Bone formation

Bone development begins with the replacement of collagenous mesenchymal tissue by bone. Generally, bone is formed by endochondral or intramembranous ossification. Intramembranous ossification is essential in the bone such as skull, facial bones, and pelvis which MSCs directly differentiate to osteoblasts.

Data suggest that acute mild hyponatremia is associated with a reduction in bone formation activity [1].

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1)

Garrahy A, Galloway I, Hannon AM, Dineen R, Javadpour M, Tormey WP, Gan KJ, Twomey PJ, Mc Kenna MJ, Kilbane M, Crowley RK, Sherlock M, Thompson CJ. The effects of acute hyponatraemia on bone turnover in patients with subarachnoid haemorrhage; a preliminary report. Clin Endocrinol (Oxf). 2020 Nov 11. doi: 10.1111/cen.14367. Epub ahead of print. PMID: 33176010.