



EVROPSKÁ UNIE



MINISTERSTVO ŠKOLSTVÍ,  
MLÁDEŽE A TĚLOVÝCHOVY



OP Vzdělávání  
pro konkurenceschopnost

INVESTICE DO ROZVOJE VZDĚLÁVÁNÍ

# PHYTOPHARMACEUTICALS

academic year 2018/19

**LECTURE 12 – Preparations used in pregnancy and breast-feeding period. Therapy of obesity.**

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# PHYTOPHARMACEUTICALS used in PREGNANCY

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## ▶ Herbal teas in pregnancy:

- ▶ do not drink too much **black** and **green tea** (*Thea sinensis*) – mainly because of caffeine content (psychostimulation effect) and tannin (risk of obstipation)
- ▶ **rooibos tea** (*Aspalathus linearis* herba) is suitable for regular drinking – it does not contain caffeine or tannins; there is a positive effect on digestion, especially spasmolytic. Thanks to the high content of polyphenols (flavonoids, chalcones) rooibos tea has a strong antioxidant activity, it can work as hypolipidemic, hypoglycemic, hepatoprotective agent...
- ▶ Avoid most of drugs with **essential oils** that can have an irritating effect and cause blood congestion in the pelvic region (*Myristica fragrans* fruit or flower – myristicin, Absinthii herba, Petroselinii radix, Juniperi fructus/, lignum, etc.)
- ▶ in the third trimester is recommended to drink raspberry tea, - **Rubi idaei folium** – it promotes uterine contractions

# PHYTOPHARMACEUTICALS used in PREGNANCY

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## ▶ LEROS Baby Tea for Pregnant Women

- ▶ 20 x 2.0 g
- ▶ rose hips (*Cynosbati fructus*)
- ▶ rooibos (*Aspalathus linearis* herba)
- ▶ black currant berries (*Ribes nigri* fructus)
- ▶ lemon balm herb (*Melissae herba*)
- ▶ drink 2-4 times a day



# PHYTOPHARMACEUTICALS used in PREGNANCY

## ▶ Megafyt Pharma Pregnancy Tea

- ▶ 20 x 1.5 g
- ▶ Cynosbati fructus sine semine  
Aspalathi herba  
Melissae herba 15 %  
Cymbopogonis herba  
Menthae crispae folium 10 %  
Ribes nigri fructus



## ▶ Teekanne Pregnancy Tea

- ▶ 16 x 1.8 g
- ▶ Urticae herba  
Melissae herba  
Cymbopogonis herba  
Menthae piperitae herba  
Alchemillae herba  
Rubi idaei folium  
Millefolii herba



# PHYTOPHARMACEUTICALS used in PREGNANCY

- ▶ Apotheke, Apotheke BIO  
Tea for Pregnant Women
  - ▶ 20 x 1.5 g
  - ▶ Cynosbati fructus (38 %)
  - ▶ Alchemillae herba (22,5 %)
  - ▶ Rubi idaei folium (15 %)
  - ▶ Calendulae flos (12,5 %)
  - ▶ Hippophae fructus (12 %)



*Hippophae rhamnoides*



# PHYTOPHARMACEUTICALS used in PREGNANCY

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## ▶ Pregnancy nausea, vomiting

- ▶ especially in the first trimester, in 60-80 % of women. Severe form of pregnancy vomiting (hyperemesis gravidarum) is relatively rare.

Recommendation:

- ▶ prophylactically (!) higher doses of pyridoxine (vitamin B6) - usual dose 3 times daily 1 tbl. (20 mg), a maximum daily dose of 120 mg
- ▶ **ginger** - up to 250 mg of dried, powdered rhizome

## GRAVIPOP, GRAVIDROPS (VitaHarmony)

- ▶ lollipops or candies
- ▶ content:  
Ginger Oil 5 mg  
+ Vitamin C 15 mg, Calcium 10.6 mg
- ▶ lollipop 1-4 times a day, 2-8 drops a day





# PHYTOPHARMACEUTICALS used in PREGNANCY

## ▶ ANTIMETIL (Tilman/Ewopharma)

- ▶ 1 tbl. contains 50 mg of standardized dried **ginger extract** (10 % of gingerols)
- ▶ appropriate from 1 month of pregnancy
- ▶ Dosage: 2 tablets a day  
(first tablet in the morning before a meal at first symptoms, second tablet at 4 hours)



## ▶ EMESIN (Favea)

- ▶ content in 1 tbl.:

ginger essential oil	3 mg
vit. B6	8 mg
- ▶ 1 tbl. in case of difficulty – swallow and wash down, or let it dissolve in the mouth



# PHYTOPHARMACEUTICALS

## used in LACTATING PERIOD

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- ▶ Herbal teas during breast-feeding:
  - ▶ similar principles as teas used in pregnancy, it means: do not consume too much real tea, avoid herbs with irritating and allergic effects, plants containing strong active substances that can pass into breast milk
  - ▶ appropriate use of herbal teas to support breast milk production: mainly ***Galega officinalis*** and some other plants from the family Fabaceae
  - ▶ use herbal remedies with **spasmolytic, carminative effect** (e.g. Foeniculi fructus, Anisi fructus, Carvi fructus, Matricariae flos, Aspalathi herba...) and with **calming effect** (e.g. Melissa herba, Lavandulae flos, Origanum herba, ...)



# PHYTOPHARMACEUTICALS used in LACTATING PERIOD

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## ▶ LEROS Baby Tea for Nursing Mothers

- ▶ 20 x 1.5 g
- ▶ **Galegae herba** (25 %)  
Carvi fructus (15 %)  
Foeniculi fructus (15 %)  
Melissae herba (15 %)  
Solidaginis herba (15 %)  
Violae tricoloris herba (10 %)  
Plantaginis folium (5 %)
- ▶ drink 2-3 times a day



## ▶ LEROS Baby BIO Tea for Nursing Mothers

- ▶ 20 x 2.0 g
- ▶ Cynosbati fructus sine semine  
Galegae herba (20 %)  
Ribes nigri fructus  
Lavandulae flos
- ▶ herbal drugs are organic products



# PHYTOPHARMACEUTICALS used in LACTATING PERIOD

## ▶ Megafyt Pharma Tea for Nursing Mothers

- ▶ 20 x 2.5 g
- ▶ Anisi fructus  
Foeniculi fructus  
Carvi fructus  
Urticae herba



## ▶ Megafyt Pharma Tea for Nursing Mothers

- ▶ 20 x 1.5 g
- ▶ **Galegae herba** (30 %)  
Foeniculi fructus (20 %)  
*Anethum graveolens* fruit  
Melissae herba  
Origanum herba



# PHYTOPHARMACEUTICALS used in LACTATING PERIOD

## ▶ Pavel VÁŇA Tea for Nursing Mothers

- ▶ 40 x 1.6 g
- ▶ **Galegae herba**  
Melissae herba  
Foeniculi fructus  
Carvi fructus  
Anisi fructus



## ▶ Teekanne Breastfeeding Tea

- ▶ 16 x 1.8 g
- ▶ Melissae herba  
Urticae herba  
Foeniculi fructus  
Cymbopogonis herba  
Anisi fructus  
Lavandulae flos  
Carvi fructus



# PREPARATIONS

## used in PREGNANCY and LACTATING PERIOD

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### ▶ Food Supplements:

- ▶ folic acid – important for normal growth of germ tissue, as protection against teratogenes in the formation of genetic material. Sufficient intake is necessary to provide one month before the planned pregnancy.
  - ▶ the recommended daily dose is 400 µg, in pregnancy planning and in the 1st trimester up to 800 µg; at risk pregnancy (in case of diabetes, epilepsy, tendency to develop defects) up to 4-5 mg/day
- ▶ minerals
  - ▶ iron, calcium, magnesium, iodine
- ▶ vitamins
- ▶ essential fatty acids
  - ▶ especially DHA (docosahexaenoic acid) – important for the proper development of brain tissue and ocular retina
  - ▶ daily dose – 200-250 mg

# PREPARATIONS

## used in PREGNANCY and LACTATING PERIOD

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### ▶ **PREGNIUM** (Walmark)

- ▶ content in 1 capsule:  
DHA (docosahexaenoic acid)  
100 mg  
Magnesium 75 mg  
Folic acid 200 µg  
Iodine 75 µg
- ▶ dosage: 2 capsules a day



- ▶ food supplement designed for the period of pregnancy planning, pregnancy and lactating
- ▶ **Folic acid** contributes to the maternal tissue growth during pregnancy
- ▶ **Iodine** and **Magnesium** support functions of nervous system
- ▶ **DHA** plays a role in foetal brain and eye development



Life's DHA™ je registrovanou ochrannou známkou Martek Biosciences Corporation

# PREPARATIONS

## used in PREGNANCY and LACTATING PERIOD

### ▶ FEMIBION 800 – Healthy Pregnancy 1 (Merck)

- ▶ when planning a baby until the 1<sup>st</sup> trimester
- ▶ Folates 800 µg (Folic acid and L-methylfolate)
- ▶ vitamins B group, E, C
- ▶ Iodine 150 µg
- ▶ dosage: 1 tablet a day



### ▶ FEMIBION 400+DHA – Healthy Pregnancy 2

- ▶ from the 2<sup>nd</sup> trimester until the end of breastfeeding
- ▶ **tablets:** Folates 400 µg (Folic acid and L-methylfolate)
- ▶ vitamins B group, E, C
- ▶ Iodine 150 µg
- ▶ + extra **capsules:** concentrated fish oil rich in DHA (200 mg)





# PHYTOPHARMACEUTICALS used in WEIGHT REDUCTION

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## OVERWEIGHT and OBESITY

- ▶ are defined as abnormal or excessive fat accumulation that presents a risk to health
- ▶ A person with a BMI equal to or more than 25 is considered **overweight**. A person with a BMI of 30 or more is generally considered **obese**.
- ▶ BMI is not suitable parameter for children and active sportsman!

OBESITY		
Body Mass Index (BMI)		
	<u>BMI</u>	<u>NIH Classification</u>
$\text{BMI} = \frac{\text{weight (kg)}}{\text{height}^2 \text{ (m)}}$	<18.5	Underweight
	18.5-24.9	Normal Weight
	25-29.9	Overweight
	30-34.9	Obesity I
	35-39.9	Obesity II
	>40	Extreme Obesity

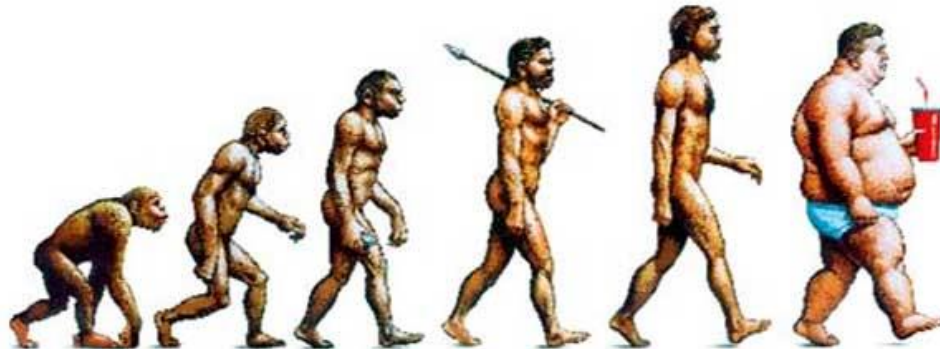


World Health Organization

# OVERWEIGHT and OBESITY

## Key facts

- ▶ Obesity has reached epidemic proportions globally, with at least 2.8 million people dying each year as a result of being overweight or obese.
- ▶ Worldwide obesity has nearly doubled since 1980.
- ▶ In 2008, more than 1.4 billion adults, 20 and older, were overweight. Of these over 200 million men and nearly 300 million women were obese.
- ▶ **35 % of adults** aged 20 and older were overweight in 2008, and **11 %** were obese.
- ▶ 65 % of the world's population live in countries where **overweight and obesity kills more people than underweight.**



# OVERWEIGHT and OBESITY

## ▶ Risks of obesity

- ▶ an enormous load for joints and all musculoskeletal system, difficult physical activity
- ▶ stasis (congestion) of body fluids causes swellings (oedemas)
- ▶ major risk factors for a number of chronic diseases, including diabetes, cardiovascular diseases and cancer
- ▶ social exclusion, difficulties in social relations



# PREPARATIONS used in WEIGHT REDUCTION

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## Therapeutic approaches to obesity treatment

- ▶ lifestyle modification
  - ▶ dietary management – reduction of caloric intake in the diet – low-fat, low-carbohydrate diet (recommended weight loss about 0.5-1 kg per week)
  - ▶ physical activity – helps to decrease body fat and to prevent decrease in muscle mass with dieting; plays an integral role in weight maintenance
  - ▶ behaviour modification – helps to improve compliance
- ▶ pharmacotherapy
  - ▶ approved prescription anti-obesity drugs
  - ▶ OTC anti-obesity drugs
- ▶ bariatric surgery



# PREPARATIONS used in WEIGHT REDUCTION

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## Therapeutic approaches:

- ▶ to slow down nutrient absorption, especially fat and carbohydrates, and alcohol as well
- ▶ to increase the feeling of fullness
- ▶ to suppress hunger, appetite
- ▶ to stimulate fat metabolism and elimination
- ▶ promote removal of waste materials from the body (use diuretics, laxatives)



# PHYTOPHARMACEUTICALS

## used in WEIGHT REDUCTION

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- ▶ dietary fibre/hydrophilic colloids – it binds water → increased filling of stomach and intestine brings the feeling of fullness and decreased appetite
  - ▶ Psyllium husk – seed coats of different *Plantago* species; contains mucilage (polysaccharides)
  - ▶ apple fibre = pectin – positive effect on bowel content but on the other hand it supports appetite!
  - ▶ oligosaccharides (glucomannans, galactomannans,...)
  - ▶ **chitosan** = a linear polysaccharide of D-glucosamine units that is obtained from the chitin of hard outer skeleton of shellfish (crab, shrimp, lobster). It might block absorption of dietary fat and cholesterol
- ▶ take before meal, wash down with higher volume of water
- ▶ do not use more than 14 days !! – the risk of malabsorption of other nutrients



# PHYTOPHARMACEUTICALS used in WEIGHT REDUCTION

## ▶ Bio PSYLLIUM – ISPAGHULA (Megafyt Pharma)

- ▶ 150 g
- ▶ *Plantago psyllium*  
*Plantago ovata*  
– seed coat (testa)



## ▶ PSYLLIUM – many producers, various packages



# PHYTOPHARMACEUTICALS used in WEIGHT REDUCTION

## ▶ Apple Fibre (Apple Pectin)



## ▶ Swiss APPLE VINEGAR with chromium (Swiss Herbal, Canada)

- ▶ composition:  
500 mg apple vinegar with fibre  
150 µg chromium salt
- ▶ for better nutrient metabolism  
and regulation of blood sugar
- ▶ dosage: 1-2 tablets day



# PHYTOPHARMACEUTICALS used in WEIGHT REDUCTION

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- ▶ MedPharma CHITOSAN tbl.
  - ▶ Chitosan 500 mg
  - ▶ Vitamin C 50 mg
  - ▶ Chromium 50 µg
  - ▶ recommended dosage:  
1 tablet 2 times a day  
before meal
- ▶ Delpharma CHITOSLIM tbl.
  - ▶ composition:  
chitosan  
different fibre types (plant  
cellulose, oat and rise bran,  
beet fibre, inulin, psyllium husk)
  - ▶ dosage: 1-3 tablets (max. daily  
dose) before meals



# PHYTOPHARMACEUTICALS used in WEIGHT REDUCTION

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- ▶ **OBETHIN™ cps. (Maxivitalis)**
  - ▶ content in 1 capsule:
    - 500 mg Glucomannan
    - 70 mg flax fibre (*Linum usitatissimum*)
    - 35 mg sodium alginate (from brown seaweed – *Fucus vesiculosus*)
    - 30 mg xanthan gum (secreted by the bacterium *Xanthomonas campestris*)
    - 30 mg Spirulina (*Arthrospira platensis*, fresh-water cyanobacterium)
    - 160 µg Chromium salt (equal to 20 µg Cr)
  - ▶ recommended dosage: 2 capsules 15 min before each meal (ideally 3 times a day); drink min. a glass of water (0.2-0.3 L)



# PHYTOPHARMACEUTICALS used in WEIGHT REDUCTION

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- ▶ **DIGELLA tbl.**  
(Walmart)
  - ▶ contains natural source of dietary fibre:  
apple pectin,  
oat glucans,  
dextro- and galactooligosaccharides,  
chlorella,  
spirulina,  
psyllium,  
vitamin B<sub>3</sub>
  - ▶ dosage: 3-4 tablets 3 times a day, rinse  
down with an adequate amount of water  
(at least 2 litres a day)





# PHYTOPHARMACEUTICALS used in WEIGHT REDUCTION

## ▶ XL to S MEDICAL (Omega Altermed)



„fat binder“



- ▶ Umožní až **66%** snížení absorbovaných sacharidů
- ▶ Bez nežádoucích vedlejších účinků

„carbohydrates blocker“



- ▶ Redukuje chuť k jídlu vytvářením příjemného pocitu sytosti
- ▶ Bez nežádoucích vedlejších účinků

„appetite suppressant“



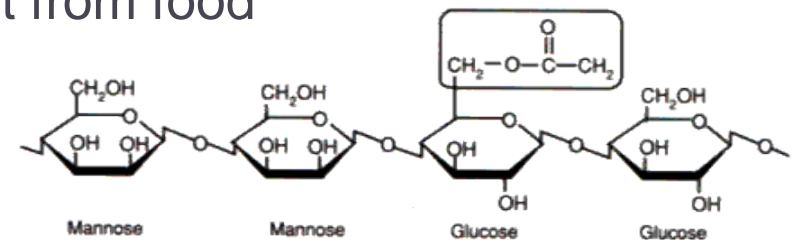
# PHYTOPHARMACEUTICALS used in WEIGHT REDUCTION

- ▶ XL to S MEDICAL (Omega Altermed)
  - ▶ „fat binder“, clinically proven
  - ▶ active ingredient is LITRAMINE™ and fat-soluble vitamins A,D,E
  - ▶ Litramine™ = patented natural fibre complex derived mainly from *Opuntia ficus-indica* and enriched with additional soluble fibres from *Acacia* spp., mechanically treated with fibre from *Zea mays*
  - ▶ it first binds fat molecules to form a fat-fibre complex too large to be absorbed by the intestine; after that the fat-soluble vitamins A,D,E are released and absorbed into the body
  - ▶ dosage: 1-3 tablets a day after meal at once



# PHYTOPHARMACEUTICALS used in WEIGHT REDUCTION

- ▶ **RIVIERIN cps.** (Brainway Inc.)
  - ▶ contains glucomannane fiber from tubers of *Amorphophallus rivieri*
  - ▶ fiber absorbs water in the stomach and intestines, swells and gives a feeling of fullness. It limits the absorption of fat from food
  - ▶ 1 cps contains:  
**glucomannane**      **500 mg**  
**gelatine**            **70 mg**
  - ▶ dosage: 2 caps. 3 times a day 20-30 minutes before a meal. Wash down with sufficient amount of water (about 200-300 mL).  
A beneficial effect is achieved when receiving 3 g per day.



# PHYTOPHARMACEUTICALS used in WEIGHT REDUCTION

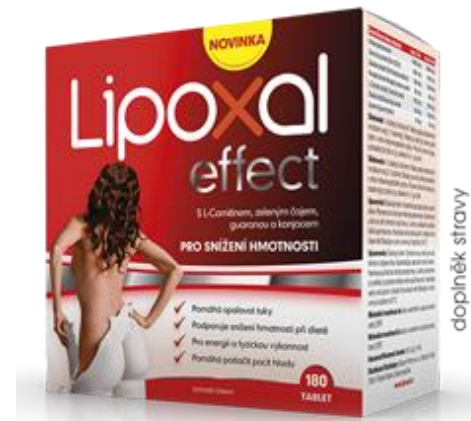
## ▶ LIPOXAL Effect (Salutem Pharma)

- ▶ contains **Konjac glucomannane fiber** from tubers of *Amorphophallus rivieri*, Konjac

- ▶ content in 1 tbl.:

<b>Konjac glucomannan</b>	500 mg
green tea extr. (80 % EGCG)	100 mg
Guarana extract	30 mg
Korean ginseng extract	15 mg
L-carnitine tartrate	85 mg
Oleae folium extract	20 mg
Synephrine	4 mg

- ▶ dosage: 1-2 tablets 3 times a day 20-30 minutes before a meal. Wash down with sufficient amount of water (about 200-300 mL).



# PHYTOPHARMACEUTICALS

## used in WEIGHT REDUCTION

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### ▶ BELLASIN 40+ tbl.

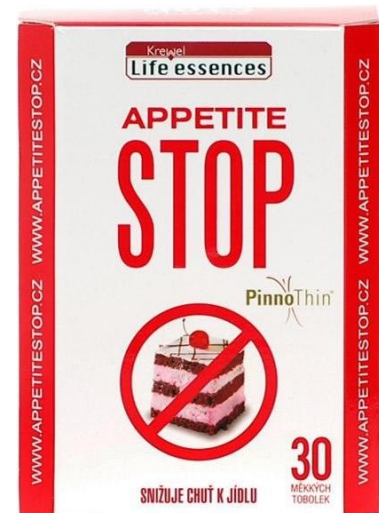
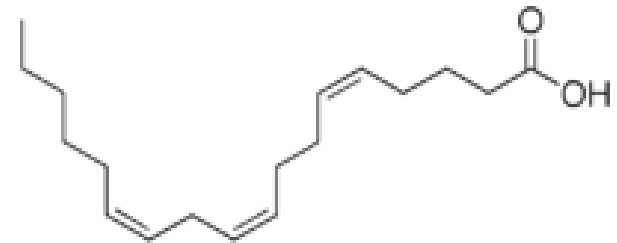
(Garden State, USA)

- ▶ suitable for women in pre-menopausal or menopausal periods when hormone production is reduced, metabolism is slowed down – water retention in the body, fat storage in risk areas, weight gain
- ▶ LipoTherm komplex – for better fat metabolism (green tea extract, guarana, ginger, L-carnitine)
- ▶ CardioVit – Oleae folium extract, *Rhodiola rosea*
- ▶ EstroTrim Complex – Trifolium pratense extract, soya beans, pumpkin seeds
- ▶ Osteoplex – calcium, vitamin D3
- ▶ dosage: 1 tablet twice a day with food (preferably in the morning and at noon). Do not take at night before bedtime.



# PHYTOPHARMACEUTICALS used in WEIGHT REDUCTION

- ▶ **APPETITE STOP cps.**  
(Krewel Meuselbach)
  - ▶ acts as appetite suppressant
  - ▶ contains oil from the Korean Pine seeds (*Pinus koraiensis*) (PinnoThin™) + natural tocoferols concentrate
  - ▶ high content of pinolenic acid that supports the release of the „hunger suppressant“ hormones: CCK (cholecystokinin) and GLP-1 (glucagon-like peptide)
  - ▶ dosage: 1-2 capsules 0.5-1 hour before meal or between meals. Maximally 3 capsules per day.





# PHYTOPHARMACEUTICALS

## used in WEIGHT REDUCTION

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### ▶ REDUKTAN (Leros)

▶ POR SPC 1X100GM

▶ composition, in 100 g:

Fucus (sea-weed) 15 g

Frangulae cortex 15 g

Sambuci nigrae flos 15 g

Sennae folium 10 g

Foeniculi amari fructus 10 g

Petroselini radix 10 g

Sambuci nigrae fructus 10 g

Betulae folium 10 g

Liquiritiae radix 5 g

▶ SUKL code: 0002142

OTC Medicinal Product

▶ ATC: V11

- ▶ used in weight reduction diet or to combat obesity (mainly if there is constipation), positively influences metabolism
- ▶ it has a mildly laxative and diuretic effect





# PHYTOPHARMACEUTICALS used in WEIGHT REDUCTION

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## ▶ SLIM FIGURE Herbal Tea (Leros Natur)

- ▶ 20 x 1.5 g
- ▶ PuErh (black tea) 20 %  
green tea 20 %  
Menthae pip. herba 20 %  
Maté folium 10 %  
Betulae folium 10 %  
Urticae herba 10 %  
Foeniculi fructus 5 %  
*Fucus vesiculosus* 5 %



## ▶ Teekanne SLIMMING TEA

- ▶ 16 x 1.8 g
- ▶ Maté folium 55 %  
Menthae pip. folium  
Verbenae herba  
Liquiritiae radix 5 %

