## **Prescribing Information**

## Femoston® conti 0.5 mg/2.5 mg

## 1. Name of the medicinal product

Femoston® conti 0.5 mg/2.5 mg

## 2. Qualitative and quantitative composition

28 tablets, each containing 0.5 mg estradiol (as hemihydrate) and 2.5 mg dydrogesterone.

Excipient with known effect: lactose monohydrate 117.4 mg

For the full list of excipients, see section 6.1.

#### 3. Pharmaceutical form

Film-coated tablet.

Round, biconvex tablets marked 379 on one side.

Yellow 0.5/2.5 mg tablets.

## 4. Clinical particulars

## 4.1 Therapeutic indications

Hormone replacement therapy (HRT) for estrogen deficiency symptoms in postmenopausal women at least 12 months since last menses.

Femoston is indicated for women with an intact uterus.

Experience in treating women older than 65 years is limited.

#### 4.2 Posology and method of administration

Femoston-conti 0.5 mg/2.5 mg is a continuous combined HRT for oral use.

The estrogen and the progestogen are given every day without interruption.

The dosage is one tablet per day for a 28 day cycle.

Femoston-conti 0.5 mg/2.5 mg should be taken continuously without a break between packs.

For initiation and continuation of treatment of postmenopausal symptoms, the lowest effective dose for the shortest duration (see also section 4.4) should be used.

Femoston is indicated for the treatment of symptoms and not for prevention.

In case of no improvement of symptoms within 3 months, treatment should be stopped

Continuous combined treatment may be started with Femoston-conti 0.5 mg/2.5 mg depending on the time since menopause and severity of symptoms. Women experiencing a natural menopause should commence treatment with Femoston conti 0.5 mg/2.5 mg not earlier than at least 12 months after their last natural menstrual bleed. For surgically induced menopause, treatment may start immediately.

Depending on the clinical response, the dosage can subsequently be adjusted.

Patients changing from a continuous sequential or cyclical preparation should complete the 28 day cycle and then change to Femoston conti 0.5 mg/2.5 mg.

Patients changing from another continuous combined preparation may start therapy at any time If a dose has been forgotten, it should be taken as soon as possible. If more than 12 hours have elapsed, treatment should be continued with the next tablet without taking the forgotten tablet. The likelihood of breakthrough bleeding or spotting may be increased.

Femoston conti 0.5 mg/2.5 mg can be taken irrespectively of food intake.

#### Paediatric population:

There is no relevant indication for the use of Femoston conti 0.5 mg/2.5 mg in the paediatric population.

#### 4.3 Contraindications

- Known, past or suspected breast cancer
- Known or suspected estrogen-dependent malignant tumours (e.g. endometrial cancer)
- Undiagnosed genital bleeding
- Untreated endometrial hyperplasia
- Previous or current venous thromboembolism (deep venous thrombosis, pulmonary embolism)
- Known thrombophilic disorders (e.g. protein C, protein S, or antithrombin deficiency, see section 4.4)
- Active or recent arterial thromboembolic disease (e.g. angina, myocardial infarction)
- Acute liver disease, or a history of liver disease, as long as the liver function tests have failed to return to normal
- Porphyria
- Hypersensitivity to the active substances or to any of the excipients listed in section 6.1

## 4.4 Special warnings and precautions for use

For the treatment of postmenopausal symptoms, HRT should only be initiated for symptoms that adversely affect quality of life. In all cases, a careful appraisal of the risks and benefits should be undertaken at least annually and HRT should only be continued as long as the benefit outweighs the risk.

Evidence regarding the risks associated with HRT in the treatment of premature menopause is limited. Due to the low level of absolute risk in younger women, however, the balance of benefits and risks for these women may be more favourable than in older women.

#### Medical examination/follow-up

Before initiating or re-instituting HRT, a complete personal and family medical history should be taken. Physical (including pelvic and breast) examination should be guided by this and by the contraindications and warnings for use. During treatment, periodic check-ups are recommended of a frequency and nature adapted to the individual woman. Women should be advised what changes in their breasts should be reported to their doctor or nurse (see 'Breast cancer' below). Investigations, including appropriate imaging tools, e.g. mammography, should be carried out in accordance with currently accepted screening practices, modified to the clinical needs of the individual.

## **Conditions which need supervision**

If any of the following conditions are present, have occurred previously, and/or have been aggravated during pregnancy or previous hormone treatment, the patient should be closely supervised. It should be taken into account that these conditions may recur or be aggravated during treatment with Femoston conti 0.5 mg/2.5 mg, in particular:

- Leiomyoma (uterine fibroids) or endometriosis
- Risk factors for thromboembolic disorders (see below)
- Risk factors for estrogen-dependent tumours, e.g. 1st degree heredity for breast cancer
- Hypertension
- Liver disorders (e.g. liver adenoma)
- Diabetes mellitus with or without vascular involvement
- Cholelithiasis
- Migraine or (severe) headache
- Systemic lupus erythematosus
- A history of endometrial hyperplasia (see below)
- Epilepsy
- Asthma
- Otosclerosis
- Meningioma

## Reasons for immediate withdrawal of therapy

Therapy should be discontinued in case a contraindication is discovered and in the following situations:

- Jaundice or deterioration in liver function
- Significant increase in blood pressure

- New onset of migraine-type headache
- Pregnancy

## Endometrial hyperplasia and carcinoma

- In women with an intact uterus the risk of endometrial hyperplasia and carcinoma is increased when estrogens are administered alone for prolonged periods. The reported increase in endometrial cancer risk among estrogen-only users varies from 2- to 12-fold greater compared with non-users, depending on the duration of treatment and estrogen dose (see section 4.8). After stopping treatment risk may remain elevated for at least 10 years.
- The addition of a progestogen cyclically for at least 12 days per month /28 day cycle or continuous combined estrogen-progestogen therapy in non-hysterectomised women can prevent the excess risk associated with estrogen-only HRT.
- Breakthrough bleeding and spotting may occur during the first months of treatment. If break-through bleeding or spotting appears after some time on therapy, or continues after treatment has been discontinued, the reason should be investigated, which may include endometrial biopsy to exclude endometrial malignancy.

#### **Breast cancer**

The overall evidence shows an increased risk of breast cancer in women taking combined estrogen-progestogen or estrogen-only HRT, that is dependent on the duration of taking HRT.

Combined estrogen-progestogen therapy:

• The randomised placebo-controlled trial, the Women's Health Initiative study (WHI), and a metaanalysis of prospective epidemiological studies are consistent in finding an increased risk of breast cancer in women taking combined estrogen-progestogen for HRT that becomes apparent after about 3 (1-4) years (see section 4.8).

*Estrogen-only therapy:* 

• The WHI trial found no increase in the risk of breast cancer in hysterectomised women using estrogenonly HRT. Observational studies have mostly reported a small increase in risk of having breast cancer diagnosed that is lower than that found in users of estrogen-progestogen combinations (see section 4.8). Results from a large meta-analysis showed that after stopping treatment, the excess risk will decrease with time and the time needed to return to baseline depends on the duration of prior HRT use. When HRT was taken for more than 5 years, the risk may persist for 10 years or more.

HRT, especially estrogen-progestogen combined treatment, increases the density of mammographic images which may adversely affect the radiological detection of breast cancer.

#### Ovarian cancer

Ovarian cancer is much rarer than breast cancer. Epidemiological evidence from a large meta-analysis suggests a slightly increased risk in women taking estrogen-only or combined estrogen-progestogen HRT, which becomes apparent within 5 years of use and diminishes over time after stopping. Some other studies, including the WHI trial suggest that use of combined HRTs may be associated with a similar or slightly smaller risk (see section 4.8).

#### Venous thromboembolism

- HRT is associated with a 1.3- 3-fold risk of developing venous thromboembolism (VTE), i.e. deep vein thrombosis or pulmonary embolism. The occurrence of such an event is more likely in the first year of HRT than later (see section 4.8).
- Patients with known thrombophilic states have an increased risk of VTE and HRT may add to this risk. HRT is therefore contraindicated in these patients (see section 4.3).
- Generally recognised risk factors for VTE include: use of estrogens, older age, major surgery, prolonged immobilisation, obesity (BMI > 30 kg/m<sup>2</sup>), pregnancy/postpartum period, systemic lupus erythematosus (SLE), and cancer. There is no consensus about the possible role of varicose veins in VTE.
- As in all postoperative patients, prophylactic measures need to be considered to prevent VTE following surgery. If prolonged immobilisation is to follow elective surgery temporarily stopping HRT 4 to 6 weeks earlier is recommended. Treatment should not be restarted until the woman is completely mobilised.
- In women with no personal history of VTE but with a first degree relative with a history of thrombosis at young age, screening may be offered after careful counselling regarding its limitations (only a proportion of thrombophilic defects are identified by screening).
- If a thrombophilic defect is identified which segregates with thrombosis in family members or if the defect is 'severe' (e.g. antithrombin, protein S, or protein C deficiencies or a combination of defects) HRT is contraindicated.
- Women already on anticoagulant treatment require careful consideration of the benefit-risk of use of HRT.
- If VTE develops after initiating therapy, the drug should be discontinued. Patients should be told to contact their doctors immediately when they are aware of a potential thromboembolic symptom (e.g. painful swelling of a leg, sudden pain in the chest, dyspnoea).

#### **Coronary artery disease (CAD)**

There is no evidence from randomised controlled trials of protection against myocardial infarction in women with or without existing CAD who received combined estrogen-progestogen or estrogen-only HRT.

Combined estrogen-progestogen therapy:

The relative risk of CAD during use of combined estrogen-progestogen HRT is slightly increased. As the baseline absolute risk of CAD is strongly dependent on age, the number of extra cases of CAD due to estrogen-progestogen use is very low in healthy women close to menopause, but will rise with more advanced age.

Estrogen-only:

Randomised controlled data found no increased risk of CAD in hysterectomised women using estrogenonly therapy.

#### **Ischaemic Stroke**

Combined estrogen-progestogen and estrogen-only therapy are associated with an up to 1.5-fold increase in risk of ischaemic stroke. The relative risk does not change with age or time since menopause. However, as the baseline risk of stroke is strongly age-dependent, the overall risk of stroke in women who use HRT will increase with age (see section 4.8).

#### **ALT elevations**

During clinical trials with patients treated for hepatitis C virus (HCV) infections with the combination regimen ombitasvir/paritaprevir/ritonavir with and without dasabuvir, ALT elevations greater than 5 times the upper limit of normal (ULN) were significantly more frequent in women using ethinylestradiol-containing medicinal products such as CHCs. Additionally, also in patients treated with glecaprevir/pibrentasvir, ALT elevations were observed in women using ethinylestradiol-containing medications such as CHCs. Women using medicinal products containing estrogens other than ethinylestradiol, such as estradiol, had a rate of ALT elevation similar to those not receiving any estrogens; however, due to the limited number of women taking these other estrogens, caution is warranted for co-administration with the combination drug regimen ombitasvir/paritaprevir/ritonavir with or without dasabuvir and also the regimen glecaprevir/pibrentasvir (see section 4.5).

#### **Other conditions**

- Estrogens may cause fluid retention, and therefore patients with cardiac or renal dysfunction should be carefully observed.
- Women with pre-existing hypertriglyceridaemia should be followed closely during estrogen replacement or hormone replacement therapy, since rare cases of large increases of plasma triglycerides leading to pancreatitis have been reported with estrogen therapy in this condition.

- Exogenous estrogens may induce or exacerbate symptoms of hereditary and acquired angioedema.
- Estrogens increase thyroid binding globulin (TBG), leading to increased circulating total thyroid hormone, as measured by protein-bound iodine (PBI), T4 levels (by column or by radio-immunoassay) or T3 levels (by radio-immunoassay). T3 resin uptake is decreased, reflecting the elevated TBG. Free T4 and free T3 concentrations are unaltered. Other binding proteins may be elevated in serum, i.e. corticoid binding globulin (CBG), sex-hormone-binding globulin (SHBG) leading to increased circulating corticosteroids and sex steroids, respectively. Free or biological active hormone concentrations are unchanged. Other plasma proteins may be increased (angiotensinogen/renin substrate, alpha-l-antitrypsin, ceruloplasmin).
- HRT use does not improve cognitive function. There is some evidence of increased risk of probable dementia in women who start using continuous combined or estrogen-only HRT after the age of 65.
- Patients with rare hereditary problems of galactose intolerance, total lactase deficiency or glucosegalactose malabsorption should not take this medicine.

This estrogen-progestogen combination treatment is not a contraceptive.

## 4.5 Interaction with other medicinal products and other forms of interaction

No interaction studies have been performed.

#### The efficacy of estrogens and progestogens might be impaired:

- The metabolism of estrogens and progestogens may be increased by concomitant use of substances known to induce drug-metabolising enzymes, specifically P450 enzymes, such as anticonvulsants (e.g. phenobarbital, carbamazepin, phenytoin) and anti-infectives (e.g. rifampicin, rifabutin, nevirapine, efavirenz).
- Ritonavir and nelfinavir, although known as strong inhibitors, by contrast exhibit inducing properties when used concomitantly with steroid hormones.
- Herbal preparations containing St. John's Wort (Hypericum perforatum) may induce the metabolism of estrogens and progestogens.
- Clinically, an increased metabolism of estrogens and progestogens may lead to decreased effect and changes in the uterine bleeding profile.

#### Effect of HRT with estrogens on other medicinal products

Hormone contraceptives containing estrogens have been shown to significantly decrease plasma concentrations of lamotrigine when co-administered due to induction of lamotrigine glucuronidation. This may reduce seizure control. Although the potential interaction between hormone replacement therapy and

lamotrigine has not been studied, it is expected that a similar interaction exists, which may lead to a reduction in seizure control among women taking both medicinal products together.

## Pharmacodynamic interactions

During clinical trials with the HCV combination drug regimen ombitasvir/paritaprevir/ritonavir with and without dasabuvir, ALT elevations greater than 5 times the upper limit of normal (ULN) were significantly more frequent in women using ethinylestradiol-containing medicinal products such as CHCs. Women using medicinal products containing estrogens other than ethinylestradiol, such as estradiol, had a rate of ALT elevation similar to those not receiving any estrogens; however, due to the limited number of women taking these other estrogens, caution is warranted for co-administration with the combination drug regimen ombitasvir/paritaprevir/ritonavir with or without dasabuvir and also the regimen with glecaprevir/pibrentasvir (see section 4.4).

#### 4.6 Fertility, pregnancy and lactation

#### Pregnancy

Femoston conti 0.5 mg/2.5 mg is not indicated during pregnancy. If pregnancy occurs during medication with Femoston conti 0.5 mg/2.5 mg treatment should be withdrawn immediately.

There are no adequate data from the use of estradiol/dydrogesterone in pregnant women. The results of most epidemiological studies to date relevant to inadvertent fetal exposure to combinations of estrogens and progestogens indicate no teratogenic or foetotoxic effect.

#### Breast feeding

Femoston conti 0.5 mg/2.5 mg is not indicated during lactation.

## **Fertility**

Femoston conti 0.5 mg/2.5 mg is not indicated during fertility.

#### 4.7 Effects on ability to drive and use machines

Femoston conti 0.5 mg/2.5 mg has no or negligible influence on the ability to drive and/or to use machines.

#### 4.8 Undesirable effects

The most commonly reported adverse drug reactions of patients treated with estradiol/dydrogesterone in clinical trials are headache, abdominal pain, breast pain/tenderness and back pain.

The following undesirable effects have been observed with the frequencies indicated below during clinical trials (n=4929). \*Undesirable effects from spontaneous reporting not observed in clinical trials have been attributed to the frequency "rare":

MedDRA system	Very common	Common	Uncommon	Rare
organ class	≥1/10	$\geq 1/100 \text{ to } < 1/10$	$\geq 1/1,000 \text{ to } < 1/100$	$\geq 1/10,000$ to
				<1/1,000
Infections and		Vaginal candidiasis	Cystitis- like symptoms	
infestations				
Neoplasms benign,			Increase in size of	
malignant and			leiomyoma	
unspecified				
Blood and the				Haemolytic
lymphatic system				anaemia*
disorders				
Immune system			Hypersensitivity	
disorders				
Psychiatric disorders		Depression,	Influence on libido	
		nervousness		
Nervous system	Headache	Migraine, dizziness		Meningioma*
disorders				
Eye disorders				Steepening of
				corneal curvature*,
				contact lenses
				intolerance*
Cardiac disorders				Myocardial
				infarction
Vascular disorders			Venous	Stroke*
			thromboembolism*,	
			hypertension, peripheral	
			vascular disease,	
			varicose vein	

Gastrointestinal	Abdominal pain	Nausea, vomiting,	Dyspepsia	
disorders		abdominal distension		
		(including flatulence)		
Hepatobiliary			Abnormal hepatic	
disorders			function occasionally	
			with jaundice asthenia or	
			malaise, and abdominal	
			pain, gall bladder	
			disorder	
Skin and		Allergic skin reactions		Angio-edema,
subcutaneous tissue		( e.g. rash, urticaria,		vascular purpura,
disorders		pruritus)		erythema
				nodosum*,
				Chloasma or
				melasma, which
				may persist when
				drug is
				discontinued*
Musculoskeletal and	Back pain			Leg cramps*
connective tissue				
disorders				
Reproductive system	Breast pain/tenderness	Menstrual disorders	Breast enlargement,	
and breast disorders		(including	premenstrual syndrome	
		postmenopausal		
		spotting,		
		metrorrhagia,		
		menorrhagia, oligo-/		
		amenorrhoea,		
		irregular		
		menstruation,		
		dysmenor-rhoea),		
		pelvic pain, cervical		
		discharge		

General disorders and	Asthenic conditions		
administration site	(asthenia, fatigue,		
reactions	malaise), peripheral		
	oedema		
Investigations	Increased weight	Decreased weight	

#### Breast cancer risk

- An up to 2-fold increased risk of having breast cancer diagnosed is reported in women taking combined estrogen-progestogen therapy for more than 5 years.
- The increased risk in users of estrogen-only therapy is lower than that seen in users of estrogen-progestogen combinations.
- The level of risk is dependent on the duration of use (see section 4.4).
- Absolute risk estimations based on results of the largest randomized placebo- controlled trial (WHIstudy) and the largest meta-analysis of prospective epidemiological studies are presented.

# Largest meta-analysis of prospective epidemiological studies— Estimated additional risk of breast cancer after 5 years' use in women with BMI 27 (kg/m2)

Age at the start of HRT (years)	Incidence per 1000 never- users of HRT over a 5 year period (50-54 years)*	Risk ratio	Additional cases per 1000 HRT users after 5 years
		Estrogen only l	HRT
50	13.3	1.2	2.7
		<b>Combined Estr</b>	ogen-progestogen
50	13.3	1.6	8.0

\*Taken from baseline incidence rates England in 2015 in women with BMI 27 (kg/m2)

Note: Since the background incidence of breast cancer differs by EU country, the number of additional cases of breast cancer will also change proportionately.

## Estimated additional risk of breast cancer after 10 years' use in women with BMI 27 (kg/m2)

Age at the start of HRT (years)	Incidence per 1000 never-users of HRT over a 10 year period (50-59 years)*	Risk ratio	Additional cases per 1000 HRT users after 10 years
		Estrogen only HRT	
50	26.6	1.3	7.1
		Combined estrogen-progestogen	
50	26.6	1.8	20.8
			,

<sup>\*</sup>Taken from baseline incidence rates in England in 2015 in women with BMI 27 (kg/m<sup>2</sup>)

Note: Since the background incidence of breast cancer differs by EU country, the number of additional cases of breast cancer will also change proportionately.

US WHI studies - additional risk of breast cancer after 5 years' use				
Age range (yrs)	Incidence per 1000 women in placebo arm over 5 years	Risk ratio & 95% CI	Additional cases per 1000 HRT users over 5 years (95%CI)	
	1	CEE estrogen-only		
50 - 79	21	0.8 (0.7 – 1.0)	-4 (-6 – 0)*	
,		CEE+MPA estrogen &	k progestogen‡	
50 - 79	17	1.2 (1.0 – 1.5)	+4 (0 – 9)	

<sup>\*</sup> WHI study in women with no uterus, which did not show an increase in risk of breast cancer

‡When the analysis was restricted to women who had not used HRT prior to the study there was no increased risk apparent during the first 5 years of treatment: after 5 years the risk was higher than in non-users.

## **Endometrial cancer risk**

Postmenopausal women with a uterus:

The endometrial cancer risk is about 5 in every 1000 women with a uterus not using HRT.

In women with a uterus, use of estrogen-only HRT is not recommended because it increases the risk of endometrial cancer (see section 4.4). Depending on the duration of estrogen-only use and estrogen dose,

the increase in risk of endometrial cancer in epidemiology studies varied from between 5 and 55 extra cases diagnosed in every 1000 women between the ages of 50 and 65.

Adding a progestogen to estrogen-only therapy for at least 12 days per cycle can prevent this increased risk. In the Million Women Study the use of five years of combined (sequential or continuous) HRT did not increase the risk of endometrial cancer (RR of 1.0 (0.8-1.2)).

#### Ovarian cancer

Use of estrogen-only or combined estrogen-progestogen HRT has been associated with a slightly increased risk of having ovarian cancer diagnosed (see section 4.4). A meta-analysis from 52 epidemiological studies reported an increased risk of ovarian cancer in women currently using HRT compared to women who have never used HRT (RR 1.43, 95% CI 1.31-1.56). For women aged 50 to 54 years taking 5 years of HRT, this results in about 1 extra case per 2000 users. In women aged 50 to 54 who are not taking HRT, about 2 women in 2000 will be diagnosed with ovarian cancer over a 5-year period.

#### Risk of venous thromboembolism

HRT is associated with a 1.3- to 3-fold increased relative risk of developing venous thromboembolism (VTE), i.e. deep vein thrombosis or pulmonary embolism. The occurrence of such an event is more likely in the first year of using HRT (see section 4.4). Results of the WHI studies are presented:

## WHI Studies - Additional risk of VTE over 5 years' use

Age range (years)	Incidence per 1000 women in	Risk ratio and 95%CI	Additional cases per 1000 HRT	
	placebo arm over 5 years		users	
Oral estrogen-only <sup>1</sup>	1	1	1	
50 - 59	7	1.2 (0.6-2.4)	1 (-3 – 10)	
Oral combined estrogen-progestogen				
50 - 59	4	2.3 (1.2 – 4.3)	5 (1 - 13)	

<sup>&</sup>lt;sup>1</sup> Study in women with no uterus

#### Risk of coronary artery disease

The risk of coronary artery disease is slightly increased in users of combined estrogen-progestogen HRT over the age of 60 (see section 4.4).

#### Risk of ischaemic stroke

The use of estrogen-only and estrogen+progestogen therapy is associated with an up to 1.5-fold increased relative risk of ischaemic stroke. The risk of haemorrhagic stroke is not increased during use of HRT. This relative risk is not dependent on age or duration of use, but as the baseline risk is strongly age-dependent, the overall risk of stroke in women who use HRT will increase with age (see section 4.4).

## WHI studies combined - Additional risk of ischaemic stroke<sup>2</sup> over 5 years' use

Age range (years)	Incidence per 1000 women	Risk ratio and 95%CI	Additional cases per 1000
	in placebo arm over 5 years		HRT users over 5 years
50 - 59	8	1.3 (1.1 - 1.6)	3 (1 - 5)

<sup>&</sup>lt;sup>2</sup> no differentiation was made between ischaemic and haemorrhagic stroke.

## Other adverse reactions have been reported in association with estrogen/progestogen treatment

Neoplasms benign, malignant and unspecified:

Estrogen dependent neoplasms both benign and malignant, e.g. endometrial cancer, ovarian cancer.

Increase in size of meningioma.

<u>Immune system disorders:</u>

Systemic lupus erythematosus

Metabolism and nutrition disorders:

Hypertriglyceridemia

Nervous system disorders:

Probable dementia, chorea, exacerbation of epilepsy

Vascular disorders:

Arterial thromboembolism

Gastrointestinal disorders:

Pancreatitis (in women with pre-existing hypertriglyceridemia)

Skin and subcutaneous tissue disorders:

Erythema multiforme

Renal and urinary disorders:

Urinary incontinence

Reproductive system and breast disorders:

Fibrocystic breast disease, uterine cervical erosion

Congenital, familial and genetic disorders:

Aggravated porphyria

Investigations:

Total thyroid hormones increased

Reporting of suspected adverse reactions

Reporting suspected adverse reactions after authorisation of the medicinal product is important. It allows continued monitoring of the benefit/risk balance of the medicinal product. Any suspected adverse events

should be reported to the Ministry of Health according to the National Regulation by using an online form

https://sideeffects.health.gov.il/

4.9 Overdose

Both estradiol and dydrogesterone are substances with low toxicity. Symptoms such as nausea, vomiting,

breast tenderness, dizziness, abdominal pain, drowsiness/fatigue, and withdrawal bleeding could occur in

cases of overdosing. It is unlikely that any specific or symptomatic treatment will be necessary.

Paediatric population

Aforementioned information is also applicable for overdosing in children.

5. Pharmacological properties

5.1 Pharmacodynamic properties

Pharmacotherapeutic group: Genito urinary system and sex hormones, progestogens and estrogens, fixed

combinations.

ATC code: G03FA14.

**Estradiol** 

The active ingredient, synthetic 17β-estradiol, is chemically and biologically identical to endogenous

human estradiol. It substitutes for the loss of estrogen production in menopausal women, and alleviates

menopausal symptoms.

**Dydrogesterone** 

Dydrogesterone is an orally-active progestogen having an activity comparable to parenterally

administered progesterone.

As estrogens promote the growth of the endometrium, unopposed estrogens increase the risk of

endometrial hyperplasia and cancer. The addition of a progestogen greatly reduces the estrogen-induced

risk of endometrial hyperplasia in non-hysterectomised women.

#### **Clinical trial information**

- Relief of estrogen-deficiency symptoms and bleeding patterns
- Relief of menopausal symptoms was achieved during the first few weeks of treatment.

With Femoston-conti 0.5 mg/2.5 mg the reduction of moderate to severe hot flushes was statistically significant versus placebo from week 4 onward. The number of moderate to severe hot flushes decreased further until end of treatment period in week 13.

In two studies amenorrhoea (no bleeding or spotting) was seen in 91% and in 88% of the women respectively during months 10-12 of treatment. Irregular bleeding and or spotting appeared in 10% and 21% of the women during the first 3 months of treatment and in 9% and in 12% during months 10-12 of treatment.

## 5.2 Pharmacokinetic properties

#### **Estradiol**

#### • Absorption:

Absorption of estradiol is dependent on the particle size: micronized estradiol is readily absorbed from the gastrointestinal tract.

The following table provides the mean steady state pharmacokinetic parameters of estradiol (E2), estrone (E1) and estrone sulphate (E1S) for each dose of micronized estradiol. Data is presented as mean (SD).

		Estradiol 0.5 mg		
Parameters	E2	E1	Parameters	E1S
Cmax (pg/mL)	34.8 (30.4)	182 (110)	Cmax (ng/mL)	6.98 (3.32)
Cmin (pg/mL)	-	-	-	-
Cav (pg/mL)	21.5 (16.0)	-	-	-
AUC <sub>0-</sub> τ (pg.h/mL)	516 (383)	2959 (2135)	AUC <sub>0-</sub> τ (ng.h/mL)	82.0 (42.6)

#### • Distribution:

Estrogens can be found either unbound or bound. About 98-99% of the estradiol dose binds to plasma proteins, from which about 30-52% to albumin and about 46-69% to the sex hormone-binding globulin (SHBG).

## • Biotransformation:

Following oral administration, estradiol is extensively metabolised. The major unconjugated and conjugated metabolites are estrone and estrone sulphate. These metabolites can contribute to the estrogen activity, either directly or after conversion to estradiol. Estrone sulphate may undergo enterohepatic circulation.

#### • Elimination:

In urine, the major compounds are the glucuronides of estrone and estradiol. The elimination half-life is between 10-16 h.

Estrogens are secreted in the milk of nursing mothers.

• Dose and time dependencies:

Following daily oral administration of Femoston-conti 0.5 mg/ 2.5mg, estradiol concentrations reached a steady-state after about five days.

Generally, steady state concentrations appeared to be reached for within 8 to 11 days of dosing.

#### **Dydrogesterone**

#### • Absorption:

Following oral administration, dydrogesterone is rapidly absorbed with a Tmax between 0.5 and 2.5 hours. The absolute bioavailability of dydrogesterone (oral 20 mg dose versus 7.8 mg intravenous infusion) is 28 %.

The following table provides the mean steady state pharmacokinetic parameters of dydrogesterone (D) and dihydrodydrogesterone (DHD). Data is presented as mean (SD).

Dydrogesterone 2.5 mg				
Parameters	D	DHD		
Cmax (ng/mL)	0.759 (0.313)	18.9 (7.22)		
Cmin (ng/mL)	0.0309 (0.0209)	-		
Cav (ng/mL)	0.117 (0.0455)	-		
AUC <sub>0-</sub> τ (ng.h/mL)	2.81 (1.09)	90.4 (44.1)		

#### • Distribution:

After intravenous administration of dydrogesterone the steady-state volume of distribution is approximately 1400 L. Dydrogesterone and DHD are more than 90% bound to plasma proteins.

### • Biotransformation:

Following oral administration, dydrogesterone is rapidly metabolised to DHD. The levels of the main active metabolite  $20~\alpha$ -dihydrodydrogesterone (DHD) peak about 1.5 hours postdose. The plasma levels of DHD are substantially higher as compared to the parent drug. The AUC and Cmax ratios of DHD to dydrogesterone are in the order of 40 and 25, respectively. Mean terminal half lives of dydrogesterone and DHD vary between 5 to 7 and 14 to 17 hours, respectively. A common feature of all metabolites characterised is the retention of the 4,6 diene-3-one configuration of the parent compound and the absence of  $17\alpha$ -hydroxylation. This explains the lack of estrogenic and androgenic effects of dydrogesterone.

#### • Elimination:

After oral administration of labelled dydrogesterone, on average 63% of the dose is excreted into the urine. Total plasma clearance is 6.4 L/min. Within 72 hours excretion is complete. DHD is present in the urine predominantly as the glucuronic acid conjugate.

#### • Dose and time dependencies:

The single and multiple dose pharmacokinetics are linear in the oral dose range 2.5 to 10 mg. Comparison of the single and multiple dose kinetics shows that the pharmacokinetics of dydrogesterone and DHD are not changed as a result of repeated dosing. Steady state was reached after 3 days of treatment.

## 5.3 Preclinical safety data

There are no preclinical safety data of relevance to the prescriber in the target population that are additional to those already included in other sections of the physician leaflet.

## 6. Pharmaceutical particulars

## 6.1 List of excipients

Core: Film-coating Yellow 1:

Lactose monohydrate Polyvinyl alcohol

Maize starch Titanium dioxide (E171)

Hypromellose (HPMC 2910) Macrogol 3350

Colloidal anhydrous silica Talc (E553b)

Magnesium stearate Iron oxide yellow (E172)

## **6.2 Incompatibilities**

Not applicable.

#### 6.3 Shelf life

The expiry date of the product is indicated on the packaging materials.

#### 6.4 Special precautions for storage

Store below 30°C. Store in original pack.

#### 6.5 Nature and contents of container

PVC/Aluminium blister strips in a printed carton.

Blister packs: 28 film-coated tablets

84 (3x28) film-coated tablets

Not all pack sizes may be marketed.

## 6.6 Special precautions for disposal and other handling

This medicinal product may pose a risk to the aquatic environment. Medicines no longer required should not be disposed of via wastewater or household waste. Any unused product or waste material should be disposed of in accordance with local requirements or returned to the pharmacy.

## 7. Manufacturer

Abbott Biological B.V. Veerweg 12, 8121 AA Olst, The Netherlands

## 8. Marketing Authorization Holder

Abbott Medical Laboratories Ltd. Kiriat Atidim, POB 58099, Tel-Aviv 6158002

## 9. Registration number

164-97-35630-00

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