

**Specific Question:**

*Are side effects reduced if practice nurses administer the intramuscular (IM) contraceptive injection via the ventrogluteal site compared to the dorsogluteal site?*

**Clinical bottom line**

There is no evidence regarding side effects of intramuscular injection site for the administration of the contraceptive injection.

There is some weak evidence that the ventrogluteal site is preferable for intramuscular injections, where the drug manufactures state that this is an option in their guidance, and where practitioners take into account the health status and preferences of the patient. There is also evidence that training is required to ensure that practitioners are able to use the ventrogluteal method appropriately.

**Why is this important?**

The use of intramuscular injections is very common in nursing practice, and is the standard method for the administration of the contraceptive injection. However, there is little guidance relating to the most appropriate intramuscular injection site and debate on whether the dorsogluteal or ventrogluteal site is associated with fewer side effects.

**Search timeframe**

From each databases inception to March 2017.

**Inclusion criteria**

	<b>Description</b>	<b>Search terms</b>
<b>Population and setting</b>	Adult women wanting to use the IM contraceptive injection	<b>P:</b> Women Contraceptive Contraception
<b>Intervention or Exposure</b>	Injection in the dorsogluteal site. The dorsogluteal region is located on the superior	<b>I:</b> Intramuscular injection Dorsogluteal Dorso gluteal

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	lateral aspect of the gluteal buttocks when the buttock is divided into four equal areas	
<b>Comparison, if any</b>	The ventrogluteal region is located at the 'anterior lateral site	<b>C:</b> Injections Intramuscular Ventrogluteal Ventro gluteal
<b>Outcomes of interest</b>	Side effects, adverse events, pain	<b>O:</b> Side effect(s) Adverse event (s) (e.g. injection of medication into a blood vessel or subcutaneous tissue, pain, periostitis, nerve damage, abscess, cellulitis, tissue necrosis, haematoma and muscle contracture)
<b>Types of studies</b>	Cohort studies RCTs, systematic reviews	

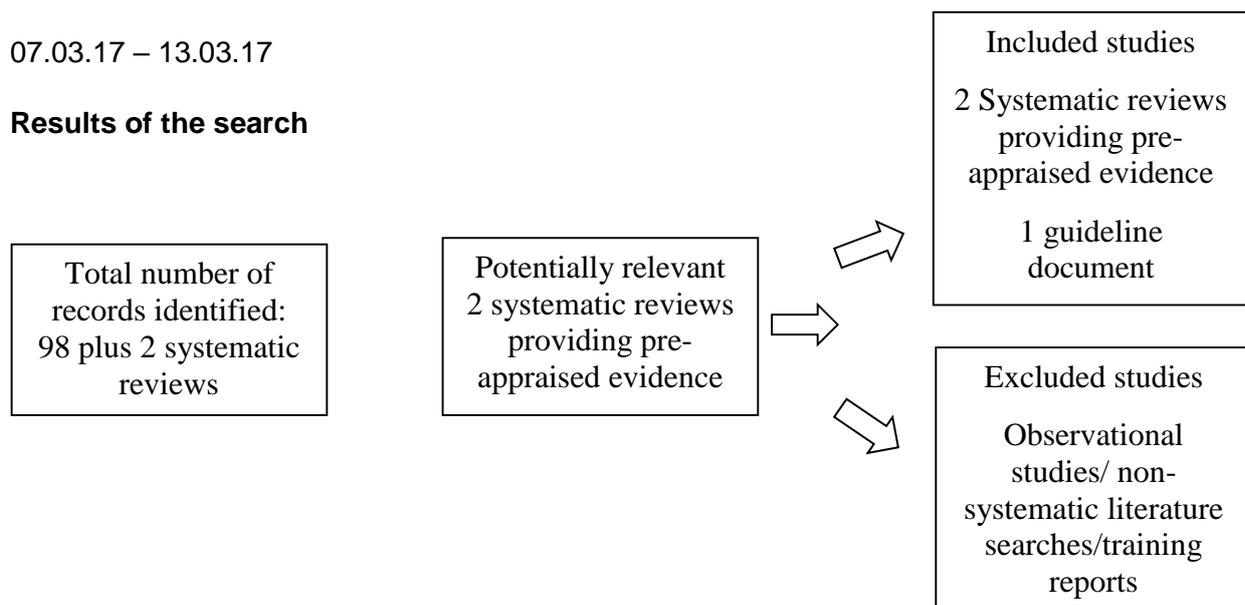
**Routine databases searched**

Cochrane systematic reviews, DARE/HTA/NHSNEED, Medline, CINAHL, Embase, Cochrane Central, Web of Science, British Nursing Index, Joanna Briggs Institute, TRIP

**Date of searches**

07.03.17 – 13.03.17

**Results of the search**



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Table 1 – Details of included studies

<b>First author, year and type of study</b>	<b>Population and setting</b>	<b>Intervention or exposure tested</b>	<b>Study results</b>	<b>Assessment of quality and comments</b>
Slade 2015, Review	Literature review to establish current understanding of present day knowledge, procedures and guidelines for the administration of IM injections  No specific population or setting	Selection of injection site	The ventrogluteal site; <ul style="list-style-type: none"> <li>▪ is capable of absorbing larger volumes of medication</li> <li>▪ has the most consistent depth of adipose tissue reducing accidental subcutaneous administration</li> <li>▪ is ideal for antibiotics, antiemetics, deep intramuscular and Z-track injections</li> </ul> Dorsogluteal site; <ul style="list-style-type: none"> <li>▪ has the lowest drug absorption rate</li> <li>▪ muscle mass may have atrophied in older/non-ambulant/emaciated populations</li> </ul>	Evidence derived from a structured search of the literature
Tufanaru 2016	Literature review to establish evidence for mental health settings	Use of ventrogluteal site for intramuscular injections	Evidence that the ventrogluteal site; <ul style="list-style-type: none"> <li>▪ is the preferred site of intramuscular injection provided that the product licence allows it</li> <li>▪ is the “safest” site for intramuscular injections</li> <li>▪ is associated with less complications/no documented evidence of complications</li> </ul>	Evidence derived from a structured search of the literature
Faculty of sexual and reproductive healthcare (FSRH) 2014	Progesterone only injectables	Use of ventrogluteal site	The use of the ventrogluteal site may; <ul style="list-style-type: none"> <li>▪ reduce the risk of sciatic nerve damage</li> <li>▪ be difficult in obese patients (as would dorsogluteal injection)</li> </ul>	Clinical guidelines, unclear whether a systematic search was undertaken

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**What would you tweet? (140 characters)**

There is weak evidence that ventrogluteal injection site leads to fewer side effects, but more training in this technique is needed.

**References**

Slade S (2015), Injection (Intramuscular). *The Joanna Briggs Institute*

Tufanaru C (2016), Mental health: Intramuscular injections (ventrogluteal site). *The Joanna Briggs Institute*

Faculty of sexual and reproductive healthcare (FSRH) (2014). *Royal College of Obstetrics and Gynaecologists*