

## SUMMARY OF PRODUCT CHARACTERISTICS

### 1 NAME OF THE MEDICINAL PRODUCT

POLLINEX Trees, 300, 800 and 2000 Standardised Units (SU)/0.5ml, suspension for injection

### 2 QUALITATIVE AND QUANTITATIVE COMPOSITION

POLLINEX Trees comprises of a series of 3 pre-filled vials or syringes in the following concentrations:

Vial/Syringe No./Colour	Concentration (Standardised Units (SU))/0.5ml
1 Green	300
2 Yellow	800
3 Red	2000

POLLINEX Trees contains equal proportions of 3 selectively purified allergen extracts of pollen from the following trees:

Birch	<i>(Betula Spp)</i>
Alder	<i>(Alnus Spp)</i>
Hazel	<i>(Corylus Spp)</i>

The allergens have been converted into allergoids by treatment with glutaraldehyde and are adsorbed onto L-tyrosine. The allergen extracts are characterised and standardised through immunological and biochemical methods to ensure batch-to-batch consistent allergen content and allergenic potency. Major allergens are measured in selected extracts. Standardisation is reflected by the assignment of Standardised Units (SU).

For the full list of excipients see section 6.1.

### 3 PHARMACEUTICAL FORM

Suspension for injection  
A white opaque suspension

### 4 CLINICAL PARTICULARS

#### 4.1 Therapeutic indications

Treatment of seasonal allergic hayfever due to tree pollen in adults, adolescents and children from the age of 6 who have failed to respond adequately to anti-allergy drugs.

The diagnosis should be based on the careful consideration of the patient's history and allergy tests, preferably skin tests.

## 4.2 Posology and method of administration

### Posology

POLLINEX Trees is presented in 3ml multi-dose vials or three unit dose syringes

Each vial/syringe is prefilled with 1.0ml/0.5ml of vaccine in graded concentrations as follows:

Vial/Syringe No. and Colour	Recommended dosage
Vial/Syringe No. 1 (Green)	300 SU – 0.5ml
Vial/Syringe No. 2 (Yellow)	800 SU – 0.5ml
Vial/Syringe No. 3 (Red)	2000 SU – 0.5ml

The injections should be given at intervals of 7-14 days. Treatment is to be initiated with 0.5ml of vial/syringe No.1, followed 7-14 days later by 0.5ml of vial/syringe No. 2 and finally 7-14 days later by 0.5ml of vial/syringe No. 3, in accordance with the dosage regime above.

The above dosage regimen is suitable for most patients in whom it is indicated. However, if the patient is particularly sensitive, then the dosage and the progression from dose to dose, should be modified according to the clinician's discretion.

The maximum dose of 0.5ml must not be exceeded.

The three graduated doses of POLLINEX Trees constitute a complete dose for one year.

The course should be completed before the onset of the tree pollen season. Do not use during the tree pollen season.

POLLINEX Trees can be followed by a preseasonal Extension Course (PL 17087/0008) for continued clinical improvement.

It is recommended that the allergy vaccine should be given in each of three successive years.

### Paediatric population

For children from the age of 6 years and adolescents, the same posology regime as adults is recommended.

Pollinex Trees should not be used in children under 6 years of age.

### Method of administration

For subcutaneous injection (see section 6.6 for instructions on handling).

It should be administered at a constant pressure by subcutaneous injection to the middle third of the lateral posterior aspect of the upper arm. The injection sites should be alternated between arms, e.g. 1<sup>st</sup> and 3<sup>rd</sup> injection in the right arm and 2<sup>nd</sup> injection in the left arm. Repeated injections at one injection site should be avoided. Do not inject into a blood vessel or intramuscularly. The patient should be instructed not to rub the injection site.

### 4.3 Contraindications

Contraindicated in patients with asthma because they are more likely to develop life threatening reactions.

Patients should not be given an allergy vaccine if they have febrile infections or inflammation of the respiratory tract; irreversible secondary changes of the reactive organs (emphysema, bronchiectasis etc.); severe chronic and inflammatory diseases, immunopathological conditions, active tuberculosis of the lung and eyes, severe mental disorders or are receiving beta-blocker therapy.

Hyposensitisation injections should not be given to patients with systemic or local infection or who have suffered from a febrile condition in the 24 hours preceding the intended dose, or if they have immunodeficiency or an autoimmune disease.

If tyrosine metabolism is disturbed, especially in the case of tyrosinaemia and alkaptonuria, or there is known hypersensitivity to any of the excipients listed in section 6.1, the allergy vaccine should not be used.

If the patient is pregnant/discover they become pregnant whilst receiving treatment POLLINEX Trees should not be started or continued during pregnancy as pregnancy may change the patient's sensitisation level to a degree that cannot be foreseen. Please refer to section 4.6 Pregnancy and lactation.

### 4.4 Special warnings and precautions for use

The individual tolerated dose should not be exceeded.

Treatment of patients should only be carried out where full facilities for cardio-respiratory resuscitation are immediately available.

Adrenaline (Epinephrine) Injection should always be kept at hand when giving any allergen specific immunotherapy.

Patients should be kept under observation for the first 60 minutes after each injection. This period should be extended if even mild symptoms or signs of hypersensitivity develop and patients should be maintained under observation until these have completely resolved. A severe and prolonged adverse reaction may necessitate hospital admission.

#### **Anaphylactic shock**

As with any specific immunotherapy there is a risk of anaphylactic shock.

#### *Warning symptoms:*

Tingling, itching and burning sensations on the tongue, in the mouth, throat or particularly on the palms and soles. This may be immediately followed by shock with cyanosis, hypotension, tachycardia, bronchospasm and unconsciousness.

Further clinical signs are: anxiety, restlessness, urticaria, dizziness, laryngeal oedema with dyspnoea, nausea and vomiting, respiratory and cardiac arrest.

Severe and potentially life-threatening reactions require fast and effective emergency treatment.

The treatment of allergic reactions is based on current medical guidelines.

In the event of simultaneous vaccination against viral or bacterial pathogens, there should be an interval of at least one week between the last injection of the allergy vaccine and the day of vaccination. Hyposensitisation therapy may be continued two weeks after the vaccination, using half of the last dose administered. Afterwards, this amount can be increased according to the dosage chart at intervals of 7-14 days.

Use with caution in patients with cardiovascular deficiency.

Patients should be warned not to eat a heavy meal immediately before an injection is due to be given.

Injections should be given at a constant pressure by the subcutaneous route. Do not inject into a blood vessel or intramuscularly. Do not rub the site of injection.

The patient should not take any strenuous physical exercise for 12 hours following the injection.

All patients should be advised to contact the doctor immediately in the event of an adverse reaction.

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

Concomitant therapy with symptomatic anti-allergic agents (e.g. antihistamines, corticosteroids, mast cell stabilisers) may affect the tolerance level of the patient. A reduction of the dose after discontinuing treatment with these symptomatic preparations may be required.

During hyposensitisation, exposure to the causal allergens and allergens cross-reacting with them is to be avoided as far as possible.

POLLINEX Trees is contraindicated in those receiving Beta-blockers, please refer to section 4.3.

#### **4.6 Fertility, pregnancy and lactation**

The use of POLLINEX Trees is contraindicated in pregnancy (see section 4.3).

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

Occasionally the injection may cause mild drowsiness; the patient should be instructed not to drive or operate machinery if this is the case.

## 4.8 Undesirable effects

If the injection intervals and dosage regimens are followed exactly and the dose is individually increased in an appropriate manner, allergic side reactions to treatment with the allergy vaccine are rare. They are usually mild but local and/or systemic reactions must be anticipated, in which case the treatment must be immediately discontinued. For these reasons an emergency kit should be immediately available. As a precautionary measure, each patient must be kept under observation for at least 60 minutes after injections, after which time a medical assessment is made.

<b>Reactions:</b>	
<i>Local -</i>	Such as swelling or irritation. These may require symptomatic treatment if they are severe or persist. In extremely rare cases, granuloma may be observed, especially if the injection was too superficial.
<b>Systemic:</b>	
<i>Mild -</i>	Such as rhinitis or urticaria. Fatigue occasionally occurs after injection of the vaccine.  Atopic eczema may be exacerbated by hyposensitisation.
<i>Moderate- Severe -</i>	Such as severe wheezing or bronchospasm.

### Description of selected adverse reactions

#### Anaphylactic reactions/anaphylactic shock

Severe anaphylactic reactions or anaphylactic shock have been reported in individual cases. Anaphylactic shock can develop minutes after administration of any allergy immunotherapy, often before a local reaction has appeared (see section 4.4).

Typical warning symptoms of anaphylactic shock are described in section 4.4.

In rare cases, adverse reactions may occur even a few hours after the hyposensitisation injection, in which case the patient should inform their attending doctor before the next injection. When in doubt especially after the appearance of systemic reactions the patients should seek medical advice/treatment immediately.

#### 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. Healthcare professionals are asked to report

any suspected adverse reactions via the Yellow Card Scheme website:  
[www.mhra.gov.uk/yellowcard](http://www.mhra.gov.uk/yellowcard)

#### **4.9 Overdose**

Symptoms:

If a patient receives an overdose of an allergy vaccine, the likelihood of an adverse reaction is increased.

Reactions are characterised by symptoms ranging from slight swelling or irritation at the site of injection to anaphylaxis.

Management:

I) See 4.8 Undesirable effects.

II) The usual precautions should be followed i.e.

Patients should be kept under medical observation for at least 60 minutes after each injection.

The patient should not take any strenuous physical exercise for 12 hours following the injection.

All patients should be advised to contact the doctor immediately in the event of a reaction.

### **5 PHARMACOLOGICAL PROPERTIES**

#### **5.1 Pharmacodynamic properties**

Pharmacotherapeutic group: allergens

ATC Classification: V01A A05

Immunotherapy with POLLINEX Trees is recommended for patients who are sensitive to specific pollens. The effectiveness of immunotherapy in reducing symptoms has been established by controlled, blinded studies.

The specific pollen allergens incorporated in POLLINEX Trees have been modified by glutaraldehyde treatment and adsorbed onto L-tyrosine with the result that allergenicity is reduced (thus increasing tolerance) while maintaining immunogenicity (related to efficacy).

Although the immunological events are not clearly understood, the production of antigen specific IgG antibody, suppression of specific IgE and decreased mediator (histamine) release from basophils are important factors.

Therapeutic effects of specific pollens immunotherapy are allergen-specific and dose dependent.

#### **5.2 Pharmacokinetic properties**

POLLINEX Trees contains glutaraldehyde-modified extracts of specific pollens adsorbed onto L-tyrosine. The adsorbate L-tyrosine is a natural amino acid which is metabolised in the body and ensures that the active material

(the allergoid) is released more slowly. This results in a prolonged and efficient desensitising effect and improves tolerance.

### **5.3 Preclinical safety data**

No further information of relevance

## **6 PHARMACEUTICAL PARTICULARS**

### **6.1 List of excipients**

L-Tyrosine  
Liquefied Phenol  
Sodium chloride  
Disodium phosphate dodecahydrate  
Sodium dihydrogen phosphate dihydrate  
Glycerol  
Water for Injections

### **6.2 Incompatibilities**

Not Applicable

### **6.3 Shelf life**

3 years

### **6.4 Special precautions for storage**

Store in a refrigerator (2°C - 8°C). Do not freeze. Remove from refrigerator 2-3 hours before use.

### **6.5 Nature and contents of container**

The vials are 3.0ml vials made from clear neutral glass (Type I, Ph. Eur.) fitted with a butyl bung, aluminium seals and coloured flip tops.

The syringes are 1.0ml syringes made from clear neutral glass (Type 1, Ph. Eur.) with a polypropylene plunger rod and butyl plunger.

A pack of POLLINEX Trees either contains 3 multi-dose vials each containing 1.0ml suspension or 3 unit dose syringes containing 0.5ml suspension in graded concentrations as follows:

Vial/Syringe No. 1. (Green) with 300 SU/0.5ml  
Vial/Syringe No. 2. (Yellow) with 800 SU/0.5ml  
Vial/Syringe No. 3. (Red) with 2000 SU/0.5ml

A combination pack which includes the Extension Course (PL 17087/0008) is also available.

Packs containing the product in vials also contain empty syringes and needles suitable for dispensing the product.

Not all pack sizes may be marketed.

#### **6.6 Special precautions for disposal and other handling**

The pack should be removed from the refrigerator 2-3 hours before use and warmed to room temperature.

POLLINEX Trees is a white opaque suspension. During storage a white deposit with colourless supernatant may form. Therefore, before use it is important to ensure that the syringe/vial is thoroughly shaken to ensure that all of the sediment is evenly resuspended.

Any unused medicinal product or waste material should be disposed of in accordance with local requirements.

#### **7 MARKETING AUTHORISATION HOLDER**

Allergy Therapeutics (UK) Ltd  
Dominion Way  
Worthing  
West Sussex  
BN14 8SA

#### **8 MARKETING AUTHORISATION NUMBER**

PL 17087/0007

#### **9 DATE OF FIRST AUTHORISATION/RENEWAL OF THE AUTHORISATION**

Date of first authorisation: 27 August 1998  
Date of latest renewal: 26 April 2005

#### **10 DATE OF REVISION OF THE TEXT**

02 March 2016