

Título artículo: Practical considerations in PTH testing. **Revista:** Clin Chim Acta . 2006; 366(1-2): 81-9 **Autores:** Souberbielle JC; Friedlander G; Cormier C **Abstract original:** New knowledge concerning PTH biology have accumulated during the past few years. The finding that the so-called "intact" PTH assays measure a "non-1-84" PTH fragment in addition to full-length PTH has led to the development of new assays. These new assays, which were initially thought to measure 1-84 PTH only, have been shown to recognize also another PTH species called "amino-PTH". As the various names given to the different assay methods are highly confusing, there is a need for a simplified nomenclature. A simple way would be to identify the older "intact" PTH assays as second-generation assays and the new assays (Whole, CAP, BioIntact) as third-generation assays. Although of considerable potential interest for the comprehension of PTH physiology, the third-generation PTH assays have not yet proved to be superior to the second-generation assays in clinical practice. There is thus currently no recommendation to switch from the second-generation to the third-generation assays in clinical practice, or to use a ratio derived from the concomitant measurement of PTH with both assay-generation. Because second- and third-generation PTH assays are usually highly correlated, significant differences in the clinical information provided by these methods are unlikely. However, our opinion is that more definitive bone biopsy studies in dialyzed patients selected according to their bone- and calcium-related treatment are still needed to reach a consensus. Finally, we have proposed that PTH reference values should be established in healthy subjects with a normal vitamin D status. This supposes that 25OHD is measured in the reference population beforehand, and that the subjects with vitamin D insufficiency are eliminated from the reference group. Although more complicated than the usual way to establish normative data, we have shown that it decreases the upper limit of normal by 25-35%, enhancing thus the diagnostic sensitivity for hyperparathyroidism without a decrease in specificity.