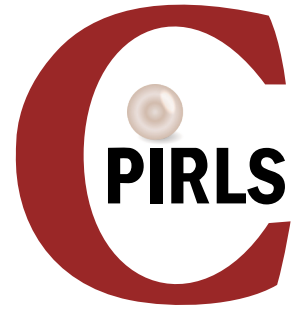


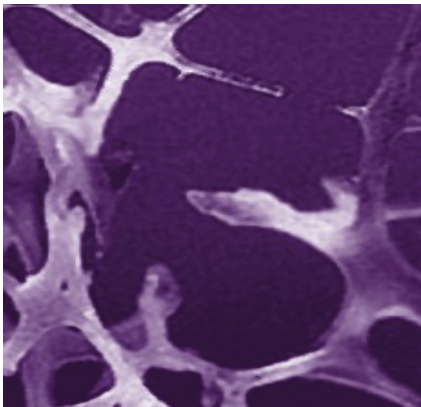
Safer Practice Notice



Monitoring and analysing chiropractic patient safety incident reports enables the CPiRLS Team to provide advice that can assist in ensuring improved standards of chiropractic patient safety. This Safer Practice Notice is a fast-track advice notice for all chiropractors.

Reducing the risk of rib fracture

Update issued: June 2022



Risk:

Rib fracture is an adverse event associated with manual therapy, in particular spinal manipulation to the thoracic or lumbar spine. The likely mechanism of injury is a thrust force applied to the thorax that exceeds the load tolerance of the patient. Reduced bone density is a relative contraindication to spinal manipulation due to the increased risk of osteoporotic fracture¹.

Evidence:

A review of the CPiRLS database (2009-2019) identified a theme of rib injury/fracture. The majority of incidents occurred among female patients. All patients affected were over the age of 45 years; the modal age was 55-64 years. Most reports of suspected rib fracture involved manipulation of the thoracic spine with the patient lying prone, but some involved a lumbar side posture manipulation. Consideration of bone density had not been documented in the majority of cases where suspected rib fracture was reported.

Recommended actions:

- Before considering manual therapy, all patients aged 40 and over should be adequately and periodically screened for osteoporosis².
- Chiropractors should be familiar with the numerous risk factors involved in osteoporosis including, but not limited to, gender, age, alcohol intake, lack of physical activity, long-term corticosteroid use, smoking and previous fragility fracture³.
- Chiropractors should seek to modify their care plan if a patient is at an increased risk of fracture².
- Caution should be applied during direct manipulation of the thoracic spine in the prone position.

References:

1. World Health Organisation (2005). WHO guidelines on basic training and safety in chiropractic. <https://apps.who.int/iris/handle/10665/43352> (Accessed 30 May 2022)
2. The Royal College of Chiropractors (2019) Osteoporosis Quality Standard. <https://rcc-uk.org/wp-content/uploads/2019/07/Osteoporosis-Quality-Standard-FinalA4-version-web.pdf> (Accessed 30 May 2022)
3. Poursmaeili F et al (2018). A comprehensive overview on osteoporosis and its risk factors. *Therapeutics and clinical risk management* 14:2029-2049

Recommended reading:

To D et al (2020) Lessons learned from cases of rib fractures after manual therapy: a case series to increase patient safety. *Journal of the Canadian Chiropractic Association* 64(1):7-15

Further information:

To read reported cases, and for further information about chiropractic patient safety incident reporting, visit <https://www.cpirls.org>.