

## ***Basic Science Fracture Forum Oct 5, 2016***

# ***Nonunions: How Important is Nutrition and Medical Management?***

## **Outline**

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### **OBJECTIVES:**

1. Recognize pre-operative factors (smoking, endocrine disorders, vitamin D, nutrition status) that are recognized to have a negative impact on fracture healing
2. Learn simple and practical methods to optimize a patients' medical condition, including nutritional status, prior to re-intervening surgically
3. Refine revision fixation strategies and surgical techniques that can be used to maximize success with nonunion surgery.

### **LITERATURE:**

Niikura T. et. al. Orthop Sci. 2014 Jan;19(1):120-4.

Causative factors of fracture nonunion: the proportions of mechanical, biological, patient-dependent, and patient-independent factors.

- One hundred two consecutive patients with fracture nonunions of the extremities were analyzed.
- Factors relating to inadequate mechanical stability or reduction and those relating to a decline in biological activity were investigated.
- Of the 102 nonunions, 24 cases had factors of inadequate mechanical stability or reduction, 23 cases had biological factors, and 55 cases had both.
- A considerable number of nonunions have medical causative factors which can be improved prior to repeat surgical intervention.