

Table 1 – Papers on binge drinking during pregnancy. Listed alphabetically by name of 1st author. Details extracted and assessed quality using Newcastle-Ottawa Scale (maximum possible scores Selection=4, Comparability=2, Outcome =3).

1 st author, year of publication, country, study type, quality assessment	Period & numbers recruited	Measures of alcohol exposure and outcome	Results	Comments
Bailey, 2004; USA: Cohort study Selection=3 Comparability=2 Outcome=2	1989-91 499 children at age 6-7 yrs	Alcohol exposure by detailed interview at each antenatal visit regarding previous 2 wks intake; outcomes assessed at research facility by researchers blind to alcohol exposure, teacher data by questionnaire	<p style="text-align: center;">Pearson correlation p-value</p> Verbal IQ -.12 .00 Performance IQ -.02 .61 Aggressive behaviour .07 .13 Delinquent behaviour .12 .01 <p style="text-align: center;">Regression for t p-value</p> Verbal IQ -2.47 .014 Delinquent behaviour 2.26 .024	Study included black mothers only, over-sampled alcohol exposed pregnancies. Excluded multiples, malformations, HIV-positive. Bingeing defined as 5+ drinks on a single occasion at least once in every 2 wks during pregnancy. Follow-up 75%, no data on those lost to follow-up. Regression included quality of home environment, SES, child violence exposure, AN exposures, cigarettes and cocaine. Numerous covariates also examined. Babies of bingers had lower birthweight but birthweight was not included in the regression analysis.
Bell, 1989; Australia; Cohort study Selection=3 Comparability=1 Outcome=3	1985 8884 women	Data from the Victorian Perinatal Morbidity Statistics (not clear whether alcohol data collected AN or PN)	<p style="text-align: center;"><i>Mean birthweight (sd)</i></p> Binge drinkers 3352 (518) Non-bingers (also non- smokers) 3420 (556) Smoking abstainers 3256 (576) <i>All differences significant at p<0.05</i> <p style="text-align: center;"><i>% Congenital malformations</i></p> Binge drinkers 1.9 Non-bingers 1.2 Abstainers 1.3	45% of hospitals took part of which 65% recorded smoking and alcohol details. Only adjusted for smoking (some of the time). Bingeing defined as any episode of 5+ drinks. Possible selection bias due to smoking and drinking details being less well recorded in cases of poor outcome.

		<i>No differences statistically significant</i>	
--	--	---	--

Nulman, 2004; Canada, Cohort study Selection=3 Comparability=2 Outcome=2	1987-97 50 women, 51 babies assessed at various ages 0-9 yrs	Alcohol exposure by interview antenatally; outcomes assessed at research facility by psychometrist blind to alcohol exposure Bayley - up to 36 mths (n=26) McCarthy – up to 7 yrs (n=22) Weschler - > 7 yrs (n=3)		Bingers	Non-bingers	p	Participants were women who contacted the Motherisk program out of concern at exposure to alcohol or other substance. In 10 yrs only 92 'eligible' women identified but eligibility undefined. Controls were women consulting about an exposure other than alcohol (teratogens excluded) matched on age, SES, smoking, time of conception and child's age. No data about alcohol consumption in controls. Bingers (defined as any episode of 5+ drinks) were not alcoholics. Numerous neuropsychological tests performed and reported. Significant differences appeared for 3/9 subscales on a temperament/behaviour score only. Multiple regression included maternal IQ, SES, Parenting stress index and GA. Frequent bingers (n=12, defined as >6 binges) numbers were too small to be useful. Similarly there were only 3 children over 7 yrs who were given the Weschler. Study did not collect measures of maternal behaviour.
				<i>mean ± sd</i>	<i>mean ± sd</i>		
			Gestational age	39.9 ± 1.8	39.5 ± 1.7	.2	
			Birthweight	3390 ± 609	3376 ± 565	.9	
			Weight (%ile)	60.6 ± 25	57.9 ± 31	.6	
			Height (%ile)	55.2 ± 25	64.0 ± 25	.08	
			Head circum- ference (%ile)	51.8 ± 20	56.6 ± 23	.3	
				Difference (95% CI)			
			Bayley MDI	-2.83 (-13.1, 7.5)			
			Bayley PDI	-4.31 (-10.5, 1.8)			
			McCarthy				
			GCI	-5.92 (-18.9, 7.0)			
			verbal	1.93 (-4.8, 8.7)			
			perceptual	-1.45 (-6.5, 3.6)			
			quantitative	-0.19 (-6.5, 6.2)			
memory	-0.05 (-5.9, 5.6)						
motor	0.59 (-5.5, 6.6)						
	<i>Multiple regression of no. binges on outcomes</i>						
	B (95% CI)						
Adaptability	1.50 (0.52, 2.49)						
Approach	1.69 (0.74, 2.66)						
Distractability	0.54 (-0.41, 1.48)						

<p>O'Callaghan, 2003; Australia, Cohort study</p> <p>Selection=4 Comparability=2 Outcome=3</p>	<p>1981-84 6320 at birth, 4038 at 5 yrs</p>	<p>Alcohol exposure by interview at first AN visit and postpartum; head circumference measured by paper tape at birth and 5 yrs</p>	<p><i>Head circumference at birth and at 5 yrs</i></p> <table border="0"> <tr> <td></td> <td colspan="2">% <3rd</td> <td colspan="2">3-10th percentile</td> </tr> <tr> <td></td> <td>birth</td> <td>5yrs</td> <td>birth</td> <td>5yrs</td> </tr> <tr> <td>Binge drinking</td> <td></td> <td></td> <td></td> <td></td> </tr> <tr> <td>Nil</td> <td>3.3</td> <td>2.9</td> <td>5.4</td> <td>6.9</td> </tr> <tr> <td>< half time</td> <td>3.9</td> <td>2.9</td> <td>7.2</td> <td>7.8</td> </tr> <tr> <td>≥ half time</td> <td>2.3</td> <td>3.4</td> <td>6.4</td> <td>5.9</td> </tr> <tr> <td><i>p</i> =</td> <td colspan="2">0.11</td> <td colspan="2">0.9</td> </tr> </table> <p><i>Weight at birth and at 5 yrs</i></p> <table border="0"> <tr> <td></td> <td colspan="2">% <3rd</td> <td colspan="2">3-10th percentile</td> </tr> <tr> <td></td> <td>birth</td> <td>5yrs</td> <td>birth</td> <td>5yrs</td> </tr> <tr> <td>Binge drinking</td> <td></td> <td></td> <td></td> <td></td> </tr> <tr> <td>Nil</td> <td>2.8</td> <td>2.8</td> <td>6.6</td> <td>7.1</td> </tr> <tr> <td>< half time</td> <td>3.6</td> <td>3.5</td> <td>8.8</td> <td>5.8</td> </tr> <tr> <td>≥ half time</td> <td>3.1</td> <td>1.7</td> <td>7.8</td> <td>10.1</td> </tr> <tr> <td><i>p</i> =</td> <td colspan="2">0.02</td> <td colspan="2">0.3</td> </tr> </table>		% <3 rd		3-10 th percentile			birth	5yrs	birth	5yrs	Binge drinking					Nil	3.3	2.9	5.4	6.9	< half time	3.9	2.9	7.2	7.8	≥ half time	2.3	3.4	6.4	5.9	<i>p</i> =	0.11		0.9			% <3 rd		3-10 th percentile			birth	5yrs	birth	5yrs	Binge drinking					Nil	2.8	2.8	6.6	7.1	< half time	3.6	3.5	8.8	5.8	≥ half time	3.1	1.7	7.8	10.1	<i>p</i> =	0.02		0.3		<p>No adjustment for confounders in this analysis. Participation at birth 74%. Binge defined as 5+ drinks at one time, frequency of binges categorised rather vaguely as never, <half the time or half the time or more in pregnancy. Only asked at 1st visit. Follow-up at 5 yrs only 47%.</p>
	% <3 rd		3-10 th percentile																																																																							
	birth	5yrs	birth	5yrs																																																																						
Binge drinking																																																																										
Nil	3.3	2.9	5.4	6.9																																																																						
< half time	3.9	2.9	7.2	7.8																																																																						
≥ half time	2.3	3.4	6.4	5.9																																																																						
<i>p</i> =	0.11		0.9																																																																							
	% <3 rd		3-10 th percentile																																																																							
	birth	5yrs	birth	5yrs																																																																						
Binge drinking																																																																										
Nil	2.8	2.8	6.6	7.1																																																																						
< half time	3.6	3.5	8.8	5.8																																																																						
≥ half time	3.1	1.7	7.8	10.1																																																																						
<i>p</i> =	0.02		0.3																																																																							
<p>Olsen, 1994; Denmark; Cohort study</p> <p>Part of EuroMac study.</p> <p>Selection=3 Comparability=2 Outcome=2</p>	<p>1988-89 276 children at 18 mths, 217 at 3.5 yrs</p>	<p>Alcohol by questionnaire at 32 wks gestation; Bayley at 18 mths after birth and Griffiths at 42 months after birth by psychologist blind to exposure and previous reports</p>	<p><i>Alcohol intake</i> Bayley at 18 mths</p> <table border="0"> <tr> <td></td> <td colspan="2">PDI</td> <td colspan="2">MDI</td> </tr> <tr> <td><i>No. binges</i></td> <td>unadj</td> <td>adj</td> <td>unadj</td> <td>adj</td> </tr> <tr> <td>0</td> <td>107</td> <td>108</td> <td>106</td> <td>106</td> </tr> <tr> <td>1-4</td> <td>104</td> <td>104</td> <td>104</td> <td>104</td> </tr> <tr> <td>5+</td> <td>103</td> <td>101</td> <td>104</td> <td>104</td> </tr> </table> <p>Griffiths overall at 3.5 yrs</p> <table border="0"> <tr> <td></td> <td>N</td> <td>Unadjusted</td> <td>adjusted</td> </tr> <tr> <td>0</td> <td>150</td> <td>107</td> <td>107</td> </tr> <tr> <td>1-4</td> <td>56</td> <td>106</td> <td>106</td> </tr> <tr> <td>5+</td> <td>11</td> <td>106</td> <td>106</td> </tr> </table>		PDI		MDI		<i>No. binges</i>	unadj	adj	unadj	adj	0	107	108	106	106	1-4	104	104	104	104	5+	103	101	104	104		N	Unadjusted	adjusted	0	150	107	107	1-4	56	106	106	5+	11	106	106	<p>Included women consuming 5 or more drinks per week, matched 1:1 with lower level drinkers. Matched on expected date of delivery and woman's year of birth. Initial sample representative of population but follow-up at 3.5 yrs 76% and only 66% included in analysis. No data about those lost to follow-up. Adjusted for parents' education, type of residence and smoking. Bingeing defined as 5+ drinks on a single occasion at any time in pregnancy.</p>																													
	PDI		MDI																																																																							
<i>No. binges</i>	unadj	adj	unadj	adj																																																																						
0	107	108	106	106																																																																						
1-4	104	104	104	104																																																																						
5+	103	101	104	104																																																																						
	N	Unadjusted	adjusted																																																																							
0	150	107	107																																																																							
1-4	56	106	106																																																																							
5+	11	106	106																																																																							

<p>Olsen, 1995; Denmark; Cohort study</p> <p>Selection=4 Comparability=2 Outcome=2</p>	<p>1988-89 323 babies</p>	<p>Questionnaire and interview at 1st AN visit; outcomes measured from photos at birth and 18 months after birth</p>	<table border="1"> <thead> <tr> <th></th> <th>Palpebral fissure</th> <th>Nose upper lip</th> <th>Root of nose</th> </tr> </thead> <tbody> <tr> <td colspan="4"><i>No. of Binges in 1st trimester</i></td> </tr> <tr> <td colspan="4">Newborns</td> </tr> <tr> <td>0</td> <td>22.7</td> <td>3.0</td> <td>.41</td> </tr> <tr> <td>1-4</td> <td>22.0</td> <td>3.1</td> <td>.42</td> </tr> <tr> <td>5+</td> <td>20.4</td> <td>2.7</td> <td>.42</td> </tr> <tr> <td colspan="4">18 months</td> </tr> <tr> <td>0</td> <td>16.1</td> <td>3.1</td> <td>.55</td> </tr> <tr> <td>1-4</td> <td>15.7</td> <td>3.0</td> <td>.50</td> </tr> <tr> <td>5+</td> <td>14.9</td> <td>3.3</td> <td>.59</td> </tr> </tbody> </table>		Palpebral fissure	Nose upper lip	Root of nose	<i>No. of Binges in 1st trimester</i>				Newborns				0	22.7	3.0	.41	1-4	22.0	3.1	.42	5+	20.4	2.7	.42	18 months				0	16.1	3.1	.55	1-4	15.7	3.0	.50	5+	14.9	3.3	.59	<p>Over-sampled women who consumed 5+ drinks per week. Measurement from photos blind to alcohol consumption but correlation between observers inconsistent. Unadjusted for confounders in this analysis.</p>
	Palpebral fissure	Nose upper lip	Root of nose																																									
<i>No. of Binges in 1st trimester</i>																																												
Newborns																																												
0	22.7	3.0	.41																																									
1-4	22.0	3.1	.42																																									
5+	20.4	2.7	.42																																									
18 months																																												
0	16.1	3.1	.55																																									
1-4	15.7	3.0	.50																																									
5+	14.9	3.3	.59																																									
<p>Passaro, 1996; UK, 10,539, Cohort study</p> <p>Selection=3 Comparability=2 Outcome=3</p>	<p>1991-92 10,539 babies</p>	<p>Alcohol exposure at 18 weeks gestation; outcomes from hospital delivery records</p>	<table border="1"> <thead> <tr> <th></th> <th>Mean birthweight (SD)</th> <th>Mean GA (SD)</th> </tr> </thead> <tbody> <tr> <td>Nonbingeing abstainers</td> <td>3397 (512)</td> <td>40.1 (2.1)</td> </tr> <tr> <td>Nonbingeing occ- asional drinkers</td> <td>3419 (488)</td> <td>40.1 (1.9)</td> </tr> <tr> <td>Bingeing occasional drinkers</td> <td>3408 (498)</td> <td>40.1 (2.0)</td> </tr> <tr> <td>Nonbingeing light daily drinkers</td> <td>3401 (441)</td> <td>39.8 (1.9)</td> </tr> <tr> <td>Heavy drinkers/ bingers</td> <td>3222 (538)</td> <td>40.1 (2.3)</td> </tr> <tr> <td colspan="3"><i>Adjusted mean differences in birthweight (95% CI) compared to prepregnancy drinkers who abstained during pregnancy</i></td> </tr> <tr> <td>Non-bingeing abstainers</td> <td></td> <td>-36g (-71, -1)</td> </tr> <tr> <td>Non-bingeing occ- asional drinkers</td> <td></td> <td>-3g (-24, 16)</td> </tr> <tr> <td>Bingeing occasional drinkers</td> <td></td> <td>-7g (-33, 177)</td> </tr> </tbody> </table>		Mean birthweight (SD)	Mean GA (SD)	Nonbingeing abstainers	3397 (512)	40.1 (2.1)	Nonbingeing occ- asional drinkers	3419 (488)	40.1 (1.9)	Bingeing occasional drinkers	3408 (498)	40.1 (2.0)	Nonbingeing light daily drinkers	3401 (441)	39.8 (1.9)	Heavy drinkers/ bingers	3222 (538)	40.1 (2.3)	<i>Adjusted mean differences in birthweight (95% CI) compared to prepregnancy drinkers who abstained during pregnancy</i>			Non-bingeing abstainers		-36g (-71, -1)	Non-bingeing occ- asional drinkers		-3g (-24, 16)	Bingeing occasional drinkers		-7g (-33, 177)	<p>Large population based study with about 90% response rate. Binge defined as 40-45g alcohol on a single occasion in the first 18 weeks of pregnancy. Mean differences in birthweight adjusted for GA, infant sex, parity, maternal smoking and BMI showed no significant differences except for lower birthweight in non-bingeing abstainers and in heavy drinkers/bingers. Type of alcoholic drink made no difference to results. Limiting analysis to exclude users of marijuana, crack and cocaine, and excluding women with a history of alcoholism made no difference.</p>										
	Mean birthweight (SD)	Mean GA (SD)																																										
Nonbingeing abstainers	3397 (512)	40.1 (2.1)																																										
Nonbingeing occ- asional drinkers	3419 (488)	40.1 (1.9)																																										
Bingeing occasional drinkers	3408 (498)	40.1 (2.0)																																										
Nonbingeing light daily drinkers	3401 (441)	39.8 (1.9)																																										
Heavy drinkers/ bingers	3222 (538)	40.1 (2.3)																																										
<i>Adjusted mean differences in birthweight (95% CI) compared to prepregnancy drinkers who abstained during pregnancy</i>																																												
Non-bingeing abstainers		-36g (-71, -1)																																										
Non-bingeing occ- asional drinkers		-3g (-24, 16)																																										
Bingeing occasional drinkers		-7g (-33, 177)																																										

			Non-bingeing light daily drinkers 52g (-73, 177) Heavy drinkers/bingers -152g (-228, -76)	
Plant, 1988; UK; Cohort study Selection=4 Comparability=2 Outcome=2	1980-83 1008 women	Alcohol by interview in 3 rd month of pregnancy; outcomes from case notes	Mean no. abnormalities noted at birth Bingers 2.0 Abstainers 1.2 $p<0.05$ Bingers and smoked 10+ cigs daily 2.4 Non-smoking abstainers 1.0 $p<0.001$	Bingeing defined as drinking 10+ units on a single occasion in first trimester of pregnancy. Not all analyses presented. Participation rate not stated. Not adjusted for other confounders in this analysis.
Sampson, 1994; USA; Cohort study (Seattle study) Selection=4 Comparability=2 Outcome=3	1974-75 1439 women, follow-up of 500 children	Alcohol exposure by interview at 5 months gestation; birth outcomes from medical records, 8 and 18 mths, 4, 7 and 14 yrs after birth by examination	Unadjusted correlations <i>Bingeing prior to pregnancy recognition</i> Birth 8mo 18mo 4y 7y 14y Weight -.15 .01 .05 -.03 .02 -.01 Length -.01 .05 .08 .03 .04 .04 Head circumference -.07 .01 -.01 -.02 -.01 -.03 <i>Bingeing during pregnancy</i> Birth 8mo 18mo 4y 7y 14y Weight -.11 .01 .05 .02 .04 .06 Length -.06 .02 .04 .02 -.01 .05 Head circumference -.08 -.02 -.02 -.02 -.04 -.04	Mainly white, married, middle class women. 500 women who were selected for follow-up were selected for high level alcohol consumption. Binge defined as 5+ drinks on a single occasion in first 5 months of pregnancy. Analyses unadjusted for confounders (except at 8 mths after birth where heavier drinkers were inadvertently over-sampled). Number lost to follow-up not stated. Strongest correlations were at birth and 8 mths, possible 'catch-up' growth thereafter.

<p>Streissguth, 1989, 1990 and 1994; USA; Cohort study (Seattle study)</p> <p>Selection=4 Comparability=2 Outcome=3</p>	<p>1974-75 486 children at age 7 yrs</p> <p>359 children at age 14 yrs</p>	<p>Alcohol exposure retrospectively by interview at 5 mths gestation in their own homes; Weschler Intelligence Scale for Children (WISC), Wide Range Achievement Test (WRAT), Connors carried out between 6.5-7.5 yrs by examiners blind to exposure</p>	<table border="0"> <tr> <td>WRAT at age 7</td> <td>R</td> <td colspan="3">Adjusted achievement decrement (p)</td> </tr> <tr> <td>Reading</td> <td>0.55</td> <td>-3.3</td> <td colspan="2">(.038)</td> </tr> <tr> <td>Spelling</td> <td>0.58</td> <td>-1.8</td> <td colspan="2">(.227)</td> </tr> <tr> <td>Arithmetic</td> <td>0.62</td> <td>-3.3</td> <td colspan="2">(.000)</td> </tr> <tr> <td><i>Learning problems</i></td> <td></td> <td>Binge %</td> <td>No-binge %</td> <td>p</td> </tr> <tr> <td>Connors learning probs</td> <td></td> <td>17</td> <td>7</td> <td>.000</td> </tr> <tr> <td>hyperkinesis</td> <td></td> <td>15</td> <td>9</td> <td>.091</td> </tr> <tr> <td>impulsivity</td> <td></td> <td>13</td> <td>8</td> <td>.104</td> </tr> <tr> <td>Parental assessment below average</td> <td></td> <td>13</td> <td>4</td> <td>.000</td> </tr> <tr> <td>Myklebust (teacher) MPRS <65 cutoff</td> <td></td> <td>17</td> <td>10</td> <td>.037</td> </tr> <tr> <td>School special class <age approp. grade</td> <td></td> <td>24</td> <td>15</td> <td>.011</td> </tr> <tr> <td></td> <td></td> <td>19</td> <td>14</td> <td>.147</td> </tr> <tr> <td>Mean WISC score</td> <td></td> <td></td> <td></td> <td></td> </tr> <tr> <td>full scale IQ</td> <td></td> <td>104.8</td> <td>108.7</td> <td></td> </tr> <tr> <td>verbal IQ</td> <td></td> <td>103.5</td> <td>107.2</td> <td></td> </tr> <tr> <td>performance IQ</td> <td></td> <td>105.3</td> <td>108.8</td> <td></td> </tr> <tr> <td><i>Age 14 correlations</i></td> <td></td> <td></td> <td></td> <td></td> </tr> <tr> <td></td> <td></td> <td>Word attack</td> <td>Arithmetic</td> <td></td> </tr> <tr> <td>Pre-pregnancy</td> <td>-0.15</td> <td>p<.01</td> <td>-0.15</td> <td>p<.05</td> </tr> <tr> <td>In pregnancy</td> <td>-0.12</td> <td>p<.05</td> <td>-0.15</td> <td>p<.05</td> </tr> </table>	WRAT at age 7	R	Adjusted achievement decrement (p)			Reading	0.55	-3.3	(.038)		Spelling	0.58	-1.8	(.227)		Arithmetic	0.62	-3.3	(.000)		<i>Learning problems</i>		Binge %	No-binge %	p	Connors learning probs		17	7	.000	hyperkinesis		15	9	.091	impulsivity		13	8	.104	Parental assessment below average		13	4	.000	Myklebust (teacher) MPRS <65 cutoff		17	10	.037	School special class <age approp. grade		24	15	.011			19	14	.147	Mean WISC score					full scale IQ		104.8	108.7		verbal IQ		103.5	107.2		performance IQ		105.3	108.8		<i>Age 14 correlations</i>							Word attack	Arithmetic		Pre-pregnancy	-0.15	p<.01	-0.15	p<.05	In pregnancy	-0.12	p<.05	-0.15	p<.05	<p>Predominantly white, middle class, married. Oversampled for heavier drinkers and smokers. Excluded multiple births. Participation rate 85%. Pre-pregnancy binges defined as 5+ drinks on any one occasion in first 5 months of pregnancy. Follow-up rate not stated. Inter-rater unreliability on WISC and Word Attack scores. WRAT adjusted for maternal and paternal education, no. children in household, household stress, prenatal nutrition, smoking, aspirin and caffeine, sex, race and grade of child, exam conditions. Multiple regression (R) and age14 years correlations indicates test scores against a binary binge drinking measure.</p>
WRAT at age 7	R	Adjusted achievement decrement (p)																																																																																																						
Reading	0.55	-3.3	(.038)																																																																																																					
Spelling	0.58	-1.8	(.227)																																																																																																					
Arithmetic	0.62	-3.3	(.000)																																																																																																					
<i>Learning problems</i>		Binge %	No-binge %	p																																																																																																				
Connors learning probs		17	7	.000																																																																																																				
hyperkinesis		15	9	.091																																																																																																				
impulsivity		13	8	.104																																																																																																				
Parental assessment below average		13	4	.000																																																																																																				
Myklebust (teacher) MPRS <65 cutoff		17	10	.037																																																																																																				
School special class <age approp. grade		24	15	.011																																																																																																				
		19	14	.147																																																																																																				
Mean WISC score																																																																																																								
full scale IQ		104.8	108.7																																																																																																					
verbal IQ		103.5	107.2																																																																																																					
performance IQ		105.3	108.8																																																																																																					
<i>Age 14 correlations</i>																																																																																																								
		Word attack	Arithmetic																																																																																																					
Pre-pregnancy	-0.15	p<.01	-0.15	p<.05																																																																																																				
In pregnancy	-0.12	p<.05	-0.15	p<.05																																																																																																				

<p>Tolo, 1993; USA; Cohort study</p> <p>Selection=3 Comparability=2 Outcome=3</p>	<p>1982-83 237 1 or more binges, 472 no binges</p>	<p>Retrospectively by questionnaire at 6 months gestation; birth outcomes from medical records; IUGR computed by regressing birthweight on gestational age and adding residuals to sample mean</p>	<p>Outcome Any No Difference in means binge binge (95% CI)</p> <p>Birth- weight (g) 3561 3579 -18 (-95, 59)</p> <p>Birth length (cm) 51.2 51.0 0.2 (-0.2, 0.6)</p> <p>Head circum- ference (cm) 34.5 34.6 -0.1 (-0.4, 0.2)</p> <p>Intrauterine growth (g) 3537 3591 -54 (-122, 14)</p>	<p>Population source was HMO, consecutive sample overwhelmingly white and well educated; not truly representative but homogeneous and therefore confounding less likely. Excluded regular drinkers from sample. Questionnaire was validated in pilot study but had 74% response rate, no information about non-respondents. Results were unadjusted, however, adjusting for confounders made little difference. Similarly, number of binge episodes (binge defined as 2.5oz on a single occasion in first 6 months of pregnancy) and timing (whether in month before pregnancy or in 1st/2nd trimester) made no difference to results.</p>
<p>Whitehead, 2003; USA; Cohort study</p> <p>Selection=4 Comparability=2 Outcome=2</p>	<p>1996-99 50,461 women</p>	<p>Retrospectively by postpartum questionnaire with telephone follow-up of non-responders; outcomes from birth certificate data</p>	<p>%SGA RR (95% CI)</p> <p><i>3 mths before pregnancy</i></p> <p>Bingeing 8.1 1.06 (0.94, 1.21)</p> <p>No bingeing 7.6</p> <p><i>last 3 mths of pregnancy</i></p> <p>Bingeing 9.4 1.20 (0.78, 1.87)</p> <p>No bingeing 7.8</p> <p>per binge relative to non-drinkers OR (95% CI)</p> <p><i>3 mths before pregnancy</i> 0.98 (0.97, 1.00)</p> <p><i>last 3 mths of pregnancy</i> 0.99 (0.90, 1.09)</p>	<p>SGA defined as birthweight <10th percentile for gestational age according to race and parity specific standards. Bingeing defined as 5 or more drinks on a single occasion. 76% response rate but over-representation of SGA babies. ORs adjusted for maternal age, education, marital staus, pre-pregnancy weight, public assistance, state of residence, smoking before pregnancy.</p>

Abbreviations used in table

%ile percentile

adj adjusted

AN antenatal

CI confidence interval

GA gestational age

HMO Health Maintenance Organisation

RR relative risk

SD standard deviation

SES socioeconomic status

SGA small for gestational age

unadj unadjusted

* $p < 0.05$