



# Dileme u terapijskoj primeni vitamina D

## Dilemmas in the Therapeutic Use of Vitamin D

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### Apstrakt

*Uvod:* Vitamin D je liposolubilni vitamin. Potrebe za njim se zadovoljavaju delom preko hrane iz koje se apsorbuje na nivou tankog creva, a delom se sintetise u koži iz holesterola, uz učešće ultravioletnog zračenja. Nezavisno od izvora, putem krvi se doprema do jetre gde se odigrava hidroksilacija u položaju 25 i dobija kalcidol. U bubrežima se kalcidol hidroksiliše u položaju 1 i tako nastaje aktivni oblik vitamina D kalcitriol koji ima odlike hormona. Osnovna uloga vitamina D je održavanje homeostaze kalcijuma i fosfora. Takođe, utiče i na ćelijsku diferencijaciju, spermatogenezu i imunogenezu.

*Cilj:* Utvrditi indikacije i najefikasnije oblike terapije vitaminom D.

*Metod:* Analizom savremene naučne literature i novih naučnih studija utvrditi prednost i nedostatke terapije vitaminom D.

*Rezultati:* Postoje brojni preparati vitamina D koji se međusobno razlikuju po farmaceutskom obliku, vrsti i količini vitamina D koji sadrže. Rahitis, osteoporoza, osteopenija, deficijencija i insuficijencija vitamina D su indikacije za primenu vitamina D. Rezultati ispitivanja o značaju njegove primene u prevenciji i lečenju virusnih infekcija su nedovoljno jasni.

*Zaključak:* Primena vitamina D mora biti racionalna. Poznavanje karakteristika preparata vitamina D koji koristimo, kao i efektivne doze vitamina D u odnosu na indikaciju, neophodno je poznavati za maksimalni terapijski efekat.

### Abstract

*Introduction:* Vitamin D is a liposoluble vitamin. The need for it is met partly through food from which it is absorbed at the level of the small intestine, and partly it is synthesized in the skin from cholesterol with the participation of ultraviolet radiation. Regardless of the source, it reaches the liver through the blood, where hydroxylation takes place in position 25 and calcidiol is obtained. In the kidneys, calcidiol is hydroxylated in position 1 and thus the active form of vitamin D, calcitriol, is formed, which has the characteristics of a hormone. The main role of vitamin D is to maintain the homeostasis of calcium and phosphorus. It also affects cell differentiation, spermatogenesis, and immunogenesis.

*Aims:* To determine the indications and most effective forms of vitamin D therapy.

*Method:* Determine the advantages and disadvantages of vitamin D therapy by analyzing modern scientific literature and new scientific studies.

*Results:* There are numerous vitamin D preparations that differ from each other in terms of pharmaceutical form, type, and amount of vitamin D they contain. Rachitis, osteoporosis, osteopenia, deficiency, and insufficiency of vitamin D are indications for the use of vitamin D. The results of studies on the importance of its use in the prevention and treatment of viral infections are insufficiently clear.

*Conclusion:* The use of vitamin D must be rational. Knowing the characteristics of the vitamin D preparation we use, as well as the effective dose of vitamin D in relation to the indication, is necessary for maximum therapeutic effect.

