Vitamin D is involved in many aspects of human life such as bone metabolism, cell functioning, and reproduction. To date there seems to be no agreement on the normal range of circulating vitamin D; however, to prevent the increase of parathyroid hormone and bone calcium mobilization, serum 25-hydroxyvitamin D [25(OH)D] levels should be higher than 30 ng/ml. In Spanish women, the median [interquartile] levels of 25(OH) D significantly decrease from the first to the third trimester of pregnancy, from 27.6 [9.9] to 18.2 [8.8] ng/ml. Low maternal serum levels of 25-hydroxyvitamin D3 [25(OH)D] have been related to adverse obstetric outcomes such as preterm birth, low birth weight, hypertension, gestational diabetes, neonatal hypocalcemia, maternal osteomalacia and muscle weakness. However, in our observations the frequency of various indicators of obstetric and neonatal outcome did not differ as a function of the first-trimester 25(OH)D status.