

PROPOLIS TINCTURE 50%
AND ITS SPECIFIC USE FOR
MOUTH ULCERS
FOLLOWING
CHEMOTHERAPY

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What is Propolis?

Propolis is made up of components of resin which the bees collect from flowers, trees and plants. The worker bees take these resins to the beehive. The bees in the hive receive the resin and masticate it once more, enriching it with proper components, principally with enzymes.

Bees use propolis for the following reasons:-

- a. To close or block openings or cracks in the beehive.
- b. To diminish the opening of the entrance.
- c. To impede the entrance of enemies.
- d. To ensure a stable temperature in cold regions.
- e. To maintain a reserve for conserving their mummified enemies.
- f. To glue the frames in their vertical framework and to fix them in the beehive.
- g. To cover all the honeycombs with one thin layer of propolis. Even the interior of the cells, before the queen lays her eggs, is covered.

Many researchers confirm that bees mix the propolis with enzymes which they secrete, thereby producing a form of defense (antibody) which acts against viruses, fungi and bacteria.

Bees collect propolis when there is good nectar harvest. Nectar is the sweet fluid produced by plants. The bees produce most propolis at the end of the harvest. The worker bees dedicate themselves to this activity in the very hot hours of the day, that is, between 1000 hrs and 1500 hrs. During these hours, propolis turns out to be easy to handle by the bees.

The sources most rich in resin or propolis are from the flower buds, the leaves of the plants and from the tree bark. Being a natural substance, its composition depends on various factors, such as, the type of vegetation around the hives, the climate and the species of bees.

Besides the innumerable benefits that propolis has for the bees and man, it also has some side effects. People who are generally allergic to bee stings are, as well, allergic to the use or application of propolis, honey, royal jelly and pollen. The direct contact with propolis (to those who are allergic) could cause red marks in the hands and face.

(Translated from the book, "*Plantas – Saude para o povo by Centro Popular de Saude – Yanten/Movimento Popular de Mulheres do Parana, 1994*".

OBJECTIVES OF PROPOLIS TREATMENT

1. To avoid the development of ulcer pain when administered as prophylaxis.
2. To relieve the patient from pain within 24 hours (or thereabouts) if the mouth ulcer/s are already present.
3. To help heal the patient's mouth ulcers.
4. To avoid admitting the patient to hospital with mouth ulcers, thereby saving thousands of euros for one admission alone.
5. To avoid separating the child or young teen from his/her immediate family and friends.

BEFORE THE ADMINISTRATION OF PROPOLIS

It is necessary to ask the parents whether the **child*** (refer to footnote) is allergic to bees or their products. If s/he is, then they would be allergic to propolis. If they do not know, then you would have to check whether the child is allergic to the medication. To do this, one drop of the tincture is to be smeared or rubbed gently on the wrist. This is done some five or six days before the administration of the radiotherapy/chemotherapy. Propolis cream could be applied instead of the tincture, as the alcohol in the tincture might cause some irritation but not an allergy. Propolis cream is easily manipulated. It could be prepared by mixing a spatula of aqueous cream, for example, with five drops of propolis tincture.

If no reaction takes place, then treatment ought to be commenced on day one of the radiotherapy/chemotherapy, that is, some 5 to 6 days when the ulcers are bound to become painful. (Please refer to p.6: ADMINISTRATION OF PROPOLIS TINCTURE 50%, point number 4). The other option is to start the treatment when the child starts complaining of pain in one's mouth. (Refer to p.6*: ADMINISTRATION OF PROPOLIS TINCTURE 50% - point number 1). However, it is better to commence treatment on day one of the chemotherapy/radiotherapy.

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* Please refer to appendix 1 on page 8 for **adult dosages**.

GENERAL NOTES ABOUT PROPOLIS

1. Its general use

As described earlier, Propolis is produced by the honey bees. It is then manipulated with alcohol to produce a tincture. It can be used for quite a big range of illnesses. It is used both internally and externally. It can be used internally for: upper and lower respiratory tract infections, sinusitis, rhinitis, tonsillitis, cough, colds, bronchitis and pharyngitis. It is used externally for: wounds, furuncles, eczema, whitlow, burns, warts, gingivitis, **mouth ulcers**, athlete's foot and onychomycosis.

2. Different forms of propolis

Propolis can be manipulated in order to produce a tincture, pomade, a cream, an ointment, oil or different strength suspensions and tablets. It can also be taken raw. Propolis sweets are also available on the market. There is also a spray which is not available in Malta. There might be other forms which are not mentioned here. The tincture (which could come in different strengths) can be mixed with water to do with it a suspension or with honey. The tincture is alcohol based and the 50% tincture is the only one available in Malta.

3. Adults and mouth ulcers

Propolis is administered in tincture form to adults. Some 2 to 3 drops are usually put onto a cotton bud until the cotton bud is saturated with the propolis. It is dabbed onto the ulcer directly from once to four or five times daily. Ulcer pain normally disappears altogether within 24 to 36 hours. It is also a fact that the continuous use of propolis cures the mouth ulcers completely.

4. Why mix it with honey?

Adult patients have reported that the tincture burns for a short while when applied directly to the ulcer and that it is unpleasant to taste. To overcome these two minor problems it would be better to mix the tincture with honey when administering it to children. Honey makes it palatable and it will remove the sting or burning sensation experienced by adults. Another reason is to have it linger in the mouth and down the oesophagus for as long as possible. This way, the medication will cover all those areas it comes into contact with, especially where there are the mouth ulcers.

5. A guide for health professionals - correct administration

As paediatric oncology patients might have more than one ulcer, then the attached table (Appendix 1) can be used to act as a guide to those administering it. This is done not to exceed the very safe daily drop allowance of the medication and also because the patient might have other ulcers in the throat and further down the throat which are not visible to
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the naked eye. The medication (propolis and honey) mixed with the saliva will reach most of these areas, whereas those ulcers which could be identified or are visible in the mouth, could have the medication applied directly with the forefinger or cotton bud by that of the health practitioner or parent.

It is ***imperative*** that the child is not given anything to drink or eat for at least half-an-hour after the administration of the treatment. An hour is preferable. This is done not to have the medication, which is meant to act locally (i.e. on the ulcers), flushed down the stomach by any liquids or solids.

There are two more points to remember. The first one is that the recommended daily dose (as described in appendix 1) may be administered in the one go or divided into two, that is, at twelve hourly intervals. The second point to remember is to have the mixed propolis and honey stored away in the refrigerator. This is to make it less viscous, consequently making it easier to apply. And as it takes the form of paste, it can remain on the ulcers for a slightly longer period of time, whereas it would not, if it had to be applied soon after it was mixed.

6. Other general information

Other than acting locally, the medication will also help combat any impending or likely infections, such as, upper and lower respiratory infections. This is quite advantageous to the child undergoing radiological/chemotherapeutical treatment because of his/her very low immune response to combat infections. Thus it also acts as a prophylaxis.

Throughout the child's hospitalization, it would be better to invest heavily in educating the parents. Explain to the parents the complications which are likely to arise after aggressive chemotherapy (e.g. the continuous mouth ulcer pain), so that they will comply with the propolis treatment if the need arises and also because they would feel that they are being involved with the child's treatment. Education and sharing of knowledge, which are synonymous with each other, among all the health professions is a must. Let us not forget that our main objective is the child.

ADMINISTRATION OF PROPOLIS TINCTURE (50%) FOR DIFFERENT FORMS OF TREATMENT IN THE MOUTH CAVITY, PHARYNX AND FURTHER DOWN THE GASTOINTESTINAL TRACT

- 1. For preventative treatment:** mix 5 drops/day in 20mls of lukewarm water/milk and instruct the patient to swish and gargle with this solution. After swishing and gargling encourage him/her to swallow the solution. Please refer to point number 4f below as well. Note that when the mouth ulcer/s become visible and/or painful, then stop this treatment and go to step 2 below. It might pay off to prepare the right number of propolis drops with honey (if using honey – point number 4d below) and put it in the refrigerator some days beforehand so that it is less viscous.

- 2. For pain caused by the visible mouth ulcer/s:** either (i) apply 2 to 3 drops onto a cotton bud (or until completely soaked) of the propolis tincture and then dab/apply it onto the ulcer from twice to four times daily. This may be applied more frequently if the patient is still in pain after 36 hours. Or (ii) mix the right amount of propolis tincture (from appendix 1) with 20 to 30mls of lukewarm water/milk and inform the child/teen to swish and gargle this. S/he may then swallow the solution. Please refer to point number 4f below as well. Or (iii) go to step number 4 below and mix with honey as explained.

- 3. For complete healing of the mouth ulcer/s:** all as point number 2 above. However, continue applying the propolis tincture or solution until the mouth ulcer/s disappear/s. Please refer to point number 4f below as well.

- 4. For ulcer/s which are either in the mouth and/or the naso-pharynx and may be further down:**
 - a. Refer to appendix 1: Table of 50% Propolis Tincture.
 - b. Identify the age group.
 - c. Identify the amount of drops which is across from the age group.
 - d. Mix the right number of drops either (a) with one teaspoon of honey (i.e. 1 to 2 mls of honey) in a small pot (e.g. pill cup) or (b) with 20 to 30 mls of lukewarm water/milk. Please note that if you select the honey, then it would be better to refrigerate it the day before so that it becomes less viscous.
 - e. Administer this to the patient. Dab/Apply some of it with a cotton bud onto the mouth ulcers first and the remainder may be introduced into the mouth with a teaspoon. Inform the child to swallow this.
 - f. Do not let the child eat or drink anything by mouth for at least half-an-hour after the treatment. One hour is better.
 - g. Encourage propolis lozenges. Inform the child/teen to suck these and not to crush them with his/her teeth. If following the steps above (i.e. points a to f), then do not forget to allow half-an-hour or one hour before encouraging these lozenges.

- h. If the pain persists, then as a last resort, you may repeat the dose. This step may also be carried out when a patient is not given any propolis treatment, for some reason or other, and then presents him/herself with painful ulcers for the first time. This double bolus dose may be repeated for up to 3 days, however, normal propolis treatment (as per table in appendix one) is to be resumed when the patient is completely free of pain.
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TABLE OF PROPOLIS TINCTURE 50%

<u>AGE</u>	<u>DAILY DOSE</u>
0 – 6 months	2.4 drops
6 months – 1 year	3.6 drops
1 - 1½ years	4.4 drops
1½ - 2 years	4.8 drops
2 - 2½ years	5.2 drops
2½ - 3 years	5.6 drops
3 - 3½ years	6 drops
3½ - 4 years	6.4 drops
4 - 4½ years	6.8 drops
4½ - 5 years	7.2 drops
5 – 6 years	8 drops
6 – 7 years	8.8 drops
7 – 8 years	9.6 drops
8 – 9 years	10.4 drops
9 – 10 years	11.2 drops
10 – 11 years	12 drops
11 – 12 years	13.2 drops
12 – 13 years	14.4 drops
13 – 14 years	15.6 drops
14 – 15 years	16.8 drops
15 – 16 years	18 drops
16 – 17 years	19.2 drops
17 – 18 years	20.4 drops
ADULT, that is, 18 years and over	10 drops (prophylactic dose) 26 to 36 drops (treatment dose)

NOTES:

1. Use one teaspoon of honey with the number of drops above.
2. The doses mentioned above can be administered for either 5, 7, 10 or 15 days or until all the ulcers disappear. It all depends on the severity of the ulcers.
3. When one encounters 5.2 drops/day, 6 drops can be administered and not 5 drops. This medication is fairly safe if all the steps mentioned in this paper are followed to the letter.
4. The **adult** daily dose is from 26 to 36 drops and the prophylactic dose is 10 drops daily.