

## REPRINT

# Evaluation of the product, SilvaDeprex, for patients with depressive disorders in parallel groups

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**Depression** is a serious psychiatric disease that affects negatively both the individual him-/herself and the closest people. About 10% of males and 20% of females are believed to have a depression during their lifetime.

In a study conducted in Latvia in 2013, 35% of respondents replied that they have had or currently have a depression. [1; 2] A combination of biological, genetic, environmental and psychological factors is believed to be the main cause of depression. [9]

Depression can also be an endogenic disease: within the frame of bipolar affective disorders, and within the frame of a recurrent depressive disorder, e.g. as an underlying disease. However, depression is more common as a syndrome together with other psychiatric disorders (alcohol dependence, schizophrenia). The classic triad of depression is: feeling depressed, slowed thinking, decreased motor activity.

Duration of disturbances with different intensities is mostly observed for at least 2 weeks.

Depressive episode can be divided into mild, moderate and severe depressive episode, or recurrent depressive disorder, if there are repeated episodes of depression.

## The following disorders belong to the group of recurrent depressive disorders:

**Masked depression** when the patient often consults with a general practitioner or other specialists about complaints of physi-

cal symptoms not supported by clinical tests and examinations. These complaints are often associated with somatoform disorders (somatisation, somatoform pain, etc.). Depression can be masked by alcoholism, eating disorders, sexual dysfunction, etc. [2]

**Seasonal depression** is common in northern countries where the daylight hours are short. Patients are characterized by lethargy, increased appetite and weight gain, during winter period increased desire to eat products that contain carbohydrates.

In a year a patient is having 12 to 18 **temporary recurrent depression** episodes on average lasting from two days up to two weeks. This form of depression is more common among younger patients, combined with personality disorders and a high risk of suicide in up to 15% of patients. [2]

Depressive disorders also include a variety of bipolar affective disorders, chronically neurotic level of mood disturbances (cyclothymia, dysthymia), organic affective disorders, depressive type, post-schizophrenic depression and adaptation disorders. [2]

**Dysthymia** is a chronically depressed mood that continues for at least several years, but is not sufficiently severe or not sufficiently long as individual episodes to

## NATURAL PRODUCT FOR PRIMARY THERAPY IN CASE OF DEPRESSIVE DISORDERS



Food supplement. Capsules N30

## STATISTICAL SIGNIFICANCE AND EFFECTIVENESS PROVEN IN OBSERVATION\*:

- IMPROVES PHYSICAL FEELING AND MOOD
- RESTORES ENERGY
- IMPROVES THE QUALITY OF SLEEP

## FOR PATIENTS:

- With complaints on psycho-emotional and physical exhaustion;
- With score in depression test 0–4 or 5–9.

## USAGE:

Adults 2 capsules in the morning for 2–3 months

\* Observation done by SIA Silvanols in 2015

diagnose a severe, moderate, or mild recurrent depressive disorder. [10]

**Adaptation disorders** are the body's physiological response to a major psychological or emotional stress (e.g., divorce, significant problems at work or in the family, etc.) manifested by characteristic symptoms of depression.

**Depression with anxiety.** According to data of different authors, it is combined in up to 80% of patients. Mostly observed symptoms are: rapid heartbeat or palpitations, sweating, tremor or dry mouth. The patient also complains about autonomic nervous system regulation disorders: breathing difficulties, chest and stomach discomfort, dizziness, tingling, etc. [2]

**Depression with somatoform disorders** includes somatisation, hypochondria, somatoform autonomic dysfunction, somatoform pain. In 5 to 25% of cases somatoform disorders are combined with depression. [2]

During the treatment course of depressive disorders, both the therapy of the acute depressive state and maintenance and preventive treatment must be ensured. Treatment of depression is based on the use of psychotherapy and pharmacotherapy where antidepressants play the key role. [2; 3]

Although antidepressants are among the most commonly used medications in the world, society has prejudices about these products. A study was conducted in California where more than a thousand residents were asked if they would talk to their family doctor about potential symptoms of depression. Approximately half of respondents replied that they would not tell about these symptoms for various reasons. Patients usually feel anxiety and fear of medication-induced side effects, and the possibility of addiction.

Not all patients with depressed mood or mild depressive episode need antidepressants. In recent years, there is a gradual increase in the number of studies and publications about the use of herbal preparations for the treatment of various psychiatric disorders. [8]

Valerian (*Valeriana officinalis*) is a publicly known and frequently used sedative medicinal herb. It is believed that it increases the concentration of gamma amino butyric acid (GABA) in the brain. GABA is the major inhibitory neurotransmitter in the central nervous system. Several studies have shown that GABA neurotransmission

plays a role in modulating alarm-like behaviour by reducing fear and anxiety. Clinical effect of valerian is associated with the treatment of insomnia and the sedative effect. [16; 17]

It is believed that St. John's Wort (*Hypericum perforatum*) raises dopamine and serotonin levels in the central nervous system, as do traditional antidepressants. St. John's Wort improves mood, reduces anxiety and insomnia associated with depression. [11; 12; 13]

Rhodiola or golden root (*Rhodiola rosea*) in small doses stimulates norepinephrine, dopamine, serotonin and nicotinic cholinergic systems in CNS, as well as increases the blood-brain barrier permeability for dopamine and serotonin precursors. Rhodiola is mainly used in the clinical settings for the treatment of mild depression, insomnia, as well as helps to adapt to different types of stressors, such as biological, physical and chemical. [14; 15]

Studies of red clover (*Trifolium pratense*) have shown a positive effect of the plant for prevention of menopause-related symptoms by creating an estrogenic-like effect, and helps for the treatment of menopause-related anxiety and depression. [19; 20]

A study of sickle-leaved hare's-ear (*Bupleurum Falcatum*) found that sickle-leaved hare's-ear can serve as a useful therapeutic tool in cases of stress-induced memory impairment. [21]

Muiru puama (*Ptychopetalum olacoides*) effect is related to the effect on beta-adrenergic and dopamine D1 receptors. Several studies carried out on animals show anti-depressant properties of the herb in cases of chronic mild stress. Extract of this medicinal plant is also used for the management of sexual dysfunction and improvement of sexual interest by using muiru puama extract in combination with other medicinal herbs. [22; 23; 24]

In order to find out the potential use of medicinal herbs for the correction of depressive disorders, in 2015 an observation was conducted to test the effect of the natural remedy "SilvaDeprex". This observation was made in cooperation with the Latvian phytopharmaceutical company "Silvanols".

The observation involved patients aged 18 to 79 years with a diagnosis of depression. All study participants used two capsules of SilvaDeprex in the morning for 90

days. During this period, patients filled in two questionnaires: rated their well-being and filled the PHQ-9 (*Patient Health Questionnaire*) questionnaire. The third questionnaire about signs of depression was filled in by the patient's attending physician. These questionnaires were filled in three times: on the first visit before initiating therapy with SilvaDeprex, on the second visit (after 27 to 30 days), and on the third visit (after 57 to 60 days). The observation included those patients who had completed the questionnaire on at least two visits.

To assess patients' well-being, the study participants rated it from 1 to 10 in each visit, where 1 meant feeling extremely unwell, but 10 – exceptionally good feeling.

Statistical data processing was performed with SPSS software (*IBM SPSS Statistics V.22*). Categorical or qualitative variables were described as the number and percentage proportion. Quantitative variables, if they met the normal distribution, were described by arithmetic mean (M) and standard deviation (SD), but if not – in addition by the median (Me) and the interval between the 25 and 75 percentile (IQR).

The role of the parameters difference was evaluated by 5% statistical error probability, therefore, if the test results p-value was less than 0.05, the test result was considered statistically significant.

## Results

In total, 77 patients of whom 76.6% were females and 23.4% males were included in the SilvaDeprex observation. The mean age of patients in the observation was  $47.3 \pm 14.4$  years. The mean age of females was  $47.8 \pm 13.3$  years; the mean age of males was  $45.3 \pm 17.8$  years.

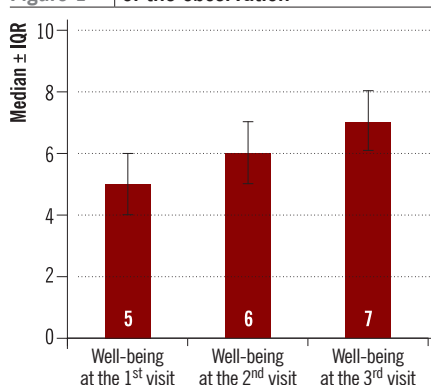
Among participants of the observation, 60 (77.9%) were patients with mild depression, 10 (13.0%) were patients with moderate to severe depression, and 9 (9.1%) were patients with major depression.

**Among all patients included in the observation, the assessment of well-being improved statistically significantly: from  $5.1 \pm 1.6$  points in the first visit to  $6.9 \pm 1.2$  points in the third visit ( $p < 0.001$ ).** From the first to the second visit, patients' well-being score statistically significantly improved from  $5.1 \pm 1.6$  points to  $6.1 \pm 1.3$  points,  $p < 0.001$ . (Figure 1)

**Looking at the PHQ-9 questionnaire score, decline of values was observed.**

**Changes in the assessment of well-being during intake of SilvaDeprex among participants of the observation**

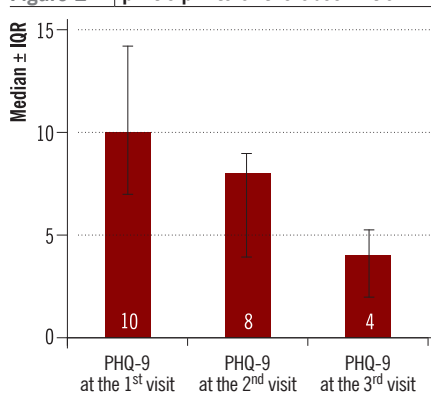
Figure 1



From the first to the third visit, patients' well-being score improved statistically significantly: from  $11.0 \pm 5.5$  points (Me = 10.0) to  $4.1 \pm 2.8$  points (Me = 4.0),  $p < 0.001$ . From the first to the second visit, patients' well-being score statistically significantly improved from  $11.0 \pm 5.5$  points (Me = 8.0) to  $7.3 \pm 4.3$  points (Me = 8.0),  $p < 0.001$ . (Figure 2)

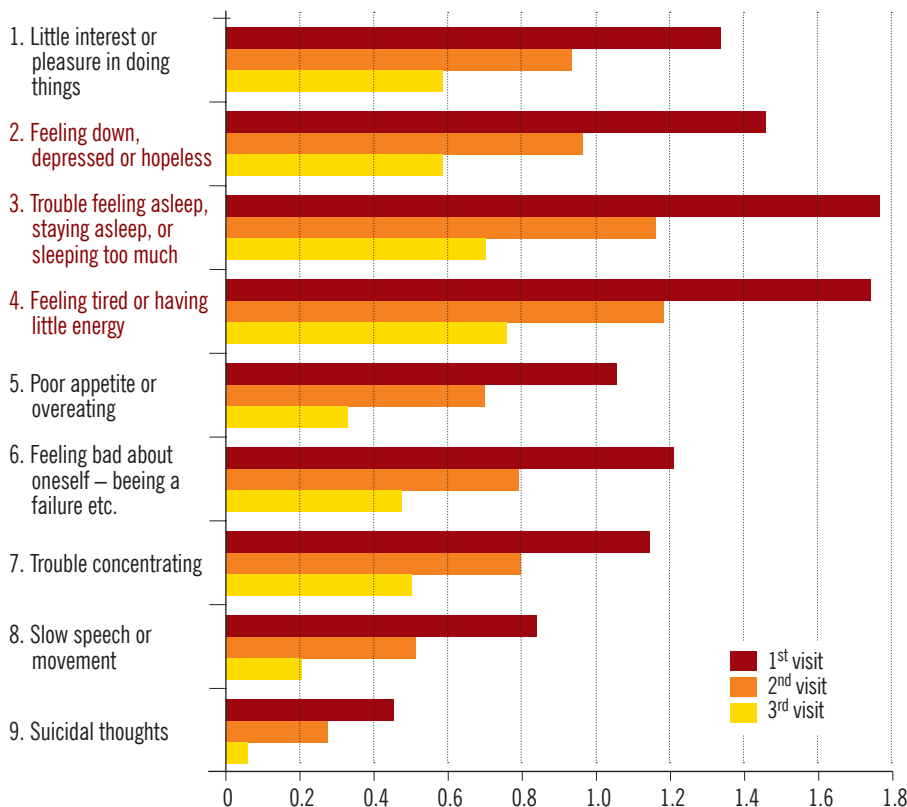
**Changes in the PHQ-9 questionnaire score during intake of SilvaDeprex among participants of the observation**

Figure 2

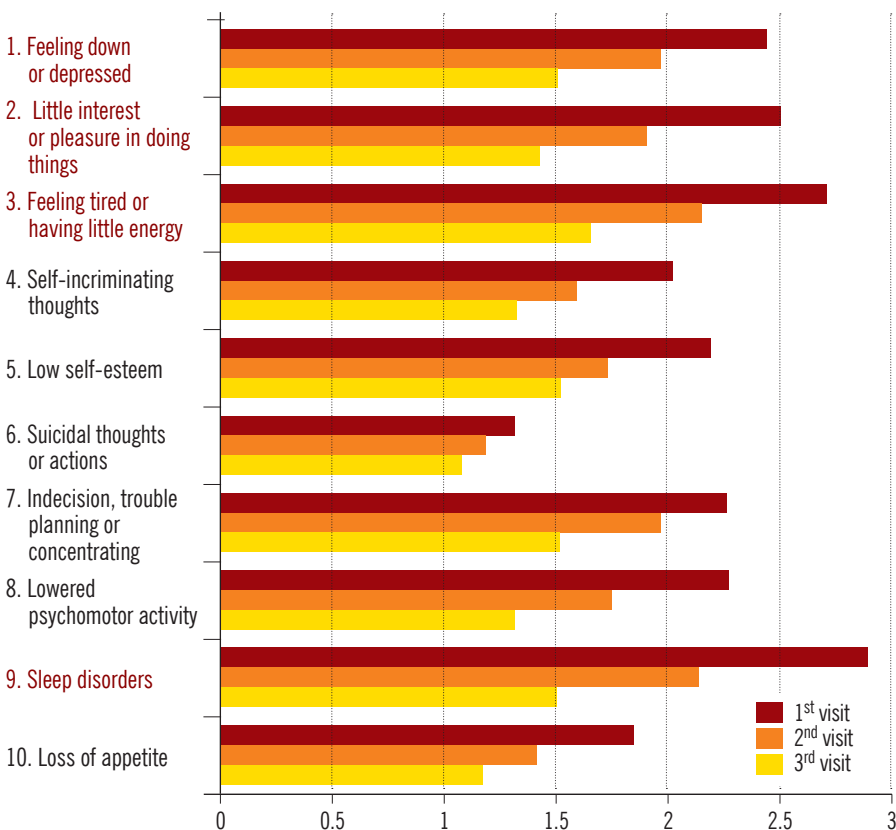


Among patients taking SilvaDeprex, statistically significant improvement in all PHQ-9 questionnaire questions from the first to the third and from the first and the second visit was observed. **From the first to the third visit, the well-being score among patients most significantly improved in the Question No. 3 - Did you have any difficulty in falling asleep, dog sleep in the last 2 weeks? ( $Z = -6.815$ ,  $p < 0.001$ ), Question No. 2 - Did you have a bad, depressed**

**Figure 3 | Changes in patients' complaints during intake of SilvaDeprex**



**Figure 4 | Changes in depression signs during intake of SilvaDeprex**



*mood, low spirits, feeling of hopelessness in the last 2 weeks?* ( $Z = -6.520$ ,  $p < 0.001$ ) and *Question No. 4 - Have you felt fatigue or lack of energy in the last 2 weeks?* ( $Z = -6.375$ ,  $p < 0.001$ ). (Figure 3)

For assessment of depression signs, 10 questions were drawn up. The questionnaire had to be filled in by the treating physician, asking the patient 10 questions and evaluating patient's complaints with an assessment on a scale from one to five. Patients taking SilvaDeprex have a statistically significant performance improvement in all parameters from the first to the third visit, as well as all the parameters from the first to the second visit. **The most significant improvement was observed in the following parameters: from the first to the third visit, well-being score in patients most improved in the Question No.3 Any tiredness, lack of energy in the last 2 weeks?** ( $Z = -7.013$ ,  $p < 0.001$ ), **in the Question No.1.- Low mood most of the day without a specific reason for the last 2 weeks?** ( $Z = -6.953$ ,  $p < 0.001$ ), **in the Question No.2 Reduced interest and the ability to experience joy for the last 2 weeks?** ( $Z = -6.937$ ,  $p < 0.001$ ) and **Question No 9 Sleep disorders?** ( $Z = -6.819$ ,  $p < 0.001$ ). (Figure 4)

## Practical experience

Experience with SilvaDeprex shows the great potential to help people in chronic fa-

tigue, exhaustion, burnout and high stress situations. There have been a variety of successful cases in the medical practice where SilvaDeprex has significantly improved the well-being, but these cases were not included in the observation.

An example: a female student who complains about nervousness, crying and fear of upcoming exams, the overall mood background downgraded. Psychotherapy is recommended, but the girl lives in sparsely populated area, in a divorced family, and the mother is not able to provide regular visits to therapist due to financial situation. Recommendations were provided and 2 capsules of SilvaDeprex in the morning prescribed. Decreased nervousness and emotional stabilization was observed after 4 to 6 weeks.

Another example: 54-year-old woman, employed, living in a family with two grown-up children. Complaining about symptoms characteristic of the climacteric period that fail to improve with the therapy prescribed by the gynaecologist. Complaints about emotional instability, "hot flushes", autonomic disorders, irregular sleep, etc. When taking SilvaDeprex, vegetative disorders gradually improved, as well as the overall mood and quality of sleep.

## Conclusions

**Among patients with various level of depression using SilvaDeprex, improve-**

**ment of patients' well-being was statistically significant, and severity of depression signs was improved.**

Improvement of well-being (average assessment of well-being increased by 1.8 points) was observed with SilvaDeprex used for 90 days, but the positive effect (well-being assessment increase by 1 point) is observed already after 30 days of treatment with SilvaDeprex. Thus, in order to obtain optimal results, SilvaDeprex has to be taken for 2-3 months in a row.

**With the use, the most mentioned and rapid improvement can be noted in particular regarding complaints about sleep disturbances; therefore, SilvaDeprex is recommended for those patients whose main complaints relate to insomnia or 'dog' sleep.**

**A marked improvement was also observed in complaints of fatigue, lack of energy, depressed mood, so SilvaDeprex would be advisable for recovery of joy for patients who complain about depressed mood.**

**SilvaDeprex patient's groups could be adults with minor disorders:**

- Recurrent depressive disorders: anxiety and somatoform disorders, masked depression, seasonal depression;
- Neurotic level mood disorders: dysthymia;
- Adaptation disorders.
- Patients taking SilvaDeprex had good tolerability, no side effects recorded.

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