Severity: Minimal

Condition Rating: Type I, II

Quality of Evidence: Class II

Consensus Level: 1

13.4 In patients with spondylolysis and spondylolisthesis caution is warranted when high-velocity thrust procedures are used. These conditions are **not contraindications**, but with progressive slippage, they may represent a **relative contraindication.**

Risk-of-Complication Rating:

Severity: Minimal to Moderate

Condition Rating: Type I, II

Quality of Evidence: Class II

Consensus Level: 1

13.5 Fractures and dislocations, or healed fractures with signs of ligamentous rupture or instability, represent an **absolute contraindication** to high-velocity thrust procedures applied to the anatomic site or region.

Risk-of-Complication Rating:

Severity: High

Condition Rating: Type III

Quality of Evidence: Class III

Consensus Level: 1

13.6 Atlanto-axial instability represents an **absolute contraindication** to high-velocity thrust procedures to the area of pathology.

Risk-of-Complication Rating:

Severity: High

Condition Rating: Type III

Quality of Evidence: Class III

Consensus Level: 1

13.7 Articular hypermobility, and circumstances where the stability of a joint is uncertain, represent a **relative contraindication** to high-velocity thrust procedures to the area of pathology.

Risk-of-Complication Rating:

Severity: Moderate

Condition Rating: Type I, II

Quality of Evidence: Class III

Consensus Level: 1

13.8 Post-surgical joint or segments with no evidence of instability are **not a contraindication** to high-velocity thrust procedures but may represent a **relative contraindication** depending on clinical signs (e.g., response, pre-test tolerance or degree of healing).

Risk-of-Complication Rating:

Severity: Minimal

Condition Rating: Type II

Quality of Evidence: Class III

Consensus Level: 1

13.9 Acute injuries of joint and soft tissues may require modification of treatment. In most cases, high-velocity thrust procedures to the area of pathology are **not contraindicated.**

Risk-of-Complication Rating:

Severity: Minimal to Moderate

Condition Rating: Type I, II

Quality of Evidence: Class I, II

Consensus Level: 1

13.10 The presence of a scoliosis is **not a contraindication** to high-velocity thrust procedures.

Risk-of-Complication Rating:

Severity: Minimal

Condition Rating: Type I, II

Quality of Evidence: Class II, III

Consensus Level: 1

B. Bone Weakening and Destructive Disorders

13.11 Active juvenile avascular necrosis, specifically of the weight bearing joints (e.g., Legg-Perthes disease) represents an **absolute contraindication** to high-velocity thrust procedures to the area of pathology.

Risk-of-Complication Rating:

Severity: High

Condition Rating: Type III

Quality of Evidence: Class III

Consensus Level: 1

13.12 Demineralization of bone warrants caution. This represents a **relative contraindication** to high-velocity thrust procedures to the area of pathology.

Risk-of-Complication Rating:

Severity: Minimal to Moderate

Condition Rating: Type II

Quality of Evidence: Class III

Consensus Level: 1

13.13 Benign bone tumours may result in pathological fractures and therefore represent a **relative to absolute contraindication** to high-velocity thrust procedures to the area of pathology. Tumour-like and dysplastic bone lesions may undergo malignant transformation or weaken bone to the point of pathological fracture and therefore represent a **relative to absolute contraindication** to high-velocity thrust procedures to the area of pathology.

Risk-of-Complication Rating:

Severity: Minimal to Moderate

Condition Rating: Type II, III

Quality of Evidence: Class III

Consensus Level: 1

13.14 Malignancies, including malignant bone tumours, are conditions for which high-velocity thrust procedures to the area of pathology are **absolutely contraindicated.**

Risk-of-Complication Rating:

Severity: Moderate to High

Condition rating: Type III

Quality of Evidence: Class III

Consensus Level: 1

13.15 Infection of bone and joint represents an **absolute contraindication** to high-velocity thrust procedures to the area of pathology.

Risk-of-Complication Rating:

Severity: High

Condition Rating: Type III

Quality of Evidence: Class III

Consensus Level: 1

C. Circulatory and Cardiovascular Disorders

13.16 Clinical manifestations of vertebrobasilar insufficiency syndrome warrant particular caution and represent a **relative to absolute contraindication** to cervical high-velocity thrust procedures to the area of pathology.

Risk-of-Complication Rating:

Severity: Minimal to High

Condition Rating: Type II, III

Quality of Evidence: Class II

Consensus Level: 1

13.17 When a diagnosis of a significant aneurysm involving a major blood vessel has been made, a **relative to absolute contraindication** may exist for high-velocity thrust procedures within the area of pathology.

Risk-of-Complication Rating:

Severity: High

Condition Rating: Type III

Quality of Evidence: Class III

Consensus Level: 1

13.18 Bleeding is a potential complication of anticoagulant therapy or certain blood dyscrasias. These disorders represent a **relative contraindication** to high-velocity thrust procedures.

Risk-of-Complication Rating:

Severity: Minimal to High

Condition Rating: Type II

Quality of Evidence: Class III

Consensus Level: 1

D. Neurological Disorders

13.19 Signs and symptoms of acute myelopathy or acute cauda equina syndrome represent an **absolute contraindication** to high-velocity thrust procedures.

Risk-of-Complication Rating:

Severity: High

Condition Rating: Type II, III

Quality of Evidence: Class II

Consensus Level: 1

* Most dysfunctions or disease processes have variations or phases. In assigning gradations of severity, it is assumed that the condition is characteristic of the average or common classical signs and symptoms. The difficulty in precisely detailing the degree of severity of an individual patient's overall physical and psychological response both to the disease process and therapeutic procedure itself (subtleties of force, amplitude, direction, patient positioning, etc.) is acknowledged; nevertheless, a rating has been assigned based on results of returned surveys and the available literature. This will provide a basis or starting point from which to fine tune future recommendations arising from discussion at the consensus conference.

VII. COMMENTS, SUMMARY OR CONCLUSION [Top]

This chapter provides an analytical framework and specific interim guideline recommendations with respect to complications of and contraindications to manipulative thrust procedures. At present detailed systematic studies on this subject are lacking and the recommendations made are based on information from clinical reviews and case reports, as well as from expert and consensus methods. One objective of this chapter is to encourage productive debate leading to firmer commitment on risk management protocols.

Recommendations made must be continuously re-evaluated in light of ongoing research and clinical experience. Co-operative intradisciplinary and interdisciplinary research will be necessary to determine the true extent of the nature and incidence of iatrogenic complications in chiropractic practice. The development of a central registry system capable of generating comprehensive research data would be valuable, and would facilitate the establishment of more detailed and refined guideline recommendations in the future.

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IX. MINORITY OPINIONS [Top]

None

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