

Summary of Product Characteristics

MEDWIN

Pre-filled syringe

^{Rx} Medroxyprogesterone Injection 150 mg/mL

1. Name of the medicinal product

1.1 Product Name: MEDWIN

1.2 Strength: Medroxyprogesterone 150 mg/mL

1.3 Pharmaceutical Dosage Form: Sterile Suspension for Injection

2. Qualitative and quantitative composition

2.1 Qualitative Declaration: Medroxyprogesterone acetate

INN Name: Medroxyprogesterone

2.2 Quantitative Declaration:

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

3. Pharmaceutical form

Sterile Suspension for Injection

4. Clinical particulars

4.1 Therapeutic indication

Progestogen: for contraception.

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

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

- 1) For partners of men undergoing vasectomy, for protection until the vasectomy becomes effective.
- 2) In women who are being immunised against rubella, to prevent pregnancy during the period of activity of the virus.
- 3) In women awaiting sterilisation.

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

Paediatric population (12-18 years)

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

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

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

4.2 Posology and method of administration

Posology

Adults:

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

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

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

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

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

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

101 **4.4 Special warning and precautions for use**

102 ***Loss of Bone Mineral Density:***

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

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

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

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

120 Significant risk factors for osteoporosis include:

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

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

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

or is severe, appropriate investigation should take place to rule out the possibility of organic pathology and appropriate treatment should be instituted when necessary. Excessive or prolonged bleeding can be controlled by the co-administration of oestrogen. This may be delivered either in the form of a low dose (30 micrograms oestrogen) combined oral contraceptive pill or in the form of oestrogen replacement therapy such as conjugated equine oestrogen (0.625-1.25 mg daily). Oestrogen therapy may need to be repeated for 1-2 cycles. Long-term co-administration of oestrogen is not recommended.

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

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

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

Table 1: Possible number of additional cases of breast cancer diagnosed up to 10 years after stopping 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

*based on use for 5 years"

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

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

166 *Thrombo-embolic Disorders:* Should the patient experience pulmonary embolism, cerebrovascular disease or
 167 retinal thrombosis while receiving medroxyprogesterone, the drug should not be re-administered.

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

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

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

176 *Precautions:*

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

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

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

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

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

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

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

197 The results of certain laboratory tests may be affected by the use of medroxyprogesterone. These include
 198 gonadotrophin levels (decreased), plasma progesterone levels (decreased), urinary pregnanediol levels
 199 (decreased), plasma oestrogen levels (decreased), plasma cortisol levels (decreased), glucose tolerance test,
 200 metyrapone test, liver function tests (may increase), thyroid function tests (protein bound iodine levels may

201 increase and T3 uptake levels may decrease). Coagulation test values for prothrombin (Factor II), and Factors
202 VII, VIII, IX and X may increase.

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

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

207 **4.5 Interaction with other medicinal products and other forms of interactions**

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

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

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

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

221 **4.6 Pregnancy and lactation**

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

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

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

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

233 **4.7 Effects on ability to drive and use machine**

234 Medroxyprogesterone may cause headaches and dizziness. Patients should be advised not to drive or

235 operate machinery if affected.

236 **4.8 Undesirable effects**

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

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

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

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

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

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

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

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

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

System Organ Class	Very Common $\geq 1/10$	Common $\geq 1/100$ to $< 1/10$	Uncommon $\geq 1/1000$ to $< 1/100$	Rare $\geq 1/10,000$ to $< 1/1000$
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 disorders	Headache	Dizziness	Seizure, Somnolence, Paraesthesia	Migraine, Paralysis, Syncope
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		Oedema/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, Vllth nerve paralysis, Axillary swelling
Investigation	Weight increased, Weight Decreased			Bone density decreased, Glucose Tolerance decreased, Cervical smear abnormal

251 *ADR identified post-marketing

252 Reporting of suspected adverse reactions

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

257 **4.9 Overdose**

258 Cessation of therapy.

259 **5. Pharmacological Properties**

260 **5.1 Pharmacodynamic Properties**

261 Pharmacotherapeutic group: Progestogens, ATC code: G03AC06

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

263 ***Mechanism of action***

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

267 ***BMD Changes in Adult Women***

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

group are listed in Table 3.

Table 3. Mean percent change from baseline in BMD in women using Depo-Provera by Skeletal 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)

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

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

Table 4. Mean percent change from baseline in BMD in adults by Skeletal Site and cohort after 5 Years of therapy with medroxyprogesterone acetate 150 mg IM and after 2 years post-therapy or 7 years of 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%

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

** The treatment group consisted of women who received medroxyprogesterone acetate Injection (150 mg IM) for 5 years and were then followed up for 2 years post-use and the control group consisted of women

292 who did not use hormonal contraceptive for 7 years.

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

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

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

308 **5.2 Pharmacokinetic Properties**

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

316 **5.3 Preclinical Safety data**

317 No data held.

318 **6. Pharmaceutical Particulars**

319 **6.1 List of excipients**

320 Macrogol 3350

321 Polysorbate 80

322 Sodium chloride

323 Methyl parahydroxybenzoate

324 Propyl parahydroxybenzoate

325 Sodium hydroxide

326 Hydrochloric acid

327 Water for Injections

328 6.2 Incompatibilities

329 Not applicable.

330 6.3 Shelf life

331 24 months

332 6.4 Special precautions for storage

333 Store below 30°C. Do not freeze.

334 6.5 Nature and contents of container

335 1 ml suspension for injection in 2.25 ml glass barrel with plastic rigid tip cap with luer lock adapter stoppered
336 with black chlorobutyl plunger rubber stopper along with white plunger rod, pack size of 1, 6, & 24's Pre-filled
337 syringes along with needles.

338 6.6 Special precautions for disposal and other handling

339 No special requirements for disposal.

340 7. Marketing Authorization Holder

341 Imported by:

342 APL Pharma Thai Ltd

343 438 Phattanakarn 30, Phattanakarn Road,

344 Suanluang Subdistrict, Suanluang District,

345 Bangkok, Thailand 10250

346 Manufactured by:

347 Eugia Pharma Specialities Limited,

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

349 Shameerpet Mandal,

350 Medchal-Malkajgiri District,

351 Telangana, India.

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

353 **9. Date of authorization:**

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