



**Considerations for Sport
Medicine
Procedures
With Office Reopening
During COVID-19**

Sport medicine procedures performed by an MD may include:

- IM injections
- Trigger point injections
- Joint aspirations for diagnostic purposes
- Intra-articular injections, landmark guided
- Intra-articular ultrasound guided
- Point of care ultrasound for diagnostic purposes

Prior to beginning a procedure, it is important to consider:

The relaunch of all semi urgent and elective medical procedures will be guided by the provincial public health authority

- What level of risk is present in my province, and in my region?
- Do we had adequate screening to identify patients at risk for COVID in our clinic?
- What stage of relaunch is your community currently in?

Public health allows urgent only

Public health allows urgent and semi urgent visits and procedures

Public health allows urgent, semi urgent, and elective visits and procedure

Stages

URGENT: Life or limb threatened, procedure required

SEMI URGENT: may be life or limb threatening, patient is likely to have immediate benefit such as significant improvement in function or pain due to the procedure or is necessary for diagnostic reasons for injury or illness

ELECTIVE: elective procedures in chronic conditions that can be rescheduled without meaningful functional impairment or patient risk.

We recommend that the physician and patient discuss the risks vs benefits of the proposed procedure and consider the following:

- where possible have this discussion virtually prior to any appointment for a procedure during the COVID-19 state of emergency (SOE)
- Is the patient at very high risk or high risk for suffering severe symptoms if they were to contract COVID-19?
- What are the patients current pain control for the condition the procedure is intended to assist with?
- What is the patient's current function for the condition the procedure is intended to assist with?
- Can the patient's pain, and function be stabilized without the proposed procedure?
- Is the patient likely to deteriorate if the procedure is not provided today?
Such as:
 - ✓ is the patient now a fall risk due to worsening joint pain?
 - ✓ Is the patient at risk of overdosing with medications due to inadequate pain control?
 - ✓ Is the condition significantly and negatively affecting the patient's mental health?
 - ✓ Is the patient likely to attend emergency for further treatment if the procedure today cannot be provided?

- Does the patient understand the risks vs benefits and is able to make a decision to consent to the procedure?

Specific considerations for intra articular injection of corticosteroids

Currently there is no literature published on the use of intra articular corticosteroids in patients infected with COVID-19. Prior literature including “Systemic effects of intra- articular steroids” Habib found that post injection overall patients had “serum cortisol decreased within hours with a nadir after usually 24-48 h” following the intra articular corticosteroid injection. In addition, the effect on inflammatory cytokines is immediate with significant decrease within hours (3) It is unclear at present, what effect an intra articular injection of corticosteroid would have on a patient with COVID-19.

Ultrasound guidance procedures:

These procedures require proximity to the patient and therefore PPE is recommended. However joint injections are not categorized as aerosol producing procedures by the WHO, and therefore do not require N95 masks.

- Consider the use of sterile probe covers during COVID-19 risk period to decrease chance of droplet contamination during the procedure
- Does my clinic have adequate cleaning supplies to clean probes, operating buttons, and U/S cart between each patient use?
- Can we ensure all surfaces of the machine are clean and dry between each use?
- Is the clinic staff adequately educated on the safe and correct cleaning of the ultrasound machine that will protect patients and not damage ultrasound probes?
- Can I ensure the safety of my staff when they are completing the cleaning post procedure?

Procedure examples only	URGENT	SEMI URGENT	ELECTIVE	Possible Contraindications To consider	PPE	Ultrasound Guidance During COVID risk period
Joint aspiration	Septic joint	Possible acute RA flare	Drainage of a baker's cyst		Surgical mask, medical grade gloves Goggles Gown	Sterile probe cover, Sterile field for procedure
Trigger point		Patients pain and/or function is not controlled and is likely to deteriorate	Pain and function is stable, but pt. interested in a trial/	Patient with active COVID	Surgical mask Gloves Goggles	
Joint injection of corticosteroids		Patients pain and function is not controlled and is likely to deteriorate due to pain	Trial pain control option	Patient who are high risk may elect to defer to later date with reduced COVID risk (ref)	Surgical mask Gloves goggles	Sterile probe cover Sterile Field for procedure

Joint injection of HA		Patients pain and function is not controlled and is likely to deteriorate due to pain	Trial pain control option	Patients at high risk may want to defer, currently no literature on the effects of HA And COVID	Surgical mask, gloves, googles	Sterile probe cover, sterile field for procedure
Joint injection of PRP		Patients pain and function is not controlled and is likely to deteriorate due to pain	Trail pain control option	Currently no literature on the risks, benefits Of PRP during COVID-19 SOE	Surgical mask, gloves, goggles , face shield for both clinician and staff member processing the pts blood for PRP	Sterile probe cover and sterile field

References

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112 Jay Karri, MD, MPH , Michelle L. Seymour, MD, PhD , Monica Verduzco-Gutierrez, MD , Prathap Jayaram, MD

2. Management of osteoarthritis during COVID-19 pandemic First published: 21 May 2020

<https://doi-org.login.ezproxy.library.ualberta.ca/10.1002/cpt.1910>

3. Systemic Effects of Intra-Articular Corticosteroids

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Abstract

The objective of this study was to review all the published articles in the English literature about the systemic effects of intra-articular corticosteroid injection (IACI) in humans. Reports were searched through Pubmed using the terms intraarticular or intra-articular and steroids, corticosteroids, or glucocorticosteroids up and including the year 2007. Reports were also located through references of articles. Only objective findings outside the injected joint were included. The overwhelming majority of the studies was done at the knee joint and in rheumatoid arthritis/juvenile idiopathic arthritis patients. Many of the studies were done on the hypothalamic-pituitary-adrenal axis. Serum cortisol decreased within hours with a nadir after usually 24-48 h following the IACI. Recovery to baseline takes 1-4 weeks and sometimes longer depending on the type and dose of IACI and on the number of injected joints. Serum cortisol levels were blunted following adrenocorticotrophic hormone stimulation in a small proportion of patients following methylprednisolone acetate injection and more common following other preparations. IACI resulted in

a transient increase in blood glucose levels over few days in controlled diabetic patients with knee osteoarthritis. Peak levels are around 300 mg%. IACIs are associated with reduction in inflammatory markers like C-reactive protein and erythrocyte sedimentation rate that start few days following the IACI and could last for months. The effect on inflammatory cytokines is immediate with significant decrease within hours. IACI may induce remission also in patients with oligo-/polyarthritis and/or in patients with extra-articular manifestations. Other metabolic, hematologic, vascular, allergic, visual, psychologic, and other effects were also reported.

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- Reduction of cortisol levels after single intra-articular and intramuscular steroid injection.

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- Systemic adverse events following intraarticular corticosteroid injections for the treatment of juvenile idiopathic arthritis: two patients with dermatologic adverse events and review of the literature.

Goldzweig O, Carrasco R, Hashkes PJ. *Semin Arthritis Rheum.* 2013 Aug;43(1):71-6. doi: 10.1016/j.semarthrit.2012.12.006. Epub 2013 Jan 16. PMID: 23332901 Review.