25–29 (3) | | 1.34 (1.16–1.54) | 0.74 |
| 40+ v. 25–29 (2) | | 1.44 (1.17–1.77) | 0.70 |
| 30–39 v. <30 (3) | | 1.24 (1.09–1.41) | 0.55 |
| 40+ v. <30 (2) | | 3.10 (0.95–9.49) | 0.01 |
| Mother born in another country (5) | 1 null 3 significant positive* 1 significant negative* | 1.28 (0.99–1.65) | <0.001 |
| Nordic studies (3) | | 1.58 (1.14–2.19) | 0.05 |
| <i>Maternal obstetrical history</i> | | | |
| Previous fetal loss (abortion, miscarriage, stillbirth) (13) | 8 null 5 significant positive* | 1.11 (0.75–1.64) | 0.26 |
| Birth order/parity/gravidity (20) | 11 null 6 mixed ^c 1 significant positive* 2 significant negative* | Trend <i>P</i> = 0.18 | |
| 1 pregnancy increase (8) | | 0.95 (0.89–1.02) | <0.001 |
| 1st v. not 1st (11) | | 1.14 (0.97–1.35) | <0.001 |
| 1st v. 2nd (4) | | 1.20 (0.85–1.71) | <0.001 |
| 1st v. 2nd or 3rd (6) | | 1.20 (0.90–1.59) | <0.001 |
| 1st v. 3rd+ (4) | | 1.61 (1.42–1.82) | 0.27 |
| 1st v. 4th+ (6) | | 0.95 (0.63–1.42) | <0.001 |
| 1st or 4th v. 2nd or 3rd (5) | | 1.20 (0.95–1.52) | <0.01 |
| 4th v. 2nd or 3rd (5) | | 1.02 (0.79–1.32) | 0.19 |
| <i>Maternal illness during pregnancy</i> | | | |
| Proteinuria/albuminuria (3) | 3 null | 0.77 (0.34–1.73) | 0.85 |
| Anaemia (4) | 4 null | 0.54 (0.14–2.15) | 0.26 |
| Diabetes (6) | 5 null 1 significant positive* | 2.07 (1.24–3.47) | 0.96 |
| Infections (15) | 10 null 4 significant positive* 1 significant negative* | 1.18 (0.76–1.83) | 0.09 |
| Rubella (3) | | 1.66 (0.84–3.29) | 0.92 |
| Vaginal infections (2) | | 0.49 (0.22–1.09) | 0.36 |
| Fever (4) | 3 null 1 significant positive* | 1.24 (0.76–2.04) | 0.27 |
| Nausea/vomiting (6) | 5 null 1 significant negative* | 1.16 (0.65–2.09) | 0.05 |
| Any illness during pregnancy (5) | 4 null 1 significant positive* | 1.23 (0.93–1.62) | 0.67 |
| Physical injury/accident (4) | 3 null 1 significant positive* | 3.24 (0.70–15.03) | 0.99 |

(continued)

| Table DS1 (continued) | | | |
|---|---|---|-----------------|
| Prenatal factors (study n) | Results across studies ^a | Summary effect estimate (95% CI) ^b | Heterogeneity P |
| <i>Medical treatment during pregnancy</i> | | | |
| Medication use (15) | 10 null 5 significant positive* | 1.46 (1.08–1.96) | 0.15 |
| Anti-epileptic/anticonvulsant drug use (2) | 2 null | 1.87 (0.65–5.37) | 0.28 |
| Psychoactive or antidepressant drug use (2) | 1 marginally significant positive** 1 null | 1.68 (1.09–2.60) | 0.34 |
| Prenatal visits (2) | 2 null | 0.60 (0.17–2.14) | 0.18 |
| <i>Bleeding and toxemia</i> | | | |
| Bleeding (19) | 12 null 6 significant positive* 1 marginally significant positive** | 1.81 (1.14–2.86) | <0.001 |
| First trimester (2) | | 1.16 (0.45–3.01) | 0.38 |
| Second trimester (2) | | 0.91 (0.25–3.34) | 0.36 |
| Third trimester (2) | | 0.48 (0.10–2.18) | 0.78 |
| Toxaemia/pre-eclampsia, hypertension, swelling (25) | 21 null 2 significant positive* 2 significant negative* | 1.01 (0.80–1.27) | 0.07 |
| Placental abnormalities (8) | 7 null 1 significant positive* | 1.40 (0.93–2.12) | 0.40 |
| Placenta praevia (2) | | 1.04 (0.21–5.22) | 0.29 |
| Placenta abruptio (2) | | 0.90 (0.39–2.08) | 0.81 |
| Placental infarcts (2) | | 1.49 (0.78–2.83) | 0.59 |
| <i>Other</i> | | | |
| High maternal weight gain during pregnancy (5) | 3 null 1 significant positive* 1 marginally significant negative** | 0.90 (0.49–1.63) | 0.03 |
| Smoking during pregnancy (6) | 4 null 1 significant positive* 1 significant negative* | 1.00 (0.75–1.36) | 0.05 |
| Threatened abortion (3) | 1 null 2 significant positive* | 1.13 (0.12–10.95) | 0.12 |
| 1+ prenatal complications (2) | 1 null 1 significant positive* | 1.17 (0.71–1.92) | 0.02 |
| <p>a. Total number of studies included in the review: 64. b. Total number of studies included in the meta-analysis: 40. c. 'Mixed' indicates significant findings with a mixed trend (e.g. elevated risk among those born first or third or later). *$P < 0.05$, **$0.10 < P < 0.05$.</p> | | | |