



**Title:** Vitamin requirements during Stem Cell Transplantation: A systematic review

**BACKGROUND**

- Malnutrition is major concern for this patient group, but there is limited evidence for vitamin requirements and post transplant outcomes
- No systematic reviews or guidelines are available for vitamin requirements in adult patients undergoing SCT
- The aim was to collate and analyze the evidence for vitamin requirements during the first 100 days following SCT

**METHODS**

- A systematic literature search of five databases was conducted to March 2021
- Adult patients who were supplemented or had their vitamin levels monitored up to 100 days post-SCT were included
- Main outcomes included vitamin status and post-transplant clinical outcomes
- Risk of bias assessed by the ADA quality criteria checklist
- GRADE approach evaluated the certainty of the evidence for each outcome

**RESULTS**

- Of the 1082 papers screened, 10 papers were eligible for this review
- Two studies monitored vitamin D levels and reported that most patients were deficient prior to SCT
- The GRADE certainty of evidence across all outcomes was very low

**CONCLUSION**

- Findings indicate an unclear association between vitamin levels and post-transplant complications
- Assessing vitamin D levels prior to transplant should be considered
- It is unclear if vitamin supplementation is needed during SCT

# Vitamin requirements for patients undergoing Stem Cell Transplantation remain unclear

Bronwyn Segon (1), Leroy Lam (1), Hei Yan Chan (1), D'arcy Kenway (1), Sarah Andersen (2), Teresa Brown (1,2), Judy Bauer (1)  
1. The University of Queensland 2. The Royal Brisbane and Women's Hospital

Figure 1. PRISMA Flowchart depicting included and excluded articles.

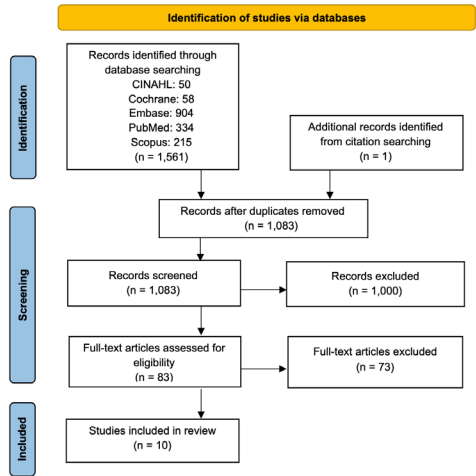


Table 1. GRADE of evidence of patient outcomes in 10 included studies

	No. of studies	Study Design	Certainty
<b>Vitamin A</b>			
Mortality	1	Observational	Very Low
OM	1	Observational	Very Low
Deficiency	1	Observational	Very Low
<b>Vitamin E</b>			
GvHD	1	Observational	Very Low
Mortality	2	Observational	Very Low
Deficiency	3	Observational, 1 RCT	Very Low
<b>Vitamin B<sub>6</sub></b>			
GvHD	1	Observational	Very Low
Mortality	1	Observational	Very Low
OM	1	Observational	Very Low
Deficiency	1	Observational	Very Low
<b>Vitamin D</b>			
GvHD	2	Observational	Very Low
Mortality	2	Observational	Very Low
Deficiency	2	Observational	Very Low
<b>Vitamin C</b>			
GvHD	1	Observational	Very Low
OM	1	Observational	Very Low
Deficiency	4	Observational, 1 RCT	Very Low
<b>Vitamin B<sub>12</sub></b>			
Deficiency	1	Observational	Very Low