

# PROPOLIS PREPARATIONS AND INDICATIONS

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**Together with other bee products such as honey, pollen and royal jelly, propolis is a fundamental and frequent reference for the operators of the sector for phytotherapies of certain efficacy.**

Although man has known and used propolis for thousands of years, he continues to use it today and indeed, in the light of new and modern scientific knowledge, he has succeeded in enhancing and making the evident properties of this extraordinary substance more tangible. With the production of more concentrated and especially standardized extracts in some active ingredients, phytotherapy products of the latest generation have been the object of more stringent studies regarding their effectiveness and possible toxicity, making it possible to produce more functional and safer preparations. The consump-

tion of these products is consequently increasing and a market of definite interest for companies has been created, especially in the last few years. But what are the most important uses, in terms of functionality, of products based on propolis?

The effects of propolis refer mainly to the anti-bacterial, anti-fungal, anti-inflammatory, cicatrizing and slightly anaesthetic activity of the product. Many of these effects are due to a group of substances in propolis and which belong to the group of flavonoids: in particular: galangine, pinocembrine and crisine, whilst other effects, for example the slightly anaesthetic effect, have not yet been attributed to any substance in particular. The essential oil, which is obtained by steam distilling the propolis, apparently contributes significantly to the anti-bacterial action of

the product, as well as giving a pleasing note of vanilla to the various extracts containing it. Incidentally, we can recall that propolis collected in Asian countries (China), due to the special processing method, does not contain the essential oil that Italian propolis normally contains and which, for this reason, is therefore considered of a higher quality.

The preparations that contain propolis are generally administered by mouth (internal use) or used, prevalently and with more visible effects, locally on the mucous and epidermis (topical use).

Below we describe the numerous indications which in the professional field are recommended every day by the sector's operators to their clients, referring to the typology of the preparation or extract which is most suitable for that type of indication.

**INTERNAL USE**

In the form of capsules, tablets, drops and syrups, propolis is taken for its anti-bacterial, anti-inflammatory, cicatrizing and anaesthetic properties in the treatment of minor ulceration of the gastro-enteric tract. Its anti-bacterial activity on *Helicobacter pylori*, a Gram-negative bacteria, the presence of which in the stomach appears

to be correlated with the appearance of gastritis associated with ulcers, has been documented. In addition, thanks to the cicatrizing and anaesthetic action of propolis, the symptomatology generally improves gradually.

The association of propolis-polysaccharide fraction of aloe vera is appropriate in some preparations recommended for this type of indication.

**TOPICAL USE**

Topical use represents the chosen method of administration of the active ingredients of propolis. Since ancient times, propolis has been used to treat skin diseases and burns, sores or wounds of the epidermis and the intrinsic properties of this resinous substance are evident for this type of pathology. Preparations for topical use which are generally used are drops, unguents, creams and collutories. They can contain dry, hydroalcoholic, glycolic or oleaginous extracts of propolis even if it should be emphasized that the last mentioned, although containing the essential oil, are without flavonoids (insoluble in oil) and therefore are less functional.

The associations with other drugs that help the action of propolis in some preparations are frequent. Extracts of *echinacea pallida*, *echinacea purpurea*, *astragalus*, *acerola*, wild rose, *grindelia*, including in associations with essential oils

of some species, pine, eucalyptus, mint and thyme are often found amongst the functional ingredients of syrups with propolis indicated for diseases of the respiratory tract; essential oils of melaleuca (tea tree oil) and of *helichrysum* in hydroalcoholic extracts or unguents with propolis advised in the treatment of cutaneous mycosis and psoriasis.

Infections of the upper air pathways, such as pharyngitis, acute or chronic tonsillitis, caused by Gram-positive bacteria such as *Staphylococcus* and *Streptococcus* respond very well and rapidly to local treatment with hydroalcoholic or glycolic extracts of propolis. The treatment that is generally recommended consists of brushing the infected area with a hydroalcoholic extract of propolis or gargles repeated during the day with the same extract but diluted in water. The anaesthetic action of propolis also helps to create a sensation of immediate relief, inhibiting the burning sensation which usually accompanies infections of the oral cavity. The doses of the extract in each individual treatment obviously depend on the degree of concentration of the extract and are generally recommended by the manufacturer of the preparation. Products in the form of sprays for the oral cavity when necessary or used as a form of prevention are also valid.

In the treatment of aphthous ulcers in the mouth and gingivi-



tis, hydroalcoholic or glycolic extracts can be used as well as unguents with propolis which, applied locally to the part concerned, remain in contact with it for a reasonably long period of time and have, as well as their own action, a protective type of action.

Again for local use in the treatment of infections of the nasal mucous, an extract of propolis can be associated with the essential oil of niaouli or eucalyptus for the preparation of highly functional rhino-balsamic drops to be applied several times a day during colds.

Bedsores can be successfully

solved by swabbing the part of the skin concerned, after having carefully cleansed and disinfected it, with the glycolic extract of propolis. Subsequently, it is possible to protect the part with a dressing of sterile gauze imbedded with a suspension of dry extract of propolis mixed with oil of paraffin/paraffin; as this suspension is liquid when warm but solid at ambient temperature, deposited when warm on the gauze, on cooling, the gauze of the dressing does not adhere to the wound, allowing the active ingredients of the propolis to carry out their anti-microbial, cicatrizing and anaesthetic

action, often leading to the complete healing of the part with sores. The above mentioned effects of propolis may also be of significant help in the treatment of slight burns of the epidermis. The burnt epidermis, due to the heat received during the burning, is strongly dehydrated and subject to bacterial or mycotic infections of various types as the surface tissues have been greatly damaged. In this case it is advisable to use an unguent with propolis which, as well as having a local anaesthetic and anti-microbial action, as it is an anhydrous preparation, by occlusion prevents the loss of



water by transpiration through the skin thus encouraging its hydration.

Hydroalcoholic and glycolic extracts are suitable and successfully used to solve cutaneous mycotic infections by application with direct and repeated swabs. The mycoses successfully treated include athlete's foot, cutaneous candidosis and thrush.

#### DOSAGE

A precise dosage has not yet been officially established as propolis has not been examined by the Commission E of the German Ministry of Health or by the ESCOP.

Scientific studies often do not refer to specific internationally recognized dosages.

However, a dosage of 25 drops 3-4 times a day of 70-75° alcoholic hydroalcoholic extract (D/E ratio: 1/3) can be recommended. This product may be standardized in total Flavonoids expressed as galangine 40 mg/ml (spectrophotometric) or Pinocembrine 3-5 mg/ml (HPLC).

Other extracts (e.g. glycolic, dry) should contribute the same quantity of active ingredients specified as for the hydroalcoholic extract with the recommended dosage. In this regard it is recommended to make the due considerations regarding the recommended doses for "aqueous" and "oleaginous" propolis which unfortunately often have too low a titre.

#### TOXICITY AND SIDE EFFECTS

No particular toxic effects of propolis and its derivatives have been documented.

The allergenic effect of propolis in susceptible subjects has been widely demonstrated and studied; this action is believed to be caused by some substances belonging to the class of caffeates, present in propolis and in its extracts.

Usually however, these phenomena are not serious and localized in the cutaneous and mucous areas which are easily resolved after suspension of the treatment.

#### CONCLUSIONS

Preparations based on propolis, if correctly formulated, are able to provide surprising responses even with treatments lasting a relatively brief period of time. Moreover, the side effects are limited to slight allergic phenomena which are not very widespread in terms of cases. There are numerous indications that are well documented in scientific literature. And so, if you haven't already done so, why not try taking a good preparation based on propolis the next time you have a sore throat? It will surprise you: you will be amazed by its extraordinary and immediate functionality!

