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# Risks Associated with Intramuscular Injections in the Dorsal Gluteal Site

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# Risks Associated with Intramuscular Injections in the Dorsal Gluteal Site

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## SYNTHESIS OF EVIDENCE

All of the articles that were reviewed agreed that the dorsal gluteal injection site has risks and is not the best site for intramuscular injections. Four of the seven articles identified the possible risk of the dorsal gluteal intramuscular injection being injected into subcutaneous tissue instead of muscle. Five of the seven articles identified nerve damage as a potential risk to giving a dorsal gluteal injection. And one article mentioned the possibility of blood vessel damage. Two of the articles identified both nerve damage and injection into the subcutaneous tissue as a possibility in a dorsal gluteal injection. All of the articles reviewed suggested using the ventral gluteal site instead of the dorsal gluteal site for intramuscular injections in adults.

## RESULTS

**The ventral gluteal site is a safer intramuscular injection site than the dorsal gluteal site.**

## PATIENT CARE ISSUE

### Background & Significance

In the past the Dorsal gluteal injection was considered the preferred intramuscular injection site; however, recent research has suggested that there is a high risk of actually administering the medication into subcutaneous tissue instead of muscle (Burbridge, 2007) and there is also a high risk of damaging the sciatic nerve (Mishra and Stringer, 2010).

## EVIDENCE-BASED PRACTICE QUESTION

**Question: Should the dorsal gluteal injection site no longer be used in nursing practice?**

**Population: Patients needing Intramuscular injections, both in the inpatient and out patient settings.**

**Intervention: The ventral gluteal muscle should be used in place of the dorsal gluteal muscle for intramuscular injections.**

**Comparisons of interventions : Teach nurses the location of alternative, safer injection sites**

**Outcomes : Intramuscular injections would be given without the risk of sciatic nerve damage or the risk of the substance entering the subcutaneous tissue instead of the muscle.**

## EVIDENCE-BASED PRACTICE RECOMMENDATIONS

Evidence shows that the dorsal gluteal muscle should be used at a minimum as an injection site due to risk of injury. Alternate injection sites are available that have a decreased risk of injury.

## REGISTERED NURSE INTERVIEW

- RN uses dorsal gluteal site
- RN unfamiliar with ventral gluteal site
- Hospital policy stated ventral gluteal site is always to be used

## LIMITATIONS

- **There was not an abundance of quality research found on the topic.**
- **The ventral gluteal site may not be ideal in situations that require a nurse to rapidly administer an injection.**

## METHODS

- Databases
  - Academic Search Complete
  - PUBMED
  - CINAHL
- Key words
  - “ventral gluteal”
  - “dorsal gluteal”
  - “injection sites”
  - “intramuscular”
  - “sciatic nerve”
- 383 articles were found and 7 were selected
- Inclusion Criteria
  - Between the years 2007 and 2012
  - English language
  - Full text

## REFERENCES

### References

1. Bagis, S., Adam, M., Leblebici, U. B., Karatas, M., Guven, A. Z., & Celiker, A. R. (2011). Sciatic nerve injury due to intramuscular injection: electrophysical findings and one-year follow-up. *Turkish Journal of Medical Sciences*, 913-917.
2. Barron, C., & Cocoman, A. (2008). Administering intramuscular injections to children: what does the evidence say? *Journal of Children's and Young People's Nursing*, 138-144.
3. Burbridge, B. E. (2007). Computed Tomographic Measurement of the Gluteal Subcutaneous Fat Thickness in Reference to Failure of Gluteal Intramuscular Injections. *Canadian Association of Radiologists Journal*, 72-75.
4. Cocoman, A., & Murray, J. (2008). Intramuscular injections: a review of best practice for mental health nurses. *Journal of Psychiatric and Mental Health Nursing*, 424-434.
5. Mishra, P., & Stringer, M. D. (2010). Sciatic nerve injury from intramuscular injection: a persistent and global problem. *The International Journal of Clinical Practice*, 1573-1579.
6. Walsh, L., & Brophy, K. (2010). Staff nurses' sites of choice for administering intramuscular injections to adult patients in the acute care setting. *Journal of Advanced Nursing*, 1034-1040.
7. Zaybak, A., Gunes, U. Y., Tamsel, S., Khorshid, L., & Eser, I. (2007). Does obesity prevent the needle from reaching muscle in intramuscular injections? *JAN Original Research*, 552-556.