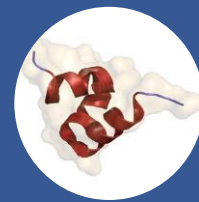


SALIVARY OSTEOCALCIN QUICK START GUIDE



BIOLOGICAL CONSIDERATIONS

Osteocalcin (OCN, bone gamma-carboxyglutamic acid-containing protein (BGLAP)), is a bone-derived hormone protein released solely by osteoblasts during bone remodeling in vertebrates. Recent findings suggest that osteocalcin may be a key factor in the body's acute response to stress. Studying salivary osteocalcin in combination with alpha-amylase and cortisol may offer a more complete picture, enabling investigators to include measures of the SNS, PNS, and HPA components of the biology of stress in the same sample. Osteocalcin has also been reported to serve several key biological functions including the regulation of insulin secretion, increased adaptation to exercise, improved brain development and cognitive functioning, and maintaining male fertility. In saliva, osteocalcin has been well-studied in dentistry as a biomarker of bone loss, and more specifically targeted in studies of periodontitis and effects of smoking. Many of these studies conclude that osteocalcin in saliva is readily available and may be a reliable measure of bone remodeling and periodontal disease progression.

Biological Representation	To Be Determined
Serum-Saliva Correlation	Moderate-Strong

SAMPLE TIMING AND DESIGN

Opportunity to make a major scientific contribution. Sponsored by the Salimetrics' "Interdisciplinary Research Initiative" to bridge gaps in scientific knowledge with validated, early-stage methodologies. [Contact Salimetrics](#) to inquire if your study can benefit from salivary osteocalcin testing. Qualifying studies will receive research and testing support through Salimetrics' Interdisciplinary Research Initiative.

FREQUENTLY STUDIED WITH

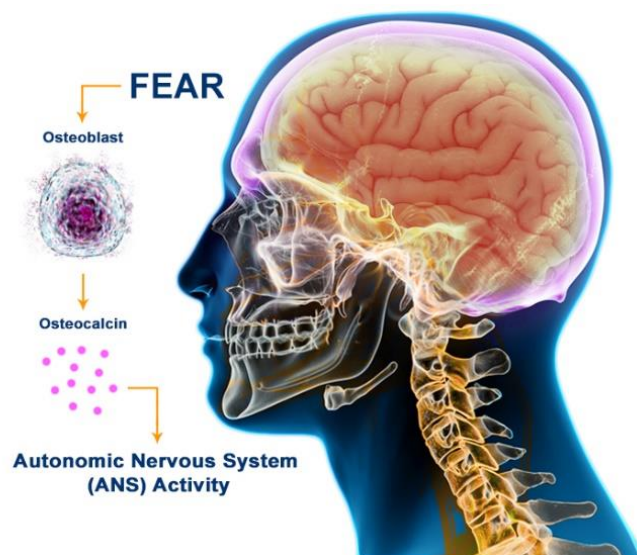
Cortisol, Alpha-Amylase, IL-6, Testosterone, Insulin

TECHNICAL SUMMARY

Sample Collection Methods & Volumes	
Passive Drool	✓
SalivaBio Swabs	✓
Optimum Collection Volume	150 µL

EXAMPLE DATA

Scientific literature to date describes osteocalcin as a hormone derived from bone, and the mechanisms that link its levels directly to the activity of the parasympathetic branch of the autonomic nervous system (ANS), as well as aspects of metabolism, exercise capacity, brain development, aging, and male fertility are currently being explored.



Representative Illustration

KEY RESOURCES

- Granger, DA, Taylor, MK. (2020). Salivary Bioscience: Foundations of Interdisciplinary Saliva Research and Applications. Springer. <https://springer.com/book/10.1007/978-3-030-35784-9>
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