

## Open Tibia and Fibula Fracture Case Study

<b>Authors</b>	William T. Axelrad, MD, PhD & Derek Hinds, MD
<b>Location</b>	Lake Charles Memorial Health System, Lake Charles, LA
<b>Patient</b>	Traumatic wound
<b>Issues</b>	Motorcycle accident induced injury
<b>Outcomes</b>	Wound healed with addition of CellerateRX <sup>®</sup> Surgical Powder

### Patient Profile

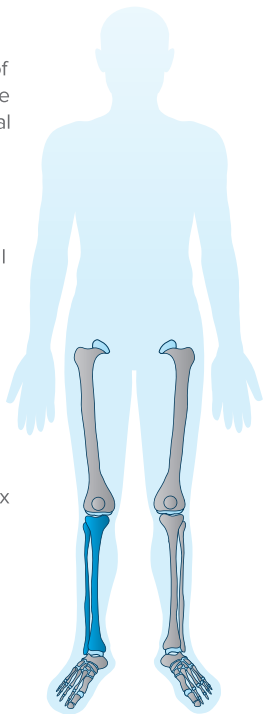
29-year-old male with an acute traumatic lower extremity injury.

### Presentation

Patient sustained an open fracture of the tibia and fibula from a motorcycle accident, with evidence of segmental bone loss.

### Treatment

Initial treatment involved an external fixator, application of CellerateRX Surgical Powder and negative pressure wound therapy. Two days after initial surgery, patient returned to the operating room for removal of the external fixator, intramedullary nailing of the tibia and surgical closure of the wound. Sustained healing was evident at six weeks upon follow-up.



## Results/Outcomes



### Intraoperative

Patient was stabilized, and the wound was cleaned prior to treatment.



### Intraoperative

CellerateRX<sup>®</sup> Surgical Powder was administered to surgical wound site before external fixator and negative pressure wound therapy was applied.



### 2 Days Post-op

Two days postoperatively, negative pressure wound therapy was discontinued and the external fixator removed. The surgical wound was closed with sutures.

## Treatment Rationale

CellerateRX Surgical Powder was implemented into the treatment plan for this patient, given the documented properties of collagen, including chemotaxis and tissue adhesion. Six weeks after the initial injury, the patient showed signs of early callus formation where segmental bone loss of the tibia was evident. Recovery was consistent with revascularization as well as a maturing wound incision site.