RAPID RESEARCH

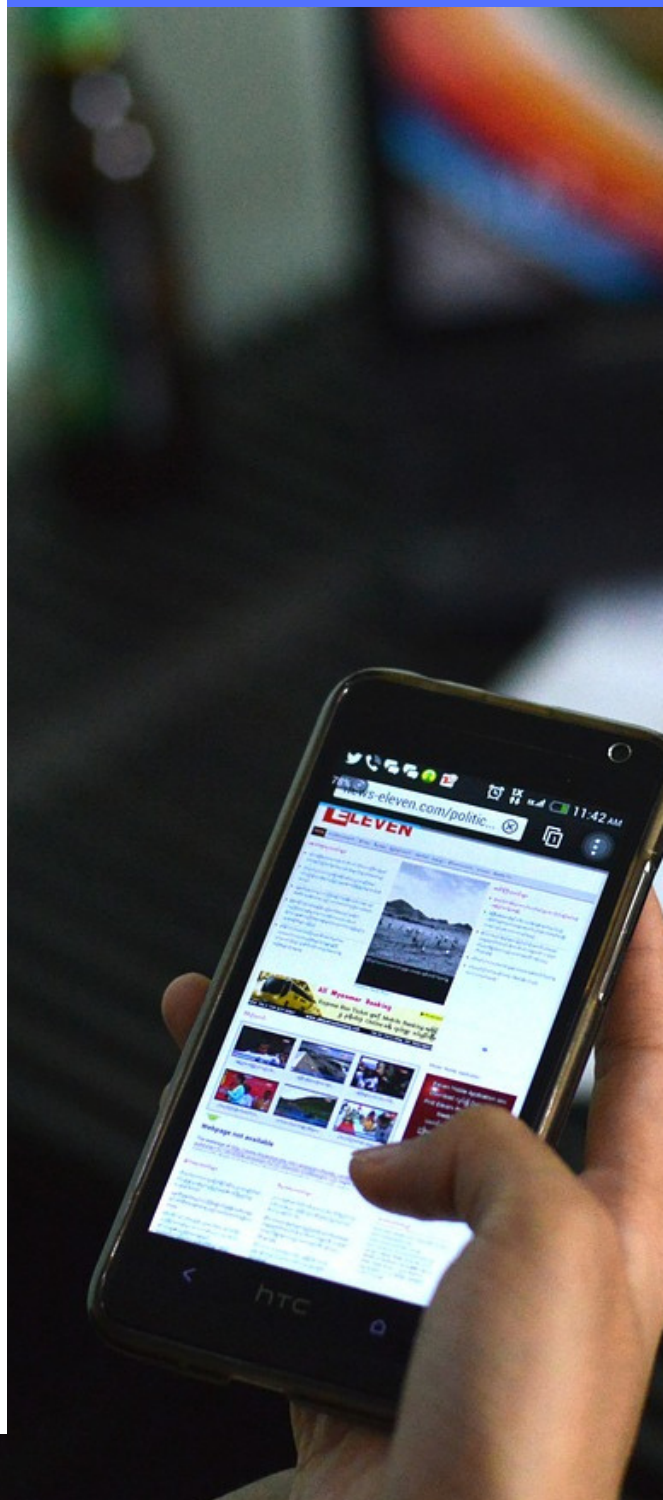
@physicaltherapyresearch

July 2022

Inside This Week:

Stress Fractures & Returning to Sport

- Bone Injuries; Do MRI Gradings Correlate with Return to Sport?
- Return to Sport Following Navicular Stress Fracture
- Scaphoid Fractures & Return to Sport

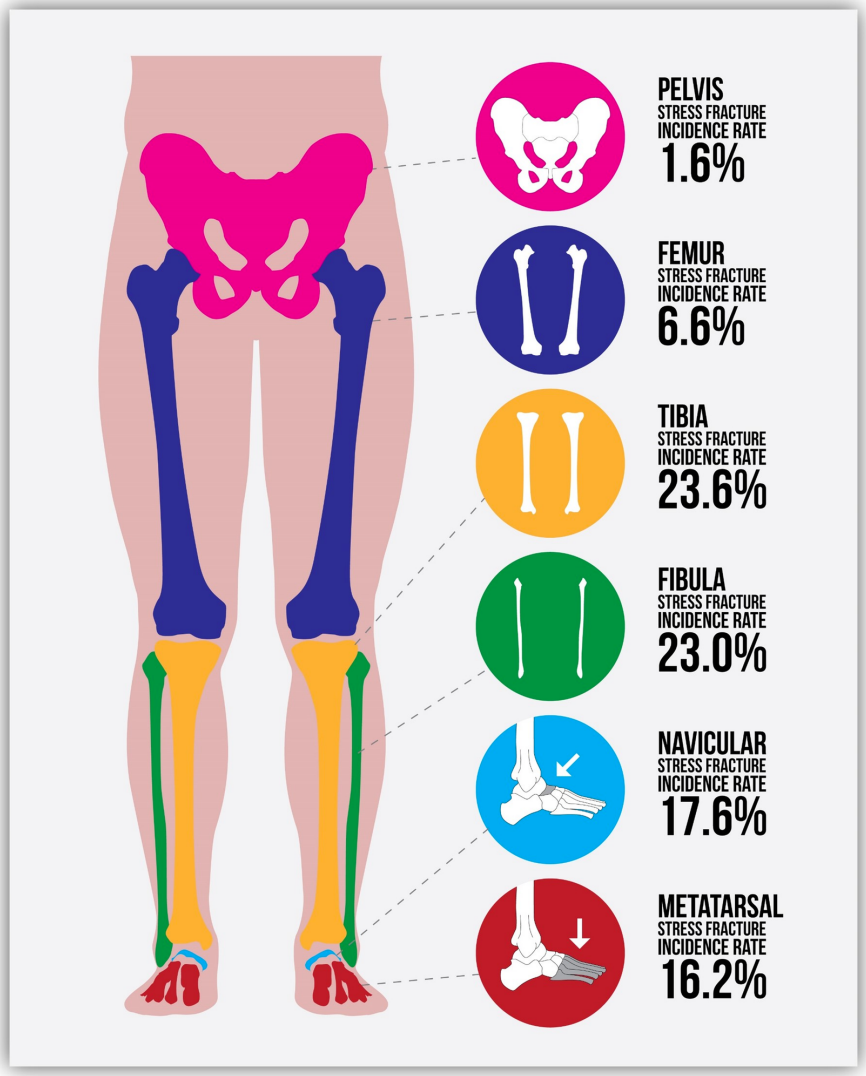


JULY 2022

BONE INJURIES; DO MRI GRADINGS CORRELATE WITH RETURN TO SPORT?

Click for Full Text (Hoenig et al. 2022)

This systematic review and meta-analysis examined whether MRI grading can accurately predict return-to-sport timeframes and rate of return to sports after the nonsurgical treatment of bone stress injuries.



KEY FINDINGS

16 studies with **560 bone stress injuries** included.

Higher grades of fracture (MRI-based) were associated with and correlated to an increased time to return to sports.

Combining all anatomic locations, average time to return to sport:
Grade 1: 41.7 days
Grade 2: 70.1 days
Grade 3: 84.3 days
Grade 4: 98.5 days

Trabecular-rich bone took longer to heal (pelvis, femoral neck, and calcaneus) **vs. cortical-rich bone** (tibia, metatarsal, other long-bones).

Overall, more than 90% of all athletes successfully returned to sports.

MAIN TAKEAWAYS

MRI grading may offer a **prognostic value in the prediction of return to sports** after the nonsurgical treatment of bone stress injuries.

Bone stress injuries of varying degrees should not be considered identical.

Patients need an **individually adapted treatment and rehab regimen, with consideration given to MRI-based injury severity.**

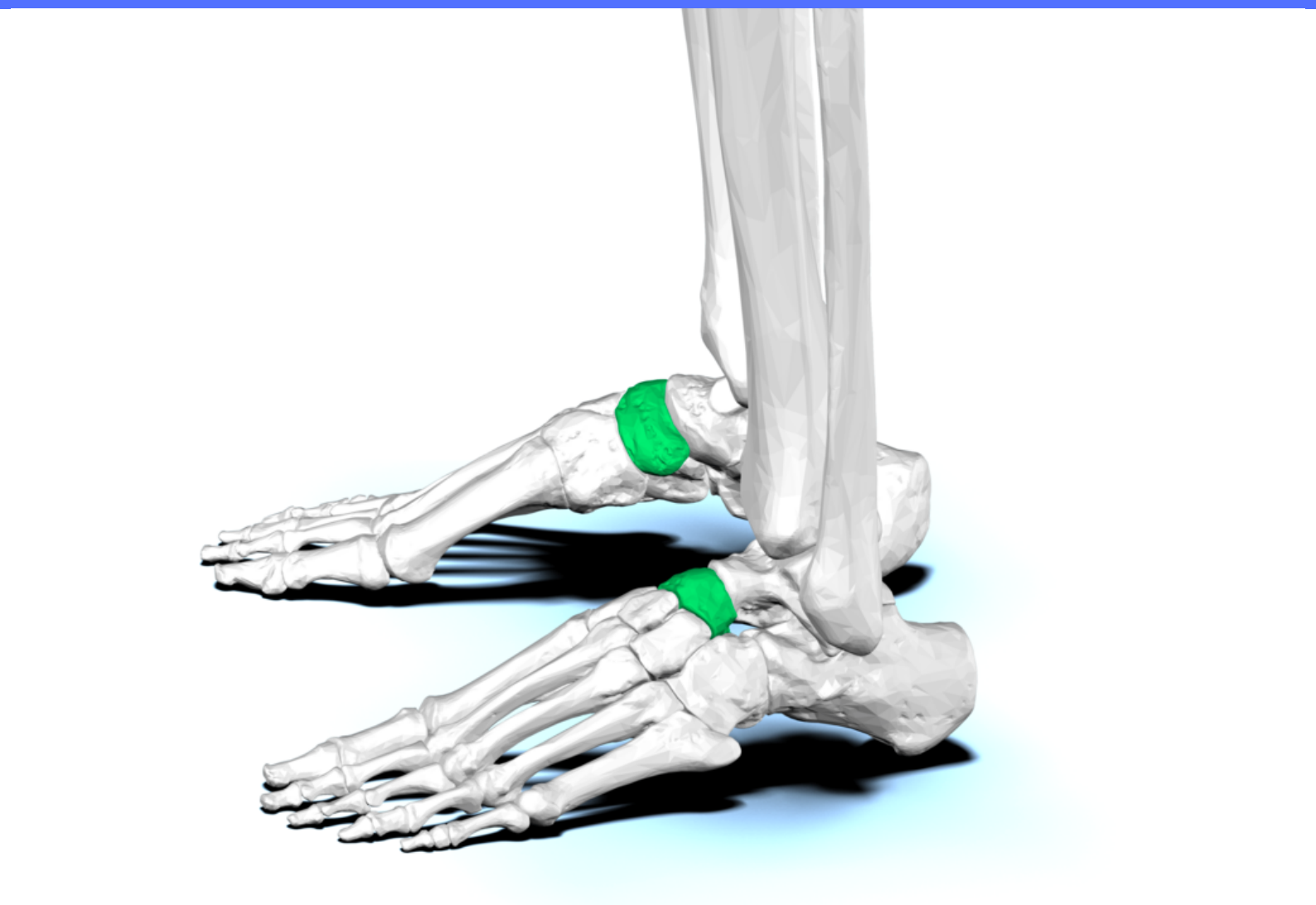
A prolonged time to return to sports may be avoided if bone stress injuries are detected early.

RETURN TO SPORT FOLLOWING NAVICULAR STRESS FRACTURE

JULY 2022

Click for Full Text (Khalil Attia et al. 2021)

This systematic review & meta-analysis investigates the success rate, return to play (RTP) rate, time to RTP, and complications of operatively and conservatively managed navicular stress fractures (NSFs).



KEY FINDINGS

11 studies included; 315 Navicular Stress Fractures (NSF).
108 managed operatively | 207 managed conservatively.

Successful Outcomes Reported:
Surgically Treated: 104/108 (96.30%)
Conservatively Treated: 149/207 (71.98%)

Return to Play Outcomes:
Surgically Treated: 97/98 (98.98%) | Average time 4.17 months
Conservatively Treated: 152/207 (73.43%) | Average time 4.67 months

Re-fractures Reported
Surgically Treated: 1 of 78 that followed-up
Conservatively Treated: 20 of 85 that followed up.

Average time of symptoms before diagnosis was 9.862 months.

MAIN TAKEAWAYS

Operative management of NSF provides a higher success rate, a lower re-fracture rate, and a lower non-union rate as compared to other non-operative management options.

While not statistically significant, there is a notable trend towards superior RTP rates and time to RTP following operative management.

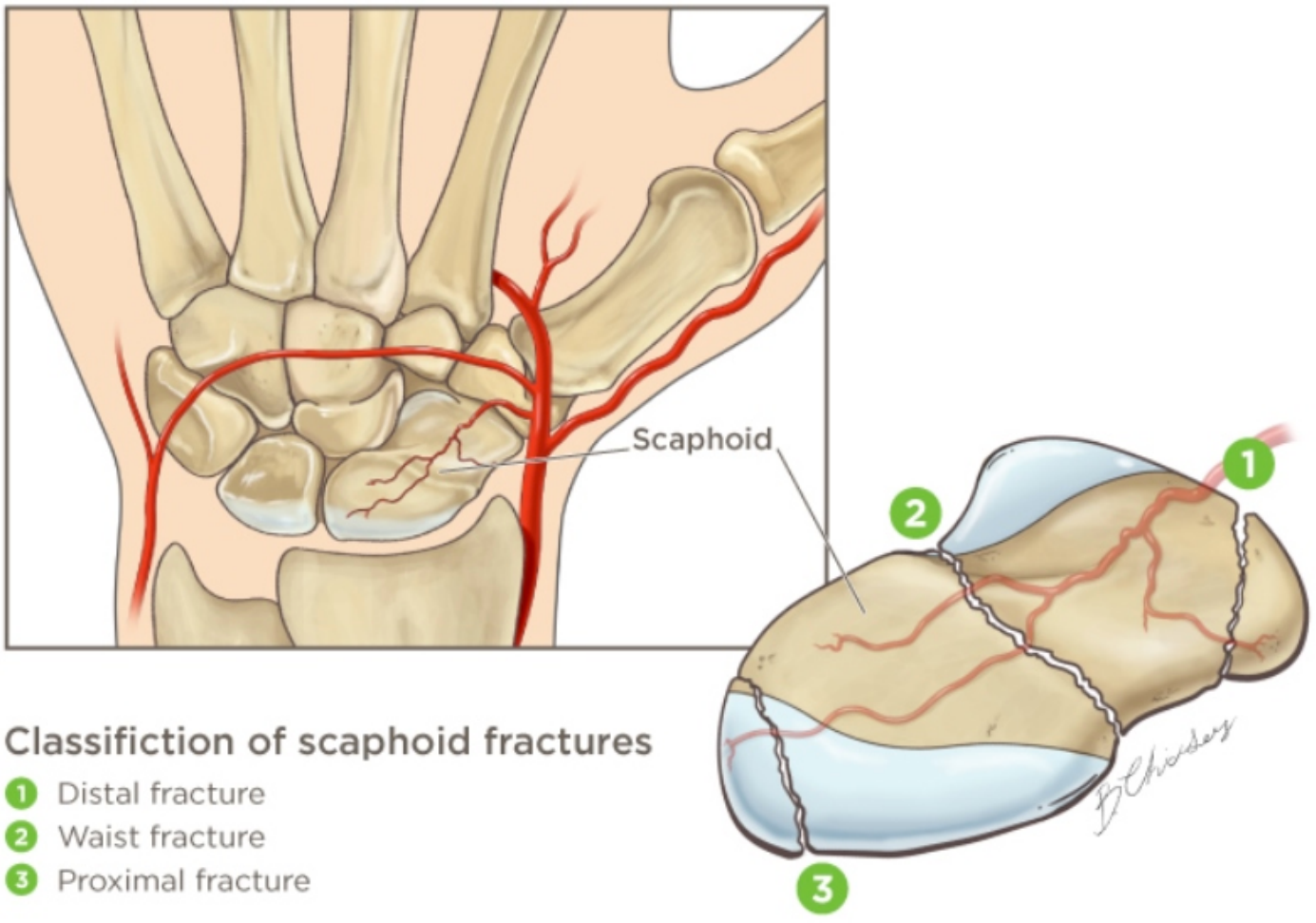
Operative fixation is recommended for all NSFs type I through III in athletes.

JULY 2022

SCAPHOID FRACTURES & RETURN TO SPORT

Click for Full Text (Goffin et al. 2019)

This systematic review aimed to assess return rates to sport (RRS) and mean return times to sport (RTS), and determining differences in sporting outcome for the various treatment methods following scaphoid fracture.



KEY FINDINGS

11 studies included; 7 conservative management, 8 included surgical.

Conservative management:

Return Rate to Sport (RRS) was 90% (69/77).

Average Return To Sport (RTS) was 9.6 wk.

Fracture Union rate was 85%, with average time to union 14 weeks.

Surgical management:

RRS was 98% (81/83)

Average RTS was 7.3 wk.

Fracture Union rate was 97%, with average time to union 9.8 wk.

Meta-analysis:

RRS, RTS, Union rates, Avg. times to union all significantly better for the surgical cohort compared to the conservative cohort.

MAIN TAKEAWAYS

Over 90% of athletes with a scaphoid fracture return to sport.

Conservative management can be successful.

Surgical management can provide a greater chance of returning to sport quicker with a higher rate of fracture union.

Risks of surgical complications, include:
Surgical site infection, neurovascular injury, metal work related symptoms and wound problems.

Return to sport during cast immobilization should be actively discouraged due to the high risk of non-union.

GIVE US YOUR FEEDBACK!

MEMBERS

We are on a mission to make research more accessible, easier to interpret, and quicker to implement.

Help us by giving 1 minute of your time to leave feedback for us.

We would greatly appreciate any feedback you have, as it helps us continually improve!

Leave Review