



CONTRACEPTION

DEPOT MEDROXYPROGESTERONE ACETATE (DMPA): DEPO PROVERA

Keywords: Depot medroxyprogesterone acetate, DPMA, contraception, depo provera, ralovera, depo, progestin only, birth control, progestogen, progesterone, IM injection

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BACKGROUND INFORMATION

Depot medroxyprogesterone acetate (DMPA) is a progestogen only method of contraception which is given by intramuscular injection. It is available in Australia as Depo-Provera[®] or Depo-Ralovera[®]. DMPA works by prevention of ovulation, and also causes cervical mucus thickening, interfering with sperm penetration.¹

DMPA contraception may be a preferable option for women who cannot tolerate oestrogen¹, or who have a past history of ectopic pregnancy as the anovulant effect prevents pregnancy in any location. Women with a history of epilepsy using DMPA may have the frequency of seizures reduced, and for women with whom long term progesterone is indicated e.g. sickle cell disease it may be an option (causes an improvement of the haematological picture²). It can provide a suitable alternative method of contraception for women who are unable to tolerate oral methods e.g. women with inflammatory bowel disease or malabsorption problems.¹

Evidence has shown that DMPA is associated with a reduction of bone mineral density, although this is mostly reversible after discontinuation of use.³ This is particularly relevant for adolescents who have not yet reached peak bone mass. Women under 18 years and those more than 45 years of age should consider other forms of contraception, as there are concerns regarding the hypo-oestrogenic effects of DMPA and the impact on bone density, however this is not a contraindication.¹ Most women will have an average weight gain of 3kg during the first two years of use.²

KEY POINTS

1. Pregnancy should be excluded prior to administration of DPMA contraception.¹
2. DMPA injection can be given any time, however the World Health Organization does not recommend administration less than 6 weeks postpartum unless other more appropriate methods are unavailable or unacceptable.⁴
3. DMPA is given by deep intramuscular injection every 12 weeks \pm 2 weeks.³ If more than 14 weeks since the last injection, consider and exclude pregnancy.¹
4. DMPA users experience a mean reduction in bone mineral density of 7.7% and 6.4% in the hip and spine compared to 1.6% in controls over a 4 year period.¹

DMPA users regain some bone mineral density after discontinuation. There is limited evidence on fracture risk.¹

5. Alternative contraceptive methods should be considered first for women who are under 18 or over 45 years of age before prescribing DPMA.¹
6. Fertility may be delayed for up to 18 months following DPMA.¹

EFFICACY

- Perfect use 99.8 % efficacy, and typical use results in 94% efficacy.¹

CONTRAINDICATIONS¹

ABSOLUTE CONTRAINDICATIONS^{1, 4}

- Breast cancer, active within the last five years.

STRONG RELATIVE CONTRAINDICATIONS¹

- Cardiovascular disease and risk factors,⁴ including current or history of ischaemic heart disease (IHD), transient ischaemic attack (TIA), stroke, cerebrovascular accident, and hypertension with vascular disease (hypertensive retinopathy, peripheral vascular disease, IHD, TIA), coronary artery disease, and multiple risk factors for arterial disease.
- Current acute venous thromboembolism⁴ (deep vein thrombosis / pulmonary embolus), defined as currently being treated with an anticoagulant.
- Postpartum <6 weeks⁴
- Vascular complications (nephropathy, retinopathy, neuropathy, vascular disease)
- Diabetes (insulin & non-insulin dependent) - if complicated or of more than 20 years duration.
- Past history of breast cancer with no current disease for 5 years.
- Severe (decompensated) cirrhosis, hepatocellular (adenoma) or malignant liver tumours⁴
- Unexplained abnormal vaginal bleeding.⁴
- Positive (or unknown) antiphospholipid antibodies
- To initiate DMPA when severe thrombocytopenia already present.

SIDE EFFECTS¹

Include:

- | | | |
|--------------------------------|-----------------------------|------------------------|
| • irregular bleeding | • headaches | • acne |
| • weight gain | • breast tenderness | • loss of bone density |
| • delay in return to fertility | • mood change / libido loss | • amenorrhoea |

MEDICAL HISTORY AND EXAMINATION¹

Medical History¹

- Age, obesity, breast cancer, liver disease
- Pregnancy history, current breastfeeding, plans for future pregnancy – fertility may be delayed for up to 18 months (mean return to fertility 8 months after DMPA)
- Menstrual history – Investigate any abnormal bleeding and ensure the ‘last period’ was not an implantation bleed. Note: a negative pregnancy test does not exclude early pregnancy if the woman had unprotected sex in the previous 3 weeks.
- Risk for bone density loss/ osteopaenia/ osteoporosis – detailed assessment and advice should be completed for new users, and every 2 years for continuing users. Discuss risk of bone mineral density reduction which is associated with DPMA use.
- Cardiovascular history, IHD, stroke – assess risk. Note: Multiple risk factors (e.g. smoking, hypertension, diabetes, hypercholesteraemia, family history of CVD) increase risk for cardiovascular disease.
- Thromboembolic disease- if on anticoagulants, a haematoma may develop at DMPA injection site

Examination¹

1. Perform a blood pressure, measure weight and calculate the BMI.
2. No routine investigations, however if CVD risk factors present, test fasting lipids.

DOSAGE AND ADMINISTRATION

Shake gently³ and administer 150mg medroxyprogesterone acetate in a 1ml aqueous microcrystalline solution by deep [intramuscular injection](#) into the gluteal or deltoid muscle every 12 weeks \pm 14 days.¹ Do not rub³.

MANAGEMENT IF DMPA INJECTION IS LATE (>14 WEEKS SINCE LAST DOSE)¹

- Pregnancy excluded: A DPMA injection can be safely given if no unprotected sexual intercourse (UPSI) has occurred since 14 weeks after the last injection, but abstinence or condom use is advised for 7 days.
- Pregnancy not excluded: Consider emergency contraception if UPSI occurred in the past 5 days. Intramuscular DMPA is Australian Pregnancy Category A.³

Management options include:

- A repeat injection if >14 weeks has elapsed since the last DPMA injection, provided the woman is aware pregnancy cannot be excluded, has a negative pregnancy test, is advised to use condoms/abstinence for 7 days, and returns for a repeat pregnancy test in 4 weeks.¹
- OR to abstain / use condoms for 3 weeks, return after 3 weeks with a negative pregnancy test, and then have the DMPA injection, using condoms/abstaining for a further 7 days.¹

INITIATION OF DMPA¹

SITUATION	GIVEN	EFFECTIVE
No contraception or barriers	Day 1 of the first day of bleeding in normal menstrual cycle to day 5 At any other time; exclude pregnancy	Immediately ^{3, 5} 7 days ^{3, 5}
Combined pill or vaginal ring	Anytime if the pills / vaginal ring have been taken/used correctly. Otherwise consider excluding pregnancy	Immediately ³ 7 days
Etonogestrel Implant	Anytime if within 3 years of insertion If >3 years- exclude pregnancy	Immediately 7 days
Progestogen only pill (POP)	Menstruates regularly, day 1-5 Anytime if the pills have been taken correctly otherwise pregnancy should be excluded	Immediately ⁵ 7 days ⁵ , or continue POP for an additional 7 days ³
Abortion/ miscarriage ≤ 24 weeks	Immediately, up to day 5 post procedure If >day 5- consider risk of repeat pregnancy	Immediately 7 days
Copper IUD	Day 1 of the first day of bleeding in normal menstrual cycle to day 5 Other times	Immediate 7 days, or leave IUD in for another 7 days
Levonorgestrel IUD	Anytime if not expired	7 days, or leave IUD in for another 7 days
Post-partum* – fully breastfeeding	<21 days^ postpartum- Anytime ¹ - see note below >21 days^ post-partum and no menses-anytime if pregnancy is excluded- see note below. ^Note: The World Health Organization does not recommend DMPA <6 weeks unless other contraceptive options are unacceptable ⁴ If the menstrual cycle has resumed – as above for no contraception or barriers	Immediately 7 days As above
Post-partum* – not (or not fully) breastfeeding (includes stillbirths / terminations ≥24 weeks)	Less than 21 days postpartum – anytime More than 21 days postpartum and no menses – anytime if pregnancy is excluded If the menstrual cycle has resumed – as above for no contraception or barriers	Immediate 7 days As above

* **Note:** Progestogens used before 3 weeks postpartum, may cause heavy irregular bleeding.³

COUNSELLING

- Discussion should include:
 - time for injection to be effective, mechanism of action, effectiveness¹
 - method and frequency of injections¹
 - risk factors, side-effects, complications, advantages and disadvantages as a contraceptive, expected bleeding patterns and lack of sexually transmitted infection (STI) protection¹
 - follow-up with the GP or family planning services
- Provide the woman with written information, or where to access information about DPMA, which is available from Sexual & Reproductive Health Western Australia at <http://www.srhwa.com.au/> (formerly Family Planning WA). See also 'Other related documents' links on the next page.

FOLLOW-UP

Women should be reviewed before each DPMA injection for the following:

- presence of side-effects¹
- changed health status¹
- bleeding patterns¹
- injection site reactions⁵

As appropriate, review also for STI risk, pregnancy planning and offer cervical⁵ / breast screening if due.

Additionally, an annual medical review should include blood pressure, weight (if relevant), new medical conditions, and a bone loss risk assessment every 2 years.¹

REFERENCES / STANDARDS

1. Family Planning NSW, Family Planning QLD, Family Planning VIC. **Contraception: An Australian clinical practice handbook**. 3rd ed. Canberra: Sexual Health & Family Planning Australia; 2012. Available from: <http://contraceptionhandbook.org.au.kelibresources.health.wa.gov.au/acknowledgements-foreword/>
2. Guillebaud J, MacGregor A. **Contraception: Your questions answered**. 6th ed. Edinburgh: Churchill Livingstone Elsevier; 2013.
3. Buckley N, editor. **Australian medicines handbook**. 16th ed. Adelaide, SA: AMH; 2015.
4. World Health Organization. Medical eligibility criteria wheel for contraceptive use. Geneva, Switzerland: **WHO**. 2015. Available from: http://apps.who.int/iris/bitstream/10665/173585/1/9789241549257_eng.pdf?ua=1
5. Faculty of Sexual & Reproductive Healthcare. Progestogen-only injectable contraception: **FSRH**. 2015. Available from: <http://www.fsrh.org/pdfs/CEUGuidanceProgestogenOnlyInjectables.pdf>

National Standards – 1- Care Provided by the Clinical Workforce is Guided by Current Best Practice
4- Medication Safety

Legislation -

Related Policies – KEMH Clinical Guidelines: O&G: Contraception & Standard Protocols: [Intramuscular Injections](#)

Other related documents –

- RANZCOG: [Depot Medroxyprogesterone Acetate](#) (2012)
- Sexual Health & Family Planning Australia: [Contraceptive Choices](#) (2013)
- Sexual & Reproductive Health WA (General [brochures](#)): [Contraception Choices](#); [Contraceptive Injection](#)
- SRHWA (Health Professionals): [Contraception Essentials](#)
- WHO (2015) [Medical Eligibility Criteria Wheel for Contraceptive Use](#)

RESPONSIBILITY

Policy Sponsor	Nursing & Midwifery Director OGCCU
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