

Short Communication

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Home Remedies

Andrew Riskalla¹ and Caroline Karkour^{2*}

¹King Hamad University Hospital, Bahrain

²University of King Hamad University, Sandoz Pharmaceuticals Company, Bahrain

*Corresponding author

Caroline Karkour, University of King Hamad University, Sandoz Pharmaceuticals Company, Bahrain.

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A large proportion of the general public has come to rely on these simple measures for part of their primary healthcare. In developing countries access to medicine is scarce and expensive forcing the majority to depend on natural remedies which have been handed down through generations. However even in developed societies skepticism towards medicine is on the rise and more and more people are favoring herbal home remedies believing they are free of undesirable side effects [1]. In fact, about 8% of hospital admissions in the United States of America are due to adverse or side effects of synthetic drugs.

In Germany a public opinion poll showed that 50% of the population uses herbal remedies, and one study indicated that patients want to be informed on the use of home remedies by their primary physicians as well [2,3]. A cross-national study across 14 European countries on self-care for common colds revealed that participants used 9 times more non-pharmaceutical items than pharmaceutical items [4].

Back to Basics

Honey has been used in traditional therapy since ancient times for its healing and therapeutic properties. The healing property is due to the fact that honey has an anti-bacterial activity, maintains the wound in a moist condition, and its high viscosity provides a barrier to infections [5]. The antimicrobial activity of the majority of honeys is due to their enzymatic production of hydrogen peroxide [6]. The enzyme glucose oxidase reduces oxygen to hydrogen peroxide. Other kinds of honeys such as Manuka honey, from the Manuka bush indigenous to New Zealand and Australia, are called non-peroxide honey and exhibit exceptionally high concentrations of the anti-bacterial compound methylglyoxal [7,8]. Additionally honey is known to have a low pH which varies between 3.2 and 4.5, and a high osmolality or sugar content both of which hinder microbial growth [9]. Honey has also been found to possess anti-oxidant and anti-inflammatory effect [10]. Due to all these properties honey has been used in many traditional preparations and home remedies to treat an array of conditions. It most commonly used to treat a sore throat by mixing it with lemon, ginger and tea. A famous traditional Russian remedy for colds called gogol mogul is made by mixing honey with raw egg yolks, milk and butter. Depending on whether or not the intended person to treat is an adult or not, whisky is added.

Honey can also be applied directly to open wounds, ulcers or sores in the oral cavity or as a wound dressing to accelerate healing and prevent infections. It has even been used as a sinus irrigation for chronic rhinosinusitis with promising results and efficacy in reducing biofilm producing bacteria and acute sinusitis exacerbations [11,12].

The Liliaceae family to which Garlic and onions both belong have been heralded for their healing properties like honey for centuries. They have played an important dietary and medicinal role throughout history for their use in prevention and treatment of diseases. Garlic contains allicin, the principle bioactive component, which is an organosulfur compound with anti-tumour, anti-thrombotic, anti-microbial, anti-protozoal, antifungal and antiviral properties [13]. Ancient Sumerians, Chinese and Indians made full use of its medicinal properties. As for the Egyptians and the Greek, it was used for its health benefits and stamina for slaves, soldiers and Olympic athletes. In fact, Tutankhamen, the youngest pharaoh, was discovered buried with garlic bulbs alongside him in his pyramid for the purpose of securing his good health in the afterlife. Hippocrates dubbed garlic as “snake grass”, and described in his works how it should be used to remedy parasitic infections and snake bites. Garlic was also known as “Russian penicillin” since it was used by physicians in Russia to treat respiratory diseases and cough up until World War 2 [14]. Sore throats can be treated by making garlic tea out of freshly chopped garlic, lemon and honey. In Ayurvedic medicine earaches caused by bacteria or fungus can be treated with a simple garlic concoction. Cloves of garlic are crushed and mixed with mustard or sesame oil, heated until the garlic turns slightly black and allowed to cool and then administered in the ears. A recent study even showed that a group of people ingesting garlic for 12 weeks reported fewer incidences of common cold.

Similarly onion consumption has been used for the same medicinal properties by almost all traditions and cultures [15,16]. A historical but well known home remedy for earache which is still used today in some households by the older generation is the onion compress. A fresh onion is cut in half and covered with a clean cloth and held over the ear for 5 to 10 minutes. Alternatively a few drops of grated onion juice can be administered to the affected ear [17]. Other traditional practices involved putting raw onion inside a

sock and sleeping with it over night to treat a cold or a flu. This remedy dates back to the 1500's, at the time of the plague, when people believed disease spread through noxious air and that onions could cleanse the air and hence the blood from disease. It was also linked to the ancient Chinese practice of foot reflexology [18].

Ginger is a member of the plant family Zingiberaceae that includes turmeric and cardamom. These spices have been used in traditional medicine for centuries and possess anti-inflammatory, antioxidant and anti-cancer properties. Ancient Indians and Chinese are believed to have produced ginger as a tonic root to treat many ailments for over 5000 years. It was exported to the Roman Empire from India and spread through Europe. After the fall of the Roman Empire Arab merchants controlled the trade of ginger and other spices between the east and Europe for centuries raising the value of these commodities [19]. Ginger's primary component is the gingerol ketones harvested from the rhizome which is the horizontal stem from which the roots grow. Similarly turmeric has been used for thousands of years and plays a major role in Ayurveda and traditional Chinese medicine. It was first used as a dye and then later for its medicinal properties in traditional medicine [20,21]. Curcumin, the chief constituent of turmeric, has been proven to have clinical therapeutic effects mostly in treating chronic inflammatory diseases amongst others [22,23]. Ginger and turmeric are excellent for soothing a sore throat or as a sinus remedy. They are considered natural decongestants and reduce inflammation. When turmeric is combined with spicy ginger root and brewed into a hot tea the combination helps loosen mucous from clogged nasal passages and relax sinus pressure. Turmeric is used in a hot drink called Golden milk or turmeric latte and is commonly prescribed in Indian traditional medicine and Ayurveda for throat pain and to help fight off common colds.

Vinegar and lemon are commonly used in home remedy preparations and are readily available in many households. They are both acidic, with apple cider vinegar consisting of acetic acid and lemon of citric acid. Vinegar derives from the French *vin aigre*, meaning "sour wine" can be made from any source of fermentable carbohydrate source including wine, molasses, dates, apples, grapes and potatoes. The use of vinegar for medicinal purposes has been used since the time of Hippocrates (460-377BC) for cleaning ulcers and treatment of sores. Oxy-mel (Latin for acid and honey) was a popular ancient medicine, composed of honey and vinegar, and prescribed for persistent coughs and sore throats by Hippocrates.

The formulation of oxymel was prescribed until the 19th century and was detailed in the British Pharmacopoeia (1898), the German Pharmacopoeia (1872), and in the French Codex (1898). Indeed the same combination is still used today for the very same reasons [24-26]. Many studies have clearly demonstrated the anti-microbial properties of vinegar, of which some have shown the effectiveness of diluted vinegar for the treatment of ear infections such as otitis externa, otitis media, and granular myringitis [27,28]. Apple cider vinegar is very popular with home remedies requiring vinegar as an active component. When used for ear infections it changes the pH of the ear canal and creates an environment where bacteria and fungus cannot survive. Usually some apple cider vinegar is warmed and then applied to the ear as drops several times a day. With regards to throat and sinus congestion, a cup of hot water or tea mixed with 2 or 3 tea spoons of raw or unfiltered apple cider vinegar helps thin out excessive mucous and relieve sinus pressure. Citric acid in lemons is used for the same properties but also for flavoring and as a rich source of vitamin C [29].

Essential oils derived from aromatic plants also play an important role in traditional medicine and home remedies. Plants such as lavender, oregano, thyme, peppermint, sage, anise, caraway and ethinacea all exhibit anti-inflammatory and antimicrobial properties which help alleviate symptoms when added to the mix of home remedies used in many patients self-care [30].

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