Clinical Operations Policy		
Title:	**Intra-Articular or Epidural Glucocorticoid Administration**	COP-12
Issuing Department/ Committee/Body:	Musculoskeletal (MSK) & Neuroradiology (Neuro) Sections	Effective From 05 December 2022 Until Next Updated
Policy Owner:	MSK & Neuro Section Heads	
Approval:	Board of Directors	

PURPOSE

To establish guidelines for exposure to glucocorticoid steroids by intra-articular or epidural injection route.

SCOPE

All Radiology Imaging Associates, P.C. (RIA) entities.

POLICY

BACKGROUND

There are no evidence-based guidelines or consensus within the medical community on the appropriate regimen for steroid injection dosage, frequency, or interval. There is substantial variation in steroid injection regimens across practices. Hypothalamic-pituitary-adrenal (HPA) axis suppression and adrenal insufficiency (AI) can occur with injected exogenous steroids, especially with repeated injections, although reported clinical complications are rare. Additional adverse effects of injected exogenous steroids include osteoporosis, hyperglycemia, anovulation, and glaucoma among others.

GENERAL GUIDELINES

- The administration of intra-articular or epidural steroids should not exceed 80 mg of methylprednisolone or this dose equivalent in a single setting.
- The administration of intra-articular or epidural steroids should not occur less than 2-3 weeks apart. The appropriate minimum interval between injections may differ depending on the type(s) of steroid administered.
- The administration of intra-articular or epidural steroids should not exceed 4 exposures in a 12 month period.

If there is a steroid injection request that falls outside of these guidelines, the request should be discussed with the on-site radiologist or with an MSK radiologist and a risk/benefit analysis should be performed to determine if the requested injection is appropriate. Injections that are requested in the setting of background oral steroid use should be reviewed on a case-by-case basis. Given the lack of evidence-based guidelines, the most prudent approach is to utilize repeat injections only in patients who are likely to have a significant improvement in symptoms from an injection, while attempting to avoid excess administration of exogenous steroids.

PROCEDURE

Patients should be evaluated by the procedure technologist, fluoroscopic technologist, nurse, or radiologist to establish the history of exogenous steroid exposure from all sources (intra-articular

injections, extra-articular injections, epidural injections, intravenous injections, oral, inhaled, topical) during the preceding 12 months.

- If the requested steroid injection falls outside of the general guidelines included above, the case should be discussed with the on-site radiologist or an MSK radiologist to allow a risk/benefit analysis to be performed.
- Invision Sally Jobe (ISJ) sites will utilize Appendix A for the patient's health history documentation.
- All other clinical sites are asked to utilize Appendix B if the information is not documented elsewhere in the medical record.

COMMON CORTICOSTERIOD INJECTABLES

Steroid	Commercial Names	Equivalent Potency (mg)	Solubility*	Maximum Particle Size (μm)†	Particles >10 μm (%)†	Particle Aggregation†	Benzyl Alcohol*	Polyethylene Glycol*
Methylprednisolone acetate	Depo-Medrol, Solu-Medrol, Duralone, Medralone	4	0.001‡	>500	45	Few	Yes	Yes
Triamcinolone acetonide	Kenalog	4	0.0002‡	>500	45	Extensive	Yes	No
Betamethasone acetate, betamethasone sodium phosphate	Celestone Soluspan, Betaject	0.75	Acetate form, "practically insoluble"; sodium phosphate form, freely soluble	500	35	Some	No	No
Dexamethasone sodium phosphate	Decadron Phosphate, Adrenocot, Decaject	0.75	Freely soluble	0.5	0	None	Yes	No

Source: MacMahon PJ et al. Injectable Corticosteroid and Local Anesthetic Preparations: A Review for Radiologists. Radiology 2009;252(3): 647-61

ASSOCIATED POLICIES

- COP-ISJ-08 Formulary
- COP-ISJ-47 Safe Injection Practices
- COP-23 Medical Imaging Exam and Procedure Orders

ATTACHMENTS

- PM-Form-03 ISJ Diagnostic Pain Management Questionnaire
- PM-Form-04 RIA Diagnostic Pain Management Questionnaire

REFERENCES

- "Injectable Corticosteroid and Local Anesthetic Preparations: A Review for Radiologists". Radiology 2009:252(3): 647-61.

REVIEW/REVISION HISTORY

Review/Revision	Summary of Review/Revision	Effective Date (month/day/year)
Original	Original document	12/05/2022
Revision	1. Revised language to indicated that Appendix A is for ISJ sites. 2. Deleted question in Appendix A, "Do you have any chronic medical conditions?" and labeled it as Appendix B.	12/11/2022
Revision	1. Replaced the "Do you have any chronic medical conditions?" question for both appendices.	01/09/2023
Revision	1. Revised the policy owner titles from Medical Directors to Section Heads. 2. Revised the indexing for the Medical Imaging Exam and Procedure Orders associated policy. 3. Added the proprietary language.	08/31/2023