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Overview of Engystol®

• What is Engystol®?

Engystol® is an immunostimulating medication which has been scientifically proven to significantly reduce the duration and severity of symptoms during an acute viral infection (when given as a treatment) and help protect against subsequent infections (when given as prophylaxis).

• What does Engystol® do?

The aim of treatment with Engystol® is to activate and support the body's endogenous defense mechanisms, ie, to:

• Strengthen the natural immune response in cases of viral invasion, resulting in milder symptoms and shorter recovery times.
• Protect against subsequent infections.

For example, taken either preventively or at the first signs of a cold, Engystol® has been used empirically to prevent the development of acute symptoms.

• Mechanism of action of Engystol®

The exact mechanism of action of Engystol® is still under investigation.

\textit{In vitro} tests have demonstrated that Engystol® stimulates the phagocytic activity of human granulocytes by up to 33.5\%.\textsuperscript{1}

Further \textit{in vitro} studies have demonstrated that Engystol® significantly increases the expression of interferon-\gamma producing T-lymphocytes. Therefore, it appears likely that there is an immunological stimulation caused by Engystol®, that is mediated by the activation of T-lymphocytes. Using Engystol®, therefore, enhanced the Th1 response, this being an antiviral pathway in the body.\textsuperscript{2}

Other studies have indicated that Engystol® is associated with a stimulation of the immune system in terms of granulocyte function and improved humoral response.\textsuperscript{3, 4}

• Antiviral activity of Engystol®

Basic research has revealed the activity of Engystol® against viruses, such as adenovirus Type 5, Herpes Simplex Virus type 1 (HSV 1) and Respiratory Syncytial Virus (RSV), and Human Rhino Virus (HRV).\textsuperscript{5}

In a clinical setting, Engystol® has also been shown to shorten the time of infection and reduce antibody titres against influenza A. These results were observed via a double-blind, placebo-controlled trial for the prophylaxis of flu (influenza) and the common cold.\textsuperscript{6}

• Demonstrated efficacy and tolerability of Engystol®

Numerous studies with Engystol® demonstrate its excellent efficacy and tolerability, and the antiviral treatment and preventive benefits of Engystol® in cases of infection and other pulmonary conditions with and without fever, such as bronchitis/asthma, RSV, upper respiratory tract infections, flu, etc.\textsuperscript{6 - 10}

• What does Engystol® contain?

Engystol® contains two main active ingredients:

• \textit{Vincetoxicum hirundinaria} (swallowwort), which has been associated with the stimulation of host defense mechanisms
• Sulfur (sulphur), which has been widely used homeopathically for treating a range of conditions, including skin diseases, acute and chronic inflammation, and hepatic and gastrointestinal complaints.\textsuperscript{9}

Engystol® is available for use in tablet form, and as an injectable or drinkable ampoule.
The benefits of Engystol® are summarized in Figure 1.

**Figure 1. The benefits of Engystol®**

- Scientifically demonstrated and clinically proven efficacy and safety
- May be used for both treatment and prevention of various viral infections
- Stimulates the non-specific and specific immune system (an immunostimulator), thereby strengthening the immune system
- Safe for pregnant women or nursing mothers, as well as the entire family
- No known side effects, contraindications or interactions
- Very well-tolerated
- Suitable for long-term treatment
- May be combined with other natural or conventional immunostimulating therapies.

**For which patients might Engystol® be used?**

Consider using Engystol® in a prophylactic and therapeutic way with:

- Patients who are susceptible to, or who have, a viral infection, such as a cold or flu
- Patients with pre-existing medical conditions, or those over 65 years of age, who might be more susceptible to viral infections, e.g., in winter
- Primarily healthy younger children who might be susceptible to viral infections, e.g., RSV, in the winter season
- The entire family with viral infections.

**Who might you be?**

All health care providers dealing with common viral infections like cold and flu.

**Worldwide experience/use**

Engystol® has been used for more than 60 years. Today, it is available in over 50 countries worldwide.

Each year, over half a million patients are treated with Engystol® worldwide.

**References**

What is Engystol®?

Susceptibility to infections depends on numerous variables, including the status of the immune system. Engystol® is an immunostimulating medication with a broad range of therapeutic uses.

The aim of treatment with Engystol® is to activate and support the body's endogenous defense mechanisms, ie, to strengthen the natural immune response in cases of viral invasion, resulting in milder symptoms and shorter recovery times. It also protects against subsequent infections. Taken either preventively or at the first signs of a cold, Engystol® may prevent the development of acute symptoms.

- Basic in vitro research reveals the antiviral activity of Engystol® in different types of viruses. Such antiviral activity has never been revealed with either paracetamol or alpha-adrenergic receptor activating drugs, ie, drugs commonly given for colds and flu

- Engystol® has been scientifically proven to significantly reduce the duration and severity of symptoms during an acute viral infection (treatment)

- Engystol® has been shown to help protect against subsequent infections (prevention)

Engystol® contains two main active ingredients:

- Vincetoxicum hirundinaria (swallowwort), which has been associated with stimulation of host defense mechanisms

- Sulfur (sulphur), which has been used homeopathically for treating a range of conditions, including skin diseases, acute and chronic inflammation, and hepatic and gastrointestinal complaints.4

Engystol® is available for use in tablet form, and as an injectable or drinkable ampoule.

Numerous clinical studies of Engystol® oral tablets and Engystol® injection solution demonstrate that both dosage forms exhibit excellent tolerability and efficacy, and show the treatment and preventive benefits of Engystol® in cases of infection and other pulmonary conditions, with and without fever, such as bronchitis/asthma, RSV, upper respiratory tract infections, flu, etc.1-5 These are detailed in the ‘Clinical efficacy and tolerability of Engystol®’ section (see later).

Summary – what is Engystol®?

- Basic in vitro research reveals the antiviral activity of Engystol® in different types of viruses. Such antiviral activity has never been revealed with either paracetamol or alpha-adrenergic receptor activating drugs, i.e., drugs commonly given for colds and flu

- Engystol® has been scientifically proven to significantly reduce the duration and severity of symptoms during an acute viral infection (treatment)

- Engystol® has been shown to help protect against subsequent infections (prevention)

Numerous clinical studies of Engystol® oral tablets and Engystol® injection solution demonstrate that both dosage forms exhibit excellent tolerability and efficacy, and show the treatment and preventive benefits of Engystol® in cases of infection and other pulmonary conditions, with and without fever, such as bronchitis/asthma, RSV, upper respiratory tract infections, flu, etc.

References
Mechanism of action of Engystol®

The exact mechanism of action of Engystol® is still under investigation. However, the immunostimulating effects of Engystol® have been substantiated in several studies:

- An in vitro study has shown that Engystol® stimulates the phagocytic activity of human granulocytes by up to 33.5% above control cultures. In this study, the increase in phagocytosis occurred rapidly. However, the study did not permit a statement to be made concerning whether Engystol® exerted its effects directly by stimulating phagocytizing leukocytes or indirectly by means of the stimulation of T-cell sub-populations, or via a release of certain mediators.1

- Another in vitro test has shown that Engystol® led to an increase in phagocytic activity of between 20-40% (depending on dilution; undiluted, 1:10 or 1:100) in three different immunological tests: the granulocyte test, the carbon clearance test and the granulocyte bioluminescence test.2

- A further in vitro study demonstrated that Engystol® significantly increases the expression of interferon-γ producing T-lymphocytes (p<0.001) (Figure 2). This effect was observed at all dilutions and with no apparent dose-dependent effect, indicating “that the active ingredients in the agent have a quite high stimulating activity,” according to the study authors. An increase in interferon-γ production indicates activation of the immune system. Interferon-γ is produced by several varieties of cells, such as helper T-cells, cytotoxic T-cells and natural killer cells. Production is induced by specific contact with antigens or through unspecific stimulation by substances that may be of biological or chemical origin.3 Whilst the exact mechanism behind the observed effects of Engystol® remains to be elucidated, a therapy that improves interferon-γ production in response to stimuli might be expected to confer benefits to patients at risk of infection or exposed to infectious agents.

- Furthermore, this paper also suggested that Engystol® may interact directly with virus particles and reduce infectivity independent of its possible effects on the immune system.3

- Other studies have confirmed the effects of Engystol® on increasing granulocyte, phagocyte and neutrophil activity when given pre-operatively in 61 patients with neoplastic disease (breast and abdominal cavity carcinoma), as well as stimulation by Engystol® of the anti-influenzal humoral response.4, 5

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![Figure 2. Percentage of T-lymphocytes expressing interferon-γ after treatment with different dilutions of Engystol® or with control (NaCl solution)](chart.png)
Summary – Actions of Engystol® on the immune system

- Increases phagocytic activity of human granulocytes by 33.5%.  
  \cite{Wagner1986}
- Increases interferon-\(\gamma\) production by T-lymphocytes. \cite{Wagner1986}
- Hypothetical activation of natural killer cells and cytotoxic T-cells. \cite{Enbergs2006}
- Elimination of viral infected cells and tumor cells. \cite{Denys1999, Siewierska1999}

References

Antiviral activity of Engystol®

Many respiratory viruses, most commonly influenza, respiratory syncytial virus (RSV) and rhinovirus, are capable of causing respiratory disease, either by their direct effects or by exacerbating underlying conditions. Several pharmaceutical antiviral substances exist but they are associated with side effects and there is still a need for antiviral substances with good efficacy and tolerability, and low toxicity.1

Basic in vitro research has demonstrated the activity of Engystol® against various types of viruses, such as adenovirus Type 5, Herpes Simplex Virus type 1 (HSV 1), Respiratory Syncytial Virus (RSV) and Human Rhino Virus (HRV).1 In addition, in a double-blind, placebo-controlled trial for the prophylaxis of flu (influenza) and the common cold, Engystol® has shown itself to be able to shorten the time of infection and reduce antibody titres against influenza A.2

Such antiviral activity has never been revealed with either paracetamol or α-adrenergic receptor activating drugs, i.e., drugs commonly given for colds and flu which cause vasoconstriction.3

In terms of activity against the influenza virus, a randomized, placebo-controlled, double-blind trial in 102 healthy males showed that Engystol® can achieve favourable results in the prophylaxis of uncomplicated viral illnesses of the upper respiratory tract, which are unresponsive to specific therapeutic measures. The duration and severity of symptoms was considerably lower in the Engystol® group compared with the placebo group.2

In an in vitro study1, Engystol® showed a dose dependent antiviral activity against the DNA viruses, adenovirus 5 (73% reduction) and Herpes Simplex Virus type 1 (HSV 1) (80% reduction). In addition, an antiviral effect was observed against the RNA viruses, Respiratory Syncytial Virus (RSV) (37% reduction) (Figures 3 and 4) and human rhinovirus (HRV) (20% reduction). Furthermore, no cytotoxic effects or other toxic effects were observed with Engystol® at the doses examined. This antiviral activity was independent of the activation of the cellular interferon system suggesting, according to the authors, that “the observed effects are a result of a real antiviral effect of Engystol®”.1

Figure 3. RSV and adenovirus 5 inhibition with Engystol®1

Percentage inhibition of viral activity of different dilutions of Engystol® tested on various RNA and DNA viruses. Inhibition was based on plaque-reduction assay for RSV and TCID50 values for Adeno 5 (adenovirus 5) were calculated as a percentage of the equivalent value from control cell cultures not exposed to Engystol®. Mean of four values (two repetitions of two separate experiments) with standard deviations.

Figure 4. HSV 1 inhibition with Engystol®1

Percentage inhibition of viral activity of different dilutions of Engystol® tested on Herpes Simplex Virus type 1 (HSV 1). Inhibition was based on viral protein-specific enzyme-linked immunosorbent assay (ELISA) and was calculated as a percentage of the equivalent value from control cell cultures not exposed to Engystol®. Mean of four values (two repetitions of two separate experiments) with standard deviations.
In another study (a pilot), conducted in a clinical setting in patients who suffered frequent infections of the respiratory tract (n=20), there were significant increases in T-lymphocyte (carriers of cellular immunity) and T-helper cells after six months of treatment with Engystol®, and there was an increase in phagocytosis*. The authors suggested that the increase in total T-lymphocytes resulting from Engystol® treatment indicates stimulation of cellular defense against infection and the increase in phagocytosis should be “regarded as an important macrophage resistance factor”.4

* Phagocytosis is the body’s most important non-specific defense reaction.4

Summary - antiviral activity of Engystol®

Basic research has revealed the activity of Engystol® against viruses, such as influenza (flu)2, adenovirus Type 5, Herpes Simplex Virus type 1 (HSV 1) and Respiratory Syncytial Virus (RSV).1

References
4. Ricken KH. The Treatment of Infection Predisposition with Biotherapeutic Medication. Biol Ther 1993; XI (1);50-54.
Engystol® presentations, indications and composition

The different presentations of Engystol®, along with their indications and composition are listed below.

- **Engystol® oral tablets**

  **Indications:** To activate the body's non-specific defense mechanism, particularly in the case of influenza and various viral diseases.

  **Method of administration:** oral, to be dissolved in the mouth.

  **Composition:** 1 tablet contains:
  - *Vincetoxicum hirundinaria* D6, *Vincetoxicum hirundinaria* D10, *Vincetoxicum hirundinaria* D30 - 75mg each
  - Sulfur D4, Sulfur D10 - 37.5 mg each.

  **Contraindications:** None known.

  **Side effects:** None known.

  **Interactions with other medication:** None known.

  **Pack sizes:** Packs containing 50 and 250 tablets.

- **Engystol® injectable and drinkable ampoules**

  **Indications:** To activate the body's non-specific defense mechanism, particularly in the case of influenza and various viral diseases.

  **Method of administration:** either intramuscular (i.m.), subcutaneous (s.c.) or intravenous (i.v.)/ or as a drinkable ampoule.

  **Composition:** 1.1ml ampoule contains:
  - *Vincetoxicum hirundinaria* D6, *Vincetoxicum hirundinaria* D10, *Vincetoxicum hirundinaria* D30 6.6µl each
  - Sulfur D4, Sulfur D10 3.3µl each.

  **Contraindications:** None known.

  **Side effects:** None known.

  **Interactions with other medication:** None known.

  **Pack sizes:** Packs containing 5, 10, 50 and 100 ampoules of 1.1ml.
Dosage recommendations for Engystol® oral tablets, injection solution and drinkable ampoules

<table>
<thead>
<tr>
<th>Dosage Form</th>
<th>Dosage Recommendations</th>
</tr>
</thead>
<tbody>
<tr>
<td>Acute (from the onset of symptoms)</td>
<td>One tablet every 30-60 minutes, for a maximum of 12 doses a day</td>
</tr>
<tr>
<td>General (after onset of symptoms, as well as for prevention and chronic treatment)</td>
<td>One tablet three times daily or one ampoule once daily</td>
</tr>
<tr>
<td>For oral use, allow tablet to dissolve slowly in the mouth or pour contents of the ampoule into a small quantity of water, sip slowly and hold in the mouth before swallowing.</td>
<td></td>
</tr>
</tbody>
</table>

Note: The above adult dosages should be adapted for children according to their age.

With both dosage forms, the level of symptomatic improvement will be the same after four days of treatment.

For prevention therapy, the general dosage should be administered in cycles of one week on and one week off. Continue this regime of cycles for a total of 4 weeks. Wait 1 month before starting again.

Patients who may most benefit from Engystol® are:

- Those who are susceptible to, or who have acquired, a viral infection, such as a cold or flu
- Those with pre-existing medical conditions or those over 65 years of age who might be more susceptible to viral infections, e.g., in winter
- Primarily healthy younger children who might be susceptible to viral infections, e.g., RSV, in the winter season
- Can be used by the entire family.
The evidence base for Engystol®
– clinical efficacy and tolerability

Several clinical trials of Engystol® oral tablets and Engystol® injection solution/drinkable ampoules have demonstrated its excellent efficacy and tolerability, and its treatment and preventive benefits in cases of infection and other pulmonary conditions, with and without fever, such as bronchitis/asthma, RSV, upper respiratory tract infections, flu, etc..

The clinical evidence base for Engystol® is detailed in the following pages.

References
Therapeutic effect

A complex homeopathic preparation for the symptomatic treatment of upper respiratory infections associated with the common cold: an observational study.


• Objective

  • To compare the effects of Engystol® with those of conventional therapies on upper respiratory symptoms of the common cold in a setting closely related to everyday clinical practice.

• Study design

  • A non-randomized, observational study; treatment period of two weeks.
  
  • n=397 patients with upper respiratory tract symptoms of the common cold.
  
  • Patients received Engystol® tablets (n=175) or popular over-the-counter (OTC) treatments (n=222, antipyretic/analgesic/anti-inflammatory) for the common cold
  
  - Engystol® tablets were usually given three times daily (69.6%); this dosage was not fixed
  
  - Control group used paracetamol (42%), aspirin (16%), metamizol (18%) and ibuprofen (12%).
  
  • Patients receiving Engystol® were permitted to take other short-term medications, but long-term use of analgesics, antibiotics and anti-inflammatory agents was not permitted.
  
  • In patients with a diagnosis of rhinitis, pharyngitis, laryngitis, or bronchitis, changes in symptoms related to these diagnoses were also monitored.
  
  • The effects of treatment were evaluated on the variables; fatigue, sensation of illness, chill/tremor, aching joints, overall severity of illness, sum of all clinical variables, temperature, and time to symptomatic improvement.
  
  - Tolerability was assessed through monitoring adverse events.

• Results

  • Both treatments provided significant symptomatic relief (- 7.9 for Engystol® vs. - 7.2 for control for the sum of all clinical variables); for most variables, there were no statistically significant differences between the two groups:
  
  - Engystol®’s results were comparable to those of conventional therapy such as paracetamol.
  
  • Significantly more patients (p<0.05) using Engystol® reported improvement within 3 days (77.1% vs. 61.7% for the control group) (Figure 5).

  Figure 5. Time to first improvement in global symptoms in Engystol® and control group

  - No adverse events were reported in any of the treatment groups:
  
  - 89.2% of patients reported ‘very good’ overall tolerability with Engystol® compared to control therapies (81.2%).
  
  - Almost 100% of patients reported ‘very good’ or ‘good’ compliance with Engystol® and with control therapies.

• Conclusions

  • Engystol® is an ideal component of an integrated symptomatic therapy for the common cold.
  
  • Engystol®’s efficacy is comparable to conventional therapy.
The effect of a homeopathic preparation on the clinical condition of patients with corticosteroid-dependent bronchial asthma


- **Objective**
  - To determine less harmful methods in the treatment of patients with corticosteroid-dependent bronchial asthma, and the effects of Engystol® on certain immunological parameters.

- **Study design**
  - A randomized, double-blind, placebo-controlled study.
  - n=40 corticosteroid-dependent asthma patients, aged 24-48 years.
  - Inclusion criteria: all patients had taken triamcinolone 4 to 8mg/24 hr for at least 5 years; FEV₁ (forced expiration volume in the first second) exceeded the normal expected value by 50%; PEFR (peak expiratory flow rate) below 80%.
  - 20 patients received one ampoule of Engystol® subcutaneously every 5 to 7 days; 20 patients received placebo; treatment period of six months.
    - In addition, all patients received methylxanthine preparations to liquefy mucus; tetracyclines were administered if exacerbation of symptoms.
  - Clinical parameters measured for each patient included PEFR, FVC (forced vital capacity), FEV₁ and granulocyte function.

- **Results**
  - Statistically significant increases in mean PEFR, FVC and FEV₁ values for patients treated with Engystol® from 200 to 330ml, 2.2 to 3.5l and 1.7 to 2.4l, respectively (p<0.01) vs. decreases from 210 to 190ml, 2.3 to 2.2l and 1.9 to 1.8l, respectively (p<0.01) in placebo group (Figures 6, 7 and 8).
  - A decrease from 6.0-3.0mg/day in corticosteroid dosage was possible in patients treated with Engystol®:
    - In the placebo group, corticosteroid dosage required was 5.0-7.0mg/day.

- **Conclusions**
  - Engystol® is an effective and safe medication in the treatment of corticosteroid-dependent bronchial asthma.
  - Its administration enables a significant reduction in the required dose of corticosteroids.
RSV infections in infants: therapy with a homeopathic preparation.


• **Objective**
  - To assess the effect of Engystol® as an adjunct therapy in infants with Respiratory Syncytial Virus (RSV) infections.

• **Study design**
  - Double-blind, placebo-controlled study.
  - n=128 infants hospitalized for RSV infections; median age 5.1±4.2 months.
  - The infants were randomly divided into two groups;
    - 66 received Engystol® (0.5ml) intramuscularly daily during the first week of hospitalization, then every other day during the second week, in addition to standard therapy
    - 62 received standard therapy plus placebo.
    - Infants treated with Engystol® in the hospital continued the treatment in tablet form and were given either Engystol® or placebo twice daily.
  - Each child's general condition was evaluated as ‘good’, ‘fair’ or ‘serious’.
  - Regression of symptoms was recorded after 5, 10 and 15 days of treatment on a 5-point rating scale (Symptom Improvement Score (SIS)).
  - Infants were re-examined at two and six months after discharge.

• **Results**
  - Initial examination in the hospital showed:
    - 65% of the infants suffering from RSV infections were in a ‘fair’ condition
    - 5% were in a ‘serious’ condition.
  - By the fifth day of treatment, faster regression of symptoms was noted in the Engystol® group compared to the control group (SIS 2.4±1.3 vs. 3.0±1.6).
    - On days 10 and 15, the SIS in the Engystol® group was also less than that of the control group (p=0.058). (Figure 9).

  \[ \text{SIS} = \text{symptom improvement score, 5.0 = all initial symptoms present,} \]
  \[ 1.0 = \text{all initial symptoms gone, } *p=0.03 \]

  \[ \text{Figure 9. Symptom improvement in Engystol® vs. control group} \]

  After two weeks of treatment, there was a significant increase in phagocytic activity in the Engystol® group compared with baseline (p=0.008)
  - NBT (nitroblue tetrazolium) value (measure of phagocytic activity) increased from 6.5±5.8% to 11.6±8.5% (p=0.002). (Figure 10).

  No adverse effects on liver and kidney function were observed.
Six months after discharge, the Engystol® group contracted significantly fewer respiratory infections than those in the placebo group: 45% with Engystol® vs. 91% in the control group (p<0.0025) (Figure 11).

Conclusions

- Engystol® is effective as an adjunctive therapy for RSV infection in infants, both in accelerating symptom resolution during acute infection, and in protecting patients from subsequent respiratory infections.
Homeopathic treatment of infections of various origins: a prospective study


- Objective
  - To study therapeutic use, efficacy and tolerability of Engystol® in an unselected patient population.

- Study design
  - Prospective study, in which data on therapeutic use, as well as efficacy and tolerability to Engystol® were systematically recorded in 1,479 patients, treated by 154 physicians from three European countries.
  - No criteria were established for inclusion/exclusion from the study.
  - The dosage of Engystol®, the duration of treatment and the choice of whether or not to prescribe supplemental therapies was left to participating physicians.
  - Primary usage indications: Flu, feverish infections, and prophylactic administration to increase endogenous defenses:
    - Additional usage indications: Acute and chronic diseases of the upper respiratory tract.
  - Results were evaluated according to the following scale:
    - ‘Very good’ = complete freedom from symptoms
    - ‘Good’ = clear improvement
    - ‘Satisfactory’ = slight improvement
    - ‘No success’ = symptoms remained the same
    - ‘Worse’ = symptoms worsened.
  - Similarly, tolerance to Engystol® was assessed as ‘excellent’, ‘good’, ‘moderate’ and ‘poor’.

- Results
  - Improvement in symptoms was noted within 1-4 days in half the cases.
  - Overall evaluation of therapy showed that either ‘complete freedom from symptoms’ or ‘clear improvement in symptoms’ was achieved in 9 out of 10 patients (90%) - The treatment was unsuccessful in 4% of patients (Table 1).
  - Comparison between the patients treated with and without supplemental therapy showed that ‘good’ and ‘very good’ results were obtained even when Engystol® was administered as a monotherapy (Table 1).

Table 1. Overall results of treatment within different treatment groups (%)

<table>
<thead>
<tr>
<th>Treatment groups</th>
<th>Very Good</th>
<th>Good</th>
<th>Satisfactory</th>
<th>No Success</th>
<th>Worse</th>
<th>No result reported</th>
</tr>
</thead>
<tbody>
<tr>
<td>Total patient group (n=1479)</td>
<td>46.2</td>
<td>42.5</td>
<td>7.0</td>
<td>3.7</td>
<td>0.5</td>
<td>0.1</td>
</tr>
<tr>
<td>Patients receiving supplemental pharmaceutical and/or physical therapies (n=870)</td>
<td>44.0</td>
<td>44.0</td>
<td>7.4</td>
<td>3.9</td>
<td>0.5</td>
<td>0.2</td>
</tr>
<tr>
<td>Patients receiving no supplemental therapy</td>
<td>49.2</td>
<td>40.4</td>
<td>6.6</td>
<td>3.3</td>
<td>0.5</td>
<td>-</td>
</tr>
</tbody>
</table>

- In almost all diagnostic groups, ‘very good’ and ‘good’ therapeutic results were obtained in over 80% of patients (Table 2).

Table 2. Overall results of treatment within different diagnostic groups (%)

<table>
<thead>
<tr>
<th>Usage indications</th>
<th>Very Good</th>
<th>Good</th>
<th>Satisfactory</th>
<th>No Success</th>
<th>Worse</th>
<th>No result reported</th>
</tr>
</thead>
<tbody>
<tr>
<td>Feverish infections (n=958)</td>
<td>47.5</td>
<td>44.0</td>
<td>4.8</td>
<td>3.0</td>
<td>0.5</td>
<td>0.2</td>
</tr>
<tr>
<td>Flu (n=486)</td>
<td>55.2</td>
<td>36.6</td>
<td>6.4</td>
<td>1.6</td>
<td>0.2</td>
<td>-</td>
</tr>
<tr>
<td>Prophylactically, to activate endogenous defense system (n=411)</td>
<td>33.8</td>
<td>51.2</td>
<td>8.0</td>
<td>6.8</td>
<td>-</td>
<td>0.2</td>
</tr>
<tr>
<td>Other indications (n=235)</td>
<td>34.5</td>
<td>43.4</td>
<td>13.2</td>
<td>7.2</td>
<td>1.3</td>
<td>0.4</td>
</tr>
</tbody>
</table>

- Tolerance to Engystol® was rated ‘excellent’ to ‘good’ by the participating physician in 97% of patients.
• **Conclusions**

  • Engystol® was therapeutically effective both as a monotherapy and in combination with other forms of therapy.

  • No negative effects were observed when Engystol® was used in combination with conventional medicines.

  • This study demonstrated the efficacy and tolerability of Engystol® in a wide range of viral infections.
Preventive effect

A combination injection preparation as a prophylactic for flu and common colds


• **Objective**
  - To verify the prophylactic effectiveness of Engystol® injection to reduce the frequency of influenza (flu), infections and common colds compared to a control group.

• **Study design**
  - Randomized, placebo-controlled, double-blind trial.
  - n=102 healthy males (soldiers), aged 20-48 years, randomized to either Engystol® or control.
  - Subjects received twice weekly 1.1ml of Engystol® ampoules intravenously or isotonic saline solution as control; a series of six injections were given over three weeks.
  - An observation period of eight weeks followed this injection phase.
  - Laboratory tests were regularly conducted during the injection and observation phase: total leukocyte and lymphocyte count, lymphocyte sub-populations, and the antibody titre for influenza A and B.

• **Results**
  - Of the 102 test subjects, a total of 21 became ill: 11 in the Engystol® group; 10 in the placebo group.
    - Engystol® had no influence on the frequency of the flu or the common cold.
    - The average length of time between the last injection and the appearance of flu or a cold was 34 days in the Engystol® group and 19 days in the placebo group (Figure 12).
  - The average length of illness was 11 days in the Engystol® group and 16 days in the placebo group (Figure 13).
  - The severity of symptoms was less in the Engystol® group with 11 compared to 16 symptom characteristics for the placebo group.
  - The increase in the antibody titre for influenza A was less in the Engystol® group than in the placebo group.
  - There was no difference in blood count parameters in both Engystol® and placebo groups.

• **Conclusions**
  - Engystol® can achieve favourable results in the prophylaxis of uncomplicated viral illnesses of the upper respiratory tract, which are unresponsive to specific therapeutic measures.
  - The duration and severity of symptoms was considerably lower in the Engystol® group compared with the placebo group.
The benefits of Engystol® are summarized below:

- Scientifically demonstrated and clinically proven safety and efficacy
- May be used for both prevention and treatment of viral infections
- Stimulates the specific and non-specific immune system (immunostimulator) → strengthens the immune system
- Safe for pregnant women or nursing mothers, as well as the entire family
- No known side effects, contraindications or interactions
- Very well-tolerated
- Suitable for long-term treatment
- May be combined with other natural or conventional immunostimulating therapies.
• **Engystol®**
  - Tablets

• **Engystol®**
  - Injection solution / drinkable ampoules

**Compositions:**
Tablets: 1 tablet containing: *Vincetoxicum hirundinaria* D6, *Vincetoxicum hirundinaria* D10, *Vincetoxicum hirundinaria* D30, 75 mg each; Sulfur D4, Sulfur D10, 37.5 mg each.

Injection solution/ drinkable ampoules: 1.1 ml containing: *Vincetoxicum hirundinaria* D6, *Vincetoxicum hirundinaria* D10, *Vincetoxicum hirundinaria* D30, 6.6 µl each; Sulfur D4, Sulfur D10, 3.3 µl each.

**Indications:**
To activate the non specific immune system, particularly in influenza-like infections and viral diseases in general.

**Dosage:**
Tablets: 1 tablet to be dissolved in the mouth 3 times daily.

Injection solution/ drinkable ampoules: 1 ampoule once daily i.m., s.c., i.v.

**Package sizes:**
Tablets: Packs containing 50 and 250 tablets

Injection solution/ drinkable ampoules: Packs containing 5, 10, 50 and 100 ampoules of 1.1 ml each
References


Ricken KH. The Treatment of Infection Predisposition with Biotherapeutic Medication. Biol Ther 1993;XI(1);50-54.


