

**Supplementary Box S1.** The search strategy of PubMed

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Source: PubMed

Search on: February 28th, 2017

#1 (((("vitamin D"[Mesh] OR "cholecalciferol"[Mesh]) OR "25-hydroxyvitamin D"[Title/Abstract]) OR "25(OH)D"[Title/Abstract])

#2 (((("small for gestational age"[Title/Abstract] OR "small-for-gestation-age"[Title/Abstract]) OR "small size for gestational age"[Title/Abstract]) OR SGA [Title/Abstract])

#3 #1 AND #2

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The search strategy in other databases did some adjustments on the basis of the above database.

**Supplementary Table S1.** Characteristics of the included studies in the present meta-analysis

Author	Latitude	The time of year data collected	Gestational age of infant at birth	The prevalence of SGA	The prevalence of vitamin D deficiency	Maternal education status	Season of blood sample
Leffelaar <sup>15</sup>	NA	2003.2~2004.3	40.1±1.2 weeks	9.2%	23.1%	≤5 years (17.2%), 6-10years (38.5%), ≥11 years (44.3%)	Summer (43.6%)
Burris <sup>24</sup>	NA	NA	39.6 weeks	4.8%	32.4%	College graduate (41.2%)	NA
Zhou <sup>25</sup>	23.1°N	2010.9~2011.8	NA	0.6%	18.9%	NA	NA
Choi <sup>26</sup>	36.0°N	2012.4~2013.9	NA	10.9%	77.3%	≤12 years(5.5%), > 12 years(94.5%)	Spring (44.5%), Summer (10.0%), Fall (39.5%), Winter (5.9%)
Ong <sup>18</sup>	1°22'N	NA	NA	9.1%	13.2%	Primary and secondary (30.2%), Post-secondary (35.4%), University (34.4%)	NA
Kiely <sup>27</sup>	52°N	2008.3~2011.2	NA	10.7%	44.0%	Secondary (61%), Tertiary (39%)	Winter (58.5%), Summer (41.5%)
Scholl <sup>28</sup>	NA	2001~2007	38.5	7.2%	33.7%	NA	NA
Chen <sup>4</sup>	31°52'N	2008.11~2010.10	NA	8.9%	38.41%	NA	Spring (36.7%), Summer (22.5%), Fall (20.6%), Winter (20.2%)
Boyle <sup>29</sup>	NA	2005~2008	NA	9.9%	21.5%	NA	Spring (20.5%), Summer (26.4%), Fall (23.2%), Winter (29.8%)
Berg <sup>30</sup>	52°22'N	2003.2~2004.3	20-42 weeks	9.1%	NA	NA	Winter (55.5%)
Gerard <sup>16</sup>	≥41°N(63.0%), 38~40°N(28.8%), ≤35°N(8.2%)	1959~1965	39.7±1.3 weeks	18.4%	34.8%	NA	Spring (25.9%), Summer (25.7%), Fall (24.6%), Winter (23.9%)
Miliku <sup>31</sup>	NA	2002.4~2006.1	35.9-42.3 weeks	5.0%	53.2%	No higher education (59.2%), Higher education (40.8%)	Spring (29.5%), Summer (22.9%), Fall (24.0%), Winter (23.6%)
Nobles <sup>17</sup>	NA	2007~2012	NA	9.6%	20.7%	≤High school (55.2%), > High school (44.8%)	Summer (41.4%), Winter (58.7%)

NA : not available.

**NEWCASTLE - OTTAWA QUALITY ASSESSMENT SCALE**  
**COHORT STUDIES**

Note: A study can be awarded a maximum of one star for each numbered item within the Selection and Outcome categories. A maximum of two stars can be given for Comparability

**Selection**

- 1) Representativeness of the exposed cohort
  - a) truly representative of the average \_\_\_\_\_ (describe) in the community \*
  - b) somewhat representative of the average \_\_\_\_\_ in the community \*
  - c) selected group of users eg nurses, volunteers
  - d) no description of the derivation of the cohort
- 2) Selection of the non-exposed cohort
  - a) drawn from the same community as the exposed cohort \*
  - b) drawn from a different source
  - c) no description of the derivation of the non-exposed cohort
- 3) Ascertainment of exposure
  - a) secure record (eg surgical records) \*
  - b) structured interview \*
  - c) written self-report
  - d) no description
- 4) Demonstration that outcome of interest was not present at start of study
  - a) yes \*
  - b) no

**Comparability**

- 1) Comparability of cohorts on the basis of the design or analysis
  - a) study controls for \_\_\_\_\_ (select the most important factor) \*
  - b) study controls for any additional factor \* (This criteria could be modified to indicate specific control for a second important factor.)

**Outcome**

- 1) Assessment of outcome
    - a) independent blind assessment \*
    - b) record linkage \*
    - c) self-report
    - d) no description
  - 2) Was follow-up long enough for outcomes to occur
    - a) yes (select an adequate follow up period for outcome of interest) \*
    - b) no
  - 3) Adequacy of follow up of cohorts
    - a) complete follow up - all subjects accounted for \*
    - b) subjects lost to follow up unlikely to introduce bias - small number lost - > \_\_\_\_ % (select an adequate %) follow up, or description provided of those lost) \*
    - c) follow up rate < \_\_\_\_ % (select an adequate %) and no description of those lost
    - d) no statement
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