

1 **Summary of Product Characteristics**

2 **MEDWIN**

3 **Single dose vial**

4 <sup>Rx</sup> Medroxyprogesterone Injection 150 mg/mL

5 **1. Name of the medicinal product**

6 **1.1 Product Name:** MEDWIN

7 **1.2 Strength:** Medroxyprogesterone 150 mg/mL

8 **1.3 Pharmaceutical Dosage Form:** Sterile Suspension for Injection

9 **2. Qualitative and quantitative composition**

10 **2.1 Qualitative Declaration:** Medroxyprogesterone acetate

11 **INN Name:** Medroxyprogesterone

12 **2.2 Quantitative Declaration:**

13 **Active Ingredient:** Each mL of suspension contains medroxyprogesterone acetate Ph.Eur 150 mg.

14 **3. Pharmaceutical form**

15 Sterile Suspension for Injection

16 **4. Clinical particulars**

17 **4.1 Therapeutic indication**

18 **Progestogen: for contraception.**

19 Medroxyprogesterone is a long-term contraceptive agent suitable for use in women who have been  
20 appropriately counselled concerning the likelihood of menstrual disturbance and the potential for a delay in  
21 return to full fertility.

22 Medroxyprogesterone may also be used for short-term contraception in the following circumstances:

23 1) For partners of men undergoing vasectomy, for protection until the vasectomy becomes effective.

24 2) In women who are being immunised against rubella, to prevent pregnancy during the period of activity  
25 of the virus.

26 3) In women awaiting sterilisation.

27 Since loss of bone mineral density (BMD) may occur in females of all ages who use Medroxyprogesterone  
28 Injection long-term (see section 4.4), a risk/benefit assessment, which also takes into consideration the  
29 decrease in BMD that occurs during pregnancy and/or lactation, should be considered before giving the  
30 Injection of Medroxyprogesterone.

31 Paediatric population (12-18 years)

32 In adolescents, medroxyprogesterone may be used, but only after other methods of contraception have been  
33 discussed with the patient and considered unsuitable or unacceptable.

34 It is of the greatest importance that adequate explanations of the long-term nature of the product, of its  
35 possible side-effects and of the impossibility of immediately reversing the effects of each Injection are given  
36 to potential users and that every effort is made to ensure that each patient receives such counselling as to  
37 enable her to fully understand these explanations. Patient information leaflets are supplied by the  
38 manufacturer. It is recommended that the doctor uses these leaflets to aid counselling of the patient before  
39 giving the Injection of Medroxyprogesterone.

40 Consistent with good clinical practice a general medical as well as gynaecological examination should be  
41 undertaken before administration of Medroxyprogesterone and at appropriate intervals thereafter.

42 **4.2 Posology and method of administration**

43 Posology

44 **Adults:**

45 **First Injection:** To provide contraceptive cover in the first cycle of use, an Injection of 150 mg IM should be  
46 given during the first five days of a normal menstrual cycle. If the Injection is carried out according to these  
47 instructions, no additional contraceptive cover is required.

48 **Post Partum:** To increase assurance that the patient is not pregnant at the time of first administration, this  
49 Injection should be given within 5 days post partum if not breast-feeding.

50 There is evidence that women prescribed medroxyprogesterone in the immediate puerperium can experience  
51 prolonged and heavy bleeding. Because of this, the drug should be used with caution in the puerperium.  
52 Women who are considering use of the product immediately following delivery or termination should be  
53 advised that the risk of heavy or prolonged bleeding may be increased. Doctors are reminded that in the non  
54 breast-feeding, post partum patient, ovulation may occur as early as week 4.

55 If the puerperal woman will be breast-feeding, the initial Injection should be given no sooner than six weeks  
56 post partum, when the infant's enzyme system is more fully developed. Further Injections should be given  
57 at 12 week intervals.

58 **Further doses:** These should be given at 12 week intervals, however, as long as the Injection is given no  
59 later than five days after this time, no additional contraceptive measures (e.g. barrier) are required. (N.B. For  
60 partners of men undergoing vasectomy, a second Injection of 150 mg I.M. 12 weeks after the first may be  
61 necessary in a small proportion of patients where the partner's sperm count has not fallen to zero.) If the  
62 interval from the preceding Injection is greater than 89 days (12 weeks and five days) for any reason, then  
63 pregnancy should be excluded before the next Injection is given and the patient should use additional  
64 contraceptive measures (e.g. barrier) for fourteen days after this subsequent Injection.

65 **Elderly:** Not appropriate.

66 **Paediatric population:** Medroxyprogesterone is not indicated before menarche (see section 4.1)

67 Data in adolescent females (12-18 years) is available (see section 4.4). Other than concerns about loss of  
68 BMD, the safety and effectiveness of Medroxyprogesterone is expected to be the same for adolescents after  
69 menarche and adult females.

#### 70 **Switching from other Methods of Contraception**

71 Medroxyprogesterone should be given in a manner that ensures continuous contraceptive coverage. This  
72 should be based upon the mechanism of action of other methods, (e.g. patients switching from oral  
73 contraceptives should have their first Injection of Medroxyprogesterone within 7 days of taking their last active  
74 pill)

#### 75 **Hepatic Insufficiency**

76 The effect of hepatic disease on the pharmacokinetics of Medroxyprogesterone is unknown. As  
77 Medroxyprogesterone largely undergoes hepatic elimination it may be poorly metabolised in patients with  
78 severe liver insufficiency (see section 4.3).

#### 79 **Renal Insufficiency**

80 The effect of renal disease on the pharmacokinetics of Medroxyprogesterone is unknown. No dosage  
81 adjustment should be necessary in women with renal insufficiency, since Medroxyprogesterone is almost  
82 exclusively eliminated by hepatic metabolism.

#### 83 **Method of Administration**

84 The sterile aqueous suspension of medroxyprogesterone should be vigorously shaken just before use to  
85 ensure that the dose being given represents a uniform suspension of Medroxyprogesterone.

86 Doses should be given by deep intramuscular Injection. Care should be taken to ensure that the depot  
87 Injection is given into the muscle tissue, preferably the gluteus maximus, but other muscle tissue such as the  
88 deltoid may be used.

89 The site of Injection should be cleansed using standard methods prior to administration of the Injection.

#### 90 **4.3 Contraindication**

91 Hypersensitivity to medroxyprogesterone acetate or to any of excipients listed in section 6.1.

92 Medroxyprogesterone should not be used during pregnancy, either for diagnosis or therapy.

93 Medroxyprogesterone is contraindicated as a contraceptive at the above dosage in known or suspected  
94 hormone-dependent malignancy of breast or genital organs.

95 Medroxyprogesterone is contraindicated in patients with the presence or history of severe hepatic disease  
96 whose liver function tests have not returned to normal.

97 Whether administered alone or in combination with oestrogen, Medroxyprogesterone should not be employed  
98 in patients with abnormal uterine bleeding until a definite diagnosis has been established and the possibility  
99 of genital tract malignancy eliminated.

#### 100 4.4 Special warning and precautions for use

##### 101 **Loss of Bone Mineral Density:**

102 Use of medroxyprogesterone reduces serum oestrogen levels and is associated with significant loss of BMD  
103 due to the known effect of oestrogen deficiency on the bone remodelling system. Bone loss is greater with  
104 increasing duration of use; however BMD appears to increase after Medroxyprogesterone is discontinued  
105 and ovarian oestrogen production increases.

106 This loss of BMD is of particular concern during adolescence and early adulthood, a critical period of bone  
107 accretion. It is unknown if use of medroxyprogesterone by younger women will reduce peak bone mass and  
108 increase the risk for fracture in later life.

109 A study to assess the BMD effects of medroxyprogesterone acetate IM (Medroxyprogesterone, DMPA) in  
110 adolescent females showed that its use was associated with a significant decline in BMD from baseline. In  
111 the small number of women who were followed-up, mean BMD recovered to around baseline values by 1- 3  
112 years after discontinuing treatment. In adolescents, Medroxyprogesterone may be used, but only after other  
113 methods of contraception have been discussed with the patients and considered to be unsuitable or  
114 unacceptable.

115 In women of all ages, careful re-evaluation of the risks and benefits of treatment should be carried out in  
116 those who wish to continue use for more than 2 years. In particular, in women with significant lifestyle and/or  
117 medical risk factors for osteoporosis, other methods of contraception should be considered prior to use of  
118 Medroxyprogesterone.

119 Significant risk factors for osteoporosis include:

- 120 • Alcohol abuse and/or tobacco use
- 121 • Chronic use of drugs that can reduce bone mass, e.g. anticonvulsants or corticosteroids
- 122 • Low body mass index or eating disorder, e.g. anorexia nervosa or bulimia
- 123 • Previous low trauma fracture
- 124 • Family history of osteoporosis

125 For further information on BMD changes in both adult and adolescent females, refer to section 5.1. Adequate  
126 intake of calcium and Vitamin D, whether from the diet or from supplements, is important for bone health in  
127 women of all ages.

128 **Menstrual Irregularity:** The administration of Medroxyprogesterone usually causes disruption of the normal  
129 menstrual cycle. Bleeding patterns include amenorrhoea (present in up to 30% of women during the first 3  
130 months and increasing to 55% by month 12 and 68% by month 24); irregular bleeding and spotting; prolonged  
131 (>10 days) episodes of bleeding (up to 33% of women in the first 3 months of use decreasing to 12% by  
132 month 12). Rarely, heavy prolonged bleeding may occur. Evidence suggests that prolonged or heavy bleeding  
133 requiring treatment may occur in 0.5-4 occasions per 100 women years of use. If abnormal bleeding persists  
134 or is severe, appropriate investigation should take place to rule out the possibility of organic pathology and

135 appropriate treatment should be instituted when necessary. Excessive or prolonged bleeding can be controlled  
 136 by the co-administration of oestrogen. This may be delivered either in the form of a low dose (30 micrograms  
 137 oestrogen) combined oral contraceptive pill or in the form of oestrogen replacement therapy such as  
 138 conjugated equine oestrogen (0.625-1.25 mg daily). Oestrogen therapy may need to be repeated for 1-2  
 139 cycles. Long-term co-administration of oestrogen is not recommended.

140 **Return to Fertility:** There is no evidence that medroxyprogesterone causes permanent infertility. Pregnancies  
 141 have occurred as early as 14 weeks after a preceding Injection, however, in clinical trials, the mean time to  
 142 return of ovulation was 5.3 months following the preceding Injection. Women should be counselled that there  
 143 is a potential for delay in return to full fertility following use of the method, regardless of the duration of use,  
 144 however, 83% of women may be expected to conceive within 12 months of the first "missed" Injection (i.e.  
 145 15 months after the last Injection administered). The median time to conception was 10 months (range 4-31)  
 146 after the last Injection.

147 **Cancer Risks:** Long-term case-controlled surveillance of medroxyprogesterone users found no overall  
 148 increased risk of ovarian, liver, or cervical cancer and a prolonged, protective effect of reducing the risk of  
 149 endometrial cancer in the population of users.

150 Breast cancer is rare among women under 40 years of age whether or not they use hormonal contraceptives.  
 151 Results from some epidemiological studies suggest a small difference in risk of the disease in current and  
 152 recent users compared with never-users. Any excess risk in current or recent DMPA users is small in relation  
 153 to the overall risk of breast cancer, particularly in young women (see below), and is not apparent after 10  
 154 years since last use. Duration of use does not seem to be important.

155

156 **Table 1: Possible number of additional cases of breast cancer diagnosed up to 10 years after stopping**  
 157 **injectable progestogens\***

Age at last use of DMPA	No of cases per 10,000 women who are never-users	Possible additional cases per 10,000 DMPA users
20	Less than 1	Much less than 1
30	44	2-3
40	160	10

158 \*based on use for 5 years"

159 **Weight Gain:** There is a tendency for women to gain weight while on medroxyprogesterone therapy. Studies  
 160 indicate that over the first 1-2 years of use, average weight gain was 5-8 lbs. Women completing 4-6 years  
 161 of therapy gained an average of 14-16.5 lbs. There is evidence that weight is gained as a result of increased  
 162 fat and is not secondary to an anabolic effect or fluid retention.

163 **Anaphylaxis:** Reports of anaphylactic responses (anaphylactic reactions, anaphylactic shock, anaphylactoid  
 164 reactions) have been received.

165 **Thrombo-embolic Disorders:** Should the patient experience pulmonary embolism, cerebrovascular disease or

166 retinal thrombosis while receiving medroxyprogesterone, the drug should not be re-administered.

167 *Psychiatric Disorders:* Patients with a history of endogenous depression should be carefully monitored. Some  
168 patients may complain of premenstrual-type depression while on medroxyprogesterone therapy.

169 Depressed mood and depression are well-known undesirable effects of hormonal contraceptive use (see  
170 section 4.8). Depression can be serious and is a well-known risk factor for suicidal behaviour and suicide.  
171 Women should be advised to contact their physician in case of mood changes and depressive symptoms,  
172 including shortly after initiating the treatment.

173 *Abscess formation:* As with any intramuscular Injection, especially if not administered correctly, there is a risk  
174 of abscess formation at the site of Injection, which may require medical and/or surgical intervention.

175 *Precautions:*

176 History or emergence of the following conditions require careful consideration and appropriate investigation:  
177 migraine or unusually severe headaches, acute visual disturbances of any kind, pathological changes in liver  
178 function and hormone levels.

179 Patients with thromboembolic or coronary vascular disease should be carefully evaluated before using  
180 medroxyprogesterone.

181 A decrease in glucose tolerance has been observed in some patients treated with progestogens. The  
182 mechanism for this decrease is obscure. For this reason, diabetic patients should be carefully monitored  
183 while receiving progestogen therapy.

184 Rare cases of thrombo-embolism have been reported with use of medroxyprogesterone, but causality has  
185 not been established. The effects of medroxyprogesterone acetate on lipid metabolism have been studied  
186 with no clear impact demonstrated. Both increases and decreases in total cholesterol, triglycerides and low-  
187 density lipoprotein (LDL) cholesterol have been observed in studies.

188 The use of medroxyprogesterone appears to be associated with a 15-20% reduction in serum high density  
189 lipoprotein (HDL) cholesterol levels which may protect women from cardiovascular disease. The clinical  
190 consequences of this observation are unknown. The potential for an increased risk of coronary disease should  
191 be considered prior to use.

192 Doctors should carefully consider the use of medroxyprogesterone in patients with recent trophoblastic  
193 disease before levels of human chorionic gonadotrophin have returned to normal.

194 Physicians should be aware that pathologists should be informed of the patient's use of medroxyprogesterone  
195 if endometrial or endocervical tissue is submitted for examination.

196 The results of certain laboratory tests may be affected by the use of medroxyprogesterone. These include  
197 gonadotrophin levels (decreased), plasma progesterone levels (decreased), urinary pregnanediol levels  
198 (decreased), plasma oestrogen levels (decreased), plasma cortisol levels (decreased), glucose tolerance test,  
199 metyrapone test, liver function tests (may increase), thyroid function tests (protein bound iodine levels may  
200 increase and T3 uptake levels may decrease). Coagulation test values for prothrombin (Factor II), and Factors

201 VII, VIII, IX and X may increase.

202 Women should be counselled that Medroxyprogesterone does not protect against sexually transmitted  
203 infections (STIs) including HIV infection (AIDS). Safer sex practices including correct and consistent use of  
204 condoms reduce the transmission of STIs through sexual contact, including HIV.

205 The benefits of contraceptive options and their risks must be evaluated individually for each woman.

#### 206 **4.5 Interaction with other medicinal products and other forms of interactions**

207 Aminoglutethimide administered concurrently with medroxyprogesterone may significantly depress the  
208 bioavailability of Medroxyprogesterone.

209 Interactions with other medicinal treatments (including oral anticoagulants) have rarely been reported, but  
210 causality has not been determined. The possibility of interaction should be borne in mind in patients receiving  
211 medroxyprogesterone with other drugs.

212 The clearance of medroxyprogesterone acetate is approximately equal to the rate of hepatic blood flow.  
213 Because of this fact, it is unlikely that drugs which induce hepatic enzymes will significantly affect the kinetics  
214 of medroxyprogesterone acetate. Therefore, no dose adjustment is recommended in patients receiving drugs  
215 known to affect hepatic metabolising enzymes.

216 Medroxyprogesterone acetate (MPA) is metabolized in-vitro primarily by hydroxylation via the CYP3A4.  
217 Specific drug- drug interaction studies evaluating the clinical effects with CYP3A4 inducers or inhibitors on  
218 MPA have not been conducted and therefore the clinical effects of CYP3A4 inducers or inhibitors are  
219 unknown.

#### 220 **4.6 Pregnancy and lactation**

221 Doctors should check that patients are not pregnant before initial Injection of medroxyprogesterone, and  
222 also if administration of any subsequent Injection is delayed beyond 89 days (12 weeks and five days).

223 Infants from accidental pregnancies that occur 1-2 months after Injection of Medroxyprogesterone may be at  
224 an increased risk of low birth weight, which in turn is associated with an increased risk of neonatal death.  
225 The attributable risk is low because such pregnancies are uncommon.

226 Children exposed to medroxyprogesterone acetate *in utero* and followed to adolescence, showed no evidence  
227 of any adverse effects on their health including their physical, intellectual, sexual or social development.

228 Medroxyprogesterone acetate and/or its metabolites are secreted in breast milk, but there is no evidence to  
229 suggest that this presents any hazard to the child. Infants exposed to medroxyprogesterone acetate via  
230 breast milk have been studied for developmental and behavioural effects to puberty. No adverse effects have  
231 been noted.

#### 232 **4.7 Effects on ability to drive and use machine**

233 Medroxyprogesterone may cause headaches and dizziness. Patients should be advised not to drive or  
234 operate machinery if affected.

**235 4.8 Undesirable effects**

236 The table below provides a listing of adverse drug reactions with frequency based on all-causality data from  
 237 clinical studies that enrolled more than 4200 women who received DMPA for contraception for up to 7 years.  
 238 Those most frequently (>5%) reported adverse drug reactions were weight increased (69%), weight decreased  
 239 (25%), headache (16%), nervousness (11%), abdominal pain or discomfort (11%), dizziness (6%), and  
 240 decrease in libido (6%).

241 The following lists of adverse reactions are listed within the organ system classes, under headings of  
 242 frequency (number of patients expected to experience the reaction), using the following categories:

243 *Very common* ( $\geq 1/10$ )

244 *Common* ( $\geq 1/100$  to  $< 1/10$ );

245 *Uncommon* ( $\geq 1/1000$  to  $< 1/100$ );

246 *Rare* ( $\geq 1/10,000$  to  $< 1/1000$ );

247 *Very rare* ( $< 1/10,000$ );

248 *Not known* (cannot be estimated from the available data)

249 **Table 2: Adverse reactions are listed within the organ system classes**

<b>System Organ Class</b>	<b>Very Common <math>\geq 1/10</math></b>	<b>Common <math>\geq 1/100</math> to <math>&lt; 1/10</math></b>	<b>Uncommon <math>\geq 1/1000</math> to <math>&lt; 1/100</math></b>	<b>Rare <math>\geq 1/10,000</math> to <math>&lt; 1/1000</math></b>
Neoplasms Benign, Malignant and Unspecified (Incl. Cysts and Polyps)				Breast cancer
Blood and lymphatic system disorders				Anaemia, Blood disorder
Immune system disorders			Drug hypersensitivity	Anaphylactic reaction, Anaphylactoid reaction, Angioedema
Metabolism & Nutrition Disorder			Increased appetite, decreased appetite	
Psychiatric disorders	Nervousness	Depression, Libido decreased	Insomnia	Anorgasmia, Emotional disturbance, Effective disorder, Irritability, Anxiety
Nervous system	Headache	Dizziness	Seizure,	Migraine, Paralysis, Syncope

disorders			Somnolence, Paraesthesia	
Ear and Labyrinth Disorder				Vertigo
Cardiac disorder				Tachycardia
Vascular disorders			Hot flush	Embolism and thrombosis, Deep vein thrombosis, Thrombophlebitis, Hypertension, Varicose veins
Respiratory, thoracic, and mediastinal disorders			Dyspnoea	Pulmonary embolism
Gastrointestinal disorders	Abdominal pain, Abdominal Discomfort	Nausea, Abdominal Distension		Rectal haemorrhage, Gastrointestinal disorder
Hepatobiliary disorders			Hepatic function Abnormal	Jaundice, Hepatic enzyme abnormal
Skin and subcutaneous tissue disorders		Alopecia, Acne, Rash	Hirsutism, Urticaria, Pruritus, Chloasma	Lipodystrophy acquired*, Dermatitis, Ecchymosis, Scleroderma, Skin striae
Musculoskeletal and connective tissue disorders		Back pain, Pain in extremity		Arthralgia, Muscle spasms, Osteoporosis, Osteoporotic fractures
Reproductive system and breast disorders		Vaginal discharge, Breast tenderness, Dysmenorrhea, Genitourinary tract infection	Dysfunctional uterine bleeding (irregular, increase, decrease, spotting, Galactorrhoea Pelvic pain, Dyspareunia, Suppressed Lactation	Vaginitis, Amenorrhoea, Breast pain, Metrorrhagia, Menometrorrhagia, Menorrhagia, Vulvovaginal dryness, Breast atrophy, Ovarian cyst, Premenstrual syndrome, Endometrial hyperplasia, Breast mass, Nipple exudate bloody, Vaginal cyst, Breast enlargement, Lack of return to fertility, Sensation of pregnancy

General disorders and administration site conditions		Odema/Fluid retention, Asthenia	Chest pain	Pyrexia, Fatigue, Injection site reaction*, Injection site persistent atrophy/ indentation/dimpling*, Injection site nodule/lump*, Injection site pain/tenderness* Thirst, Dysphonia, VIth nerve paralysis, Axillary swelling
Investigation	Weight increased, Weight Decreased			Bone density decreased, Glucose Tolerance decreased, Cervical smear abnormal

250 \*ADR identified post-marketing

251 Reporting of suspected adverse reactions

252 Reporting suspected adverse reactions after authorisation of the medicinal product is important. It allows  
253 continued monitoring of the benefit/risk balance of the medicinal product. Healthcare professionals are asked  
254 to report any suspected adverse reactions via the Yellow Card Scheme at [www.mhra.gov.uk/yellowcard](http://www.mhra.gov.uk/yellowcard) or  
255 search for MHRA Yellow Card in the Google Play or Apple App Store.

256 **4.9 Overdose**

257 Cessation of therapy.

258 **5. Pharmacological Properties**

259 **5.1 Pharmacodynamic Properties**

260 Pharmacotherapeutic group: Progestogens, ATC code: G03AC06

261 Medroxyprogesterone acetate exerts anti-oestrogenic, anti-androgenic and antigonadotrophic effects.

262 ***Mechanism of action***

263 DMPA, when administered parenterally at the recommended dose to women, inhibits the secretion of  
264 gonadotropins which, in turn, prevents follicular maturation and ovulation and causes thickening of cervical  
265 mucus which inhibits sperm entry into the uterus

266 ***BMD Changes in Adult Women***

267 A study comparing changes in BMD in women using medroxyprogesterone with women using  
268 medroxyprogesterone acetate Injection (150 mg IM) showed no significant differences in BMD loss between  
269 the two groups after two years of treatment. Mean percent changes in BMD in the medroxyprogesterone  
270 group are listed in Table 3.

271 **Table 3. Mean percent change from baseline in BMD in women using Depo-Provera by Skeletal**  
 272 **Site**

Time on Treatment	Lumbar Spine		Total Hip		Femoral Neck	
	N	Mean% Change (95% CI)	N	Mean % Change (95% CI)	N	Mean % Change (95% CI)
1 year	166	-2.7 (-3.1 to -2.3)	166	-1.7 (-2.1 to -1.3)	166	-1.9 (-2.5 to -1.4)
2 year	106	- 4.1 (-4.6 to -3.5)	106	-3.5 (-4.2 to -2.7)	106	-3.5 (-4.3 to -2.6)

273 In another controlled, clinical study adult women using medroxyprogesterone acetate Injection (150 mg IM)  
 274 for up to 5 years showed spine and hip mean BMD decreases of 5-6%, compared to no significant change  
 275 in BMD in the control group. The decline in BMD was more pronounced during the first two years of use,  
 276 with smaller declines in subsequent years. Mean changes in lumbar spine BMD of -2.86%, -4.11%, -4.89%,  
 277 -4.93% and -5.38% after 1, 2, 3, 4 and 5 years, respectively, were observed. Mean decreases in BMD of  
 278 the total hip and femoral neck were similar. Please refer to Table 2 below for further details.

279 After stopping use of medroxyprogesterone acetate Injection (150 mg IM), BMD increased towards baseline  
 280 values during the post-therapy period. A longer duration of treatment was associated with a slower rate of  
 281 BMD recovery.

282 **Table 4. Mean percent change from baseline in BMD in adults by Skeletal Site and cohort after 5 Years**  
 283 **of therapy with medroxyprogesterone acetate 150 mg IM and after 2 years post-therapy or 7 years of**  
 284 **observation (control)**

Time Study	Spine		Total Hip		Femoral Neck	
	Medroxypro gesterone acetate	Control	Medroxypro gesterone acetate	Control	Medroxypro gesterone acetate	Control
5 years*	n=33 -5.38%	n=105 0.43%	n=21 -5.16%	n=65 0.19%	n=34 -6.12%	n=106 -0.27%
7 years**	n=12 -3.13%	n=60 0.53%	n=7 -1.34%	n=39 0.94%	n=13 -5.38%	n=63 -0.11%

286 \*The treatment group consisted of women who received medroxyprogesterone acetate Injection (150 mg IM)  
 287 for 5 years and the control group consisted of women who did not use hormonal contraception for this time  
 288 period.

289 \*\* The treatment group consisted of women who received medroxyprogesterone acetate Injection (150 mg  
 290 IM) for 5 years and were then followed up for 2 years post-use and the control group consisted of women  
 291 who did not use hormonal contraceptive for 7 years.

292 **BMD Changes in Adolescent Females (12-18 years)**

293 Results from an open-label, non-randomised, clinical study of Medroxyprogesterone acetate Injection (150  
294 mg IM every 12 weeks for up to 240 weeks (4.6 years), followed by post-treatment measurements) in  
295 adolescent females (12-18 years) also showed that medroxyprogesterone acetate IM use was associated  
296 with a significant decline in BMD from baseline. Among subjects who received  $\geq 4$  Injections/60-week period,  
297 the mean decrease in lumbar spine BMD was -2.1 % after 240 weeks (4.6 years); mean decreases for the  
298 total hip and femoral neck were -6.4 % and -5.4 %, respectively.

299 Post-treatment follow-up showed that, based on mean values, lumbar spine BMD recovered to baseline  
300 levels approximately 1 year after treatment was discontinued and that hip BMD recovered to baseline levels  
301 approximately 3 years after treatment was discontinued. However, it is important to note that a large number  
302 of subjects discontinued from the study, therefore these results are based on a small number of subjects  
303 (n=71 at 60 weeks and n=25 at 240 weeks after treatment discontinuation). In contrast, a non-comparable  
304 cohort of unmatched, untreated subjects, with different baseline bone parameters from the DMPA users,  
305 showed mean BMD increases at 240 weeks of 6.4%, 1.7% and 1.9% for lumbar spine, total hip and femoral  
306 neck, respectively.

307 **5.2 Pharmacokinetic Properties**

308 Parenteral Medroxyprogesterone acetate (MPA) is a long acting progestational steroid. The long duration of  
309 action results from its slow absorption from the Injection site. Immediately after Injection of 150 mg/ml MPA,  
310 plasma levels were  $1.7 \pm 0.3$  nmol/l. Two weeks later, levels were  $6.8 \pm 0.8$  nmol/l. Concentrations fell to the  
311 initial levels by the end of 12 weeks. At lower doses, plasma levels of MPA appear directly related to the  
312 dose administered. Serum accumulation over time was not demonstrated. MPA is eliminated via faecal and  
313 urinary excretion. Plasma half-life is about six weeks after a single intramuscular Injection. At least 11  
314 metabolites have been reported. All are excreted in the urine, some, but not all, conjugated.

315 **5.3 Preclinical Safety data**

316 No data held.

317 **6. Pharmaceutical Particulars**

318 **6.1 List of excipients**

319 Macrogol 3350

320 Polysorbate 80

321 Sodium chloride

322 Methyl parahydroxybenzoate

323 Propyl parahydroxybenzoate

324 Sodium hydroxide

325 Hydrochloric acid

326 Water for Injections

327 **6.2 Incompatibilities**

328 Not applicable.

329 **6.3 Shelf life**

330 24 months

331 **6.4 Special precautions for storage**

332 Store below 30°C. Do not freeze.

333 **6.5 Nature and contents of container**

334 1 ml suspension for Injection in 4 mL clear glass vial stoppered with gray bromobutyl rubber stopper and  
335 sealed with aluminum seal with polypropylene disc, packed singly.

336 **6.6 Special precautions for disposal and other handling**

337 No special requirements for disposal.

338 **7. Marketing Authorization Holder**

339 Imported by:

340 APL Pharma Thai Ltd

341 438 Phattanakarn 30, Phattanakarn Road,

342 Suanluang Subdistrict, Suanluang District,

343 Bangkok, Thailand 10250

344 Manufactured by:

345 Eugia Pharma Specialities Limited,

346 Survey No. 550, 551 & 552, Kolthur Village,

347 Shameerpet Mandal,

348 Medchal-Malkajgiri District,

349 Telangana, India.

350 **8. Marketing Authorization Number:** 1C...../.....

351 **9. Date of authorization:** .....

352 **10. Date of revision of the text:** December 12, 2022