**Table 2:** Summary of conditions that increase the risk of vitamin B6 deficiency (plasma PLP < 20 nmol/L).

|  |  |  |  |  |  |  |  |
| --- | --- | --- | --- | --- | --- | --- | --- |
| **Factor** | **Subjects** | **Intake measurement** | **Vit B6 intake (mg/d)** | **Vit B6 status measurement** | **Plasma PLP (nmol/L)** | **Conclusion** | **Ref** |
| Type 2 diabetes | 22 patients (36 - 79y) | Dietary record | 22 ± 6 µg/g protein/d | Plasma PLP;Urinary 4-PA | 10.5 - 118.3 | Increased renal clearance; lower intake |  [[42](https://www.ncbi.nlm.nih.gov/pubmed/27812289)] |
| 20 control (19 - 23y) | 31 ± 3 µg/g protein/d | 52.7 - 113.3 |
| Renal transplantation | 687 stable recipients(53 ± 13 y) | Dietary recall | 1.77 ± 0.49 | Plasma PLP | 30% deficiency mean: 29.00 | Diabetes; higher utilization of PLP due to inflammation | [[43](https://www.ncbi.nlm.nih.gov/pubmed/28468895)] |
| 357 control (54 ± 11y) | 1.85 ± 0.56 | 11% deficiency mean: 41.00 |
| High-flux haemo-dialysis | 14 patients(59 ± 5y) | 3-day dietary record | 4-wk 60 mg B6/d treatment | Plasma PLP | Prior to treatment:5.9 ± 0.8(100% deficiency) | Dialysis depleted B6; more utilization of PLP | [[44](https://www.ncbi.nlm.nih.gov/pubmed/10978399)] |
| After treatment:29.7 ± 5.3 |
| Chronic peritoneal dialysis | 11 patients(26 - 70y) | 3-day dietary record | First 4 weeks 1.3 ± 0.2 | Plasma PLP | Prior to treatment 16 ± 3(100% deficiency) | Inadequate intake;dialysis depleted B6 | [[45](https://www.ncbi.nlm.nih.gov/pubmed/2811067)] |
| 16-wk, 5-10 mg/d supplement | After treatment:52 ± 7 |
| Smoking | 159 now(19 - 73y) | N/A | Normal Western-style diet | Plasma PLP, PL | 15.4 ± 6.2 | Higher utilization of PLP | [[46](https://www.ncbi.nlm.nih.gov/pubmed/2349919)] |
| 59 past(22 - 71y) | 19.9 ± 7.9 |
| 68 control(18 - 64y) | 18.9 ± 6.7 |
| Intensive care unit under nutritional support | 46patients(23 - 85y) | Medical record | D19.3 ± 16.4 | Plasma PLP, PL, urinary 4-PA; erythrocyte alanine and aspartate amino transaminase activity | 42.7 ± 14.5 | Supplement can maintain good B6 status | [[47](https://www.ncbi.nlm.nih.gov/pubmed/12001008)] |
| D1417.5 ± 19.6 | 34.6 ± 14.8 |
| Inflammation | 714 subjects(mean76y) | Dietary recall | 2.26 - 2.55 | Plasma PLP | CRP < 6 mg/L:52.6-59.2 | Higher utilization of PLP in inflammation | [[48](https://www.ncbi.nlm.nih.gov/pubmed/11401933)] |
| 1.62 - 2.67  | CRP ≥ 6 mg/L29.2 - 45.8 |
| Cancers | 963 patients(46 - 74 y) | N/A | N/A | Baseline plasma PLP, PL and PA before the study | 32.9 - 75.6(mean: 47.1) | Increased catabolism; higher utilization of PLP  | [[10](https://www.ncbi.nlm.nih.gov/pubmed/25404109)] |
| 5576 controls(46 - 74y) | 36.2 - 75.0(mean:50.6) |
| Colorectal cancer | 613 patients(40 - 68y) | Dietary recall | 1.5-2.5 (food); 1.5-2.8 (total)  | Plasma PLP, PL, PA | 17.5 - 99.9(mean:35.9) | Increasedcatabolism; higher utilization of PLP |  [[6](https://www.ncbi.nlm.nih.gov/pubmed/28275126),[49](https://www.ncbi.nlm.nih.gov/pubmed/19298497)] |
| 1190 controls(40 - 68y) | 19.0 - 107.1(mean:38.20) |
| Rheumatoid arthritis | 33 patients (54 ± 12y) | Dietary recall | 1.7 ± 0.9 | Plasma PLP, urinary 4-PA, PLP functional assessments | 19.5 - 31.1(mean:24.7) | Increased phosphatase; lower plasma albumin |  [[50](https://www.ncbi.nlm.nih.gov/pubmed/12672918),[51](https://www.ncbi.nlm.nih.gov/pubmed/16277678)] |
| 17 controls(53 ± 14y) |  | 35.3 - 60.3(mean:46.2) |
| Inflammation | 743 each tertile(mean 61y) | Dietary recall | 2.7 (0.9 - 4.5) | Plasma PLP | Mean 35 (CRP 3.1) | Higher utilization of PLP in inflammation |  [[52](https://www.ncbi.nlm.nih.gov/pubmed/22623384)] |
| 5.2 (3.4 - 6.9) | Mean:69 (CRP 2.1) |
| 18.6 (16.8 - 20.3) | Mean:177 (CRP 1.8 mg/L) |
| Adults underwentcoronary angiography(45-78y) | 1313 B6 treatment  | N/A | 4-wk B6 supplement (40 mg/d) | Ratios PA:PL, PA:(PL + PLP) | PA: PL= 0.26PA: (PL + PLP) = 0.44 | Increased catabolism;higher utilization of PLP in inflammation |  [[3](https://www.ncbi.nlm.nih.gov/pubmed/24808485),[53](https://www.ncbi.nlm.nih.gov/pubmed/18714059)] |
| 664 placebos  | PA: PL= 0.61PA: (PL + PLP) = 0.75 |