Battiston ALM, Nunn N, Breeze S, Harrison J. Chiropractic spinal adjustments in patients with heavy sympathomimetic drug use. Asia-Pac Chiropr J. 2026;7.3 https://www.apcj.site/BattistonDrugUse.pdf

MANUS Summary

This narrative review examines the vascular effects of sympathomimetic drugs and their potential implications for cervical spinal adjustment or manipulation. The authors describe how heavy or prolonged cocaine exposure may contribute to endothelial dysfunction, vasospasm, hypertension, increased platelet aggregation, arterial wall degeneration and accelerated atherosclerosis. These mechanisms are associated with cardiovascular and cerebrovascular complications, including myocardial infarction, arterial dissection, and ischaemic and haemorrhagic stroke, sometimes in younger individuals without recognised conventional risk factors. Amphetamines, methamphetamine and methylphenidate are also discussed because of their sympathomimetic properties, although their specific relationships with cervical arterial pathology remain insufficiently investigated.

The review does not establish a direct causal relationship between sympathomimetic drug use, cervical manipulation and cervical artery dissection. Instead, it proposes that pre-existing stimulant-associated vascular injury could plausibly increase susceptibility to adverse vascular events, including the theoretical displacement of an existing thrombus during manipulation. The authors recommend comprehensive enquiry about recreational and prescribed stimulant use, individualised cardiovascular and neurological risk assessment, and recognition of active heavy use as a potential relative contraindication pending appropriate assessment. Conservative alternatives, including mobilisation, exercise therapy and soft-tissue interventions, and medical referral when indicated are advocated. Further prospective and large multicentre observational research is needed to quantify any additional manipulation-related risk.

MANUS QUIZ

Question 1.

What type of study is presented in this paper?

A. It is a randomised controlled trial comparing manipulation with exercise.
B. It is a narrative review of published literature.
C. It is a prospective cohort study of stimulant users.
D. It is a laboratory experiment involving cervical arteries.

Answer: B. The paper is a narrative review, not an original clinical trial or experimental study.

Question 2.

Which combination best reflects the mechanisms of cocaine-associated vascular injury discussed in the review?

A. Reduced blood pressure and inhibited platelet aggregation.
B. Increased arterial elasticity and improved endothelial function.
C. Endothelial dysfunction, vasospasm and enhanced platelet aggregation.
D. Reduced sympathetic activity and sustained vasodilation.

Answer: C. These mechanisms can impair vascular integrity and promote thrombosis and ischaemia.

Question 3.

How do the authors characterise the relationship between sympathomimetic drug use, cervical manipulation and cervical artery dissection?

A. A direct causal relationship has been conclusively demonstrated.
B. Stimulant exposure eliminates the possibility of manipulation-related vascular complications.
C. All reported dissections are caused exclusively by manipulation.
D. A biologically plausible concern exists, but direct causation has not been established.

Answer: D. The authors distinguish biological plausibility from an established causal relationship.

Question 4.

What approach do the authors recommend when active heavy sympathomimetic drug use is identified before cervical manipulation?

A. Consider it a potential relative contraindication pending appropriate individualised assessment.
B. Regard it as an absolute lifelong contraindication to every form of manual therapy.
C. Proceed without further assessment if the patient is young.
D. Assess recreational drug use but exclude prescribed stimulants from the history.

Answer: A. Active heavy use may warrant deferring cervical manipulation while the patient's overall vascular risk is assessed.

Question 5.

Which management options are suggested when significant vascular risk is identified?

A. Increasing the force of cervical manipulation.
B. Mobilisation, appropriate exercise and soft-tissue interventions, with medical referral when indicated.
C. Relying solely on the absence of conventional cardiovascular risk factors.
D. Continuing high-velocity cervical manipulation without monitoring.

B, The review recommends individualised conservative care and medical assessment when clinically indicated.