Table 33a. Vitamin D and preeclampsia: Results of observational studies (updated from original report)

| **Author Year Study Name  Location  (Latitude)  [PMID]** | **Life Stage** | **Outcome (n/N; Incidence)** | **Followup Duration (Time to Dx)** | **Vit D Measure** | **Concentration, nmol/L** | **No. of Cases** | **No. in Category** | **Adjusted OR** | **95% CI** | **Study Quality** |
| --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- |
| **Radioimmunoassay** | | | | | | | | | | |
| Shand 2010[177](#_ENREF_177) |  | preeclampsia | 10-20 weeks gestation | 25(OH)D | <37.5 | 10 | NR | 0.91 | 0.31, 2.62 | A |
|  | ≥37.5 | 18 | NR | 1.00 | **Reference** |  |
|  | <50 | 17 | NR | 1.39 | 0.54, 3.53 |  |
|  | ≥50 | 11 | NR | 1.00 | **Reference** |  |
|  |  | <75 | 21 | NR | 0.57 | 0.19, 1.66 |  |
|  |  | ≥75 | 6 | NR | 1.00 | **Reference** |  |
| **Chemiluminescence Assay** | | | | | | | | | | |
| Wei 2012[174](#_ENREF_174) |  | preeclampsia | 12-18 weeks gestation | 25(OH)D | per SD increase | 32 | 697 | 0.79 | 0.52, 1.20 | A |
|  | <50 | 15 | 272 | 1.24 | 0.58, 2.67 |  |
|  | >50 | 17 | 425 | 1.00 | **Reference** |  |
|  |  | 24-26 weeks gestation | per SD increase | 28 | 604 | 0.68 | 0.44, 1.05 |  |
|  |  | <50 | 19 | 236 | 3.24 | 1.37, 7.69 |  |
|  |  | >50 | 9 | 368 | 1.00 | **Reference** |  |
| Wei 2013[172](#_ENREF_172)  INTAPP |  | preeclampsia | 24-26 weeks gestation | 25(OH)D | <50 nmol/L  >=50 nmol/L | NR | NR | 2.97  1.00 | 1.23, 7.20  **Reference** | B |
| **Enzyme-linked immunoabsorption assay** | | | | | | | | | | |
| Bodnar 2007[179](#_ENREF_179)A  PEPPSB  US  (41°N)  [17535985] | Pregnancy | Preeclampsia  (55/1198; 4%)C | ND | 25(OH)DD | <37.5 (vs. >37.5) | 49 | 265 | 5 | 1.7, 14.1 | B |
| **HPLC-Tandem mass Spectrometry** | | | | | | | | | | |
| Baker 2010[175](#_ENREF_175) | Pregnant or lactating women | severe preeclampsia | NR | 25(OH)D | < 50 | 22 | 160 | 5.41 | 2.02, 14.52 | B |
| 50-74.9 | 10 | 51 | 2.16 | 0.85, 5.40 |  |
|  | ≥75 | 11 | 30 | 1.00 | **Reference** |  |
| Powe 2010[178](#_ENREF_178) |  | severe preeclampsia | NR | 25(OH)D | Quartile 1 (ND) | 39 (overall) | 170 (overall) | 1.50 | 0.57, 3.96 | B |
|  | Quartile 2 (ND) |  |  | 1.04 | 0.39, 2.76 |  |
|  | Quartile 3 (ND) |  |  | 0.67 | 0.23, 1.91 |  |
|  |  | Quartile 4 (ND) |  |  | 1.00 | **Reference** |  |
| Scholl 2013[173](#_ENREF_173) |  | preeclampsia | 20 weeks gestation | 25(OH)D | <30  30-40  40-50  >=50 | 12  12  7  38 | 121  116  154  750 | 2.13  2.09  0.94  1.00 | 1.07, 4.26  1.04, 4.22  0.41, 2.17  **Reference** | B |
| Woodham 2011[176](#_ENREF_176) |  | severe preeclampsia | NR | 25(OH)D |  | 41 | 164 | 0.95 | 0.94, 0.97 | B |

AThis is a nested case-control study.

B Pregnancy Exposures and Preeclampsia Prevention Study.

C Incidence obtained from the “parent” cohort study in which this case control study is nested.

D Early in pregnancy, approximately 30 wk before outcome assessment.