

Template for the laboratory's report of 25-hydroxyvitamin D: recommendations from the Brazilian Society of Clinical Pathology/Laboratory Medicine (SBPC/ML) and the Brazilian Society of Endocrinology and Metabolism (SBEM)

Modelo de laudo laboratorial para 25-hidroxivitamina D: recomendações da Sociedade Brasileira de Patologia Clínica/Medicina Laboratorial (SBPC/ML) e da Sociedade Brasileira de Endocrinologia e Metabologia (SBEM)

Carlos Eduardo S. Ferreira¹; Carolina A. Moreira²; Leonardo S. Vasconcellos¹

1. Sociedade Brasileira de Patologia Clínica/Medicina Laboratorial, Rio de Janeiro, Rio de Janeiro, Brazil.

2. Sociedade Brasileira de Endocrinologia e Metabologia, Rio de Janeiro, Rio de Janeiro, Brazil.

ABSTRACT

The Brazilian Society of Clinical Pathology/Laboratory Medicine (SBPC/ML) and the Brazilian Society of Endocrinology and Metabolism (SBEM) recommend a new template for laboratory reports of 25-hydroxyvitamin D: deficiency < 20 ng/ml; normal values for the general population between 20-60 ng/ml; ideal values for at-risk population between 30-60 ng/ml; e risk of toxicity > 100 ng/ml.

Key words: vitamin D; reference values; laboratory test.

RESUMO

A Sociedade Brasileira de Patologia Clínica/Medicina Laboratorial (SBPC/ML) e a Sociedade Brasileira de Endocrinologia e Metabologia (SBEM) recomendam um novo modelo de laudo laboratorial para 25-hidroxivitamina D: deficiência < 20 ng/ml; valores normais para a população geral entre 20 e 60 ng/ml; valores ideais para população de risco entre 30 e 60 ng/ml; e risco de intoxicação > 100 ng/ml.

Unitermos: vitamina D; valores de referência; testes laboratoriais.

RESUMEN

La Sociedad Brasileira de Patologia Clínica/Medicina Laboratorial (SBPC/ML) y la Sociedad Brasileira de Endocrinologia e Metabologia (SBEM) sugieren un nuevo modelo de informe de laboratorio para 25-hidroxivitamina D: deficiencia < 20 ng/ml; valores normales para la población general entre 20 y 60 ng/ml; valores ideales para la población de riesgo entre 30 y 60 ng/ml; riesgo de intoxicación > 100 ng/ml.

Palabras clave: vitamina D; valores de referencia; pruebas de laboratorio.

Vitamin D, whose laboratory measurements and prescriptions for hormone replacement have increased exponentially in the latest decade, is one of the most studied biomarkers in this period.

The Brazilian Society of Clinical Pathology/Laboratory Medicine (SBPC/ML), in partnership with the Brazilian Society of Endocrinology and Metabolism (SBEM), actively takes part in scientific discussions about reference intervals for vitamin D, also known as 25-hydroxyvitamin D [25(OH)D].

Both medical societies published the first Brazilian consensus over the matter, in 2017, in the *Brazilian Journal of Pathology and Laboratory Medicine (JBPML)*⁽¹⁾, aiming to clarify controversial issues about normal values. Since then, discussions have continued given the importance of the subject and the dynamic rate of scientific publications. In 2020, both organizations produced a new document, recently published in the journal *Archives of Endocrinology and Metabolism*⁽²⁾.

The second consensus brought important news. The main piece of this was a clearer definition of values considered normal for the general population, whose levels vary between 20 and 60 ng/ml. For individuals considered at risk, the values remain the same, between 30 and 60 ng/ml, however, in the previous consensus, the age range considered for this group was 60 years or

older; now, it increased to 65 years. Besides this change, a review was undertaken of the list of osteometabolic and systemic diseases.

Serum levels of 25(OH)D considered deficient remained the same (< 20 ng/ml); risk values for toxicity (> 100 ng/ml) were not changed either.

In view of those updates, the SBPC/ML and the SBEM recommend a new template of report to be adopted by clinical laboratories in Brazil, according to the following **Table**.

The SBPC/ML and the SBEM continue to join efforts for clinical laboratory discussions of related matters, in a way that is productive and based on scientific evidence, always seeking the population's well-being.

Template of laboratory report for 25-hydroxyvitamin D
Deficient < 20 ng/ml Normal for general population 20-60 ng/ml Ideal for population at risk* 30-60 ng/ml Risk of toxicity > 100 ng/ml
<i>*at-risk population encompasses elderly (over 65 years) people, pregnant women, individuals with a history of frequent falls and fractures, after bariatric surgery, people taking medications that interfere with vitamin D metabolism, osteometabolic diseases (osteoporosis, osteomalacia, osteogenesis imperfecta, primary and secondary hyperparathyroidism), sarcopenia, type 1 diabetes mellitus, chronic kidney disease, hepatic failure, anorexia nervosa, malabsorption syndrome and cancer.</i>

REFERENCES

1. Ferreira CES, Maeda SS, Batista MC, et al. Consensus – reference ranges of vitamin D [25(OH)D] from the Brazilian medical societies. Brazilian Society of Clinical Pathology/Laboratory Medicine (SBPC/ML) and Brazilian Society of Endocrinology and Metabolism

(SBEM). *J Bras Patol Med Lab.* 2017; 53(6): 377-81. Doi: 10.5935/1676-2444.20170060.

2. Moreira CA, Ferreira CES, Madeira M, et al. Reference values of 25-hydroxyvitamin D revisited: a position statement from the Brazilian Society of Endocrinology and Metabolism (SBEM) and the Brazilian Society of Clinical Pathology/Laboratory Medicine (SBPC). *Arch Endocrinol Metab.* 2020; Doi: 10.20945/2359-3997000000258.

CORRESPONDING AUTHOR

Carlos Eduardo dos Santos Ferreira  0000-0001-9149-1252
e-mail: carlos.ferreira@einstein.br



This is an open-access article distributed under the terms of the Creative Commons Attribution License.