

articulating the issues that Pacific peoples face, as well as encouraging public debate to improve the hearing health for Pacific peoples. In this connection, some of the implications for future work on hearing loss among Pacific peoples may include the need to:

- overcome data limitations by collecting credible evidence, investigating the hearing health of Pacific peoples by ethnicity, and describing the prevalence of health conditions of each group
- know what's important and works for Pacific peoples and their lived realities in order to improve care for them and maintain relationships
- understand the issues within the institutional framework in which they currently exist
- work across other sectors like education
- support local ownership of services that are adaptable, innovative and responsive to the needs of Pacific peoples, and
- develop local capacity and capability to support hearing services for and with Pacific peoples.

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Colloidal silver

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Silver is a metallic element. Through the ages there has been the belief that silverware used for water storage had disinfecting properties. People are exposed to silver, usually in tiny amounts, through environment and in certain work activities or hobbies. Colloidal silver is a suspension of very small metallic silver particles in a liquid base. It has been marketed in various forms for many years as a topical antimicrobial preparation and as a dietary supplement to stimulate the immune system.

PREPARATIONS: Available products range from liquids for oral administration to topical gels, ointments and sprays, usually supported by websites that describe the manufacturing process and their silver content.

ACTIVE CONSTITUENTS: Elemental silver, usually its ionic form, is proposed as the active ingredient as an antimicrobial and immunostimulant.

MAIN USES AND CLAIMS: Silver in various forms and salts has had medicinal uses since ancient times. Most recently, silver nitrate has been used to treat corns and warts and silver sulfadiazine to treat burns. These uses should not be confused with the claims associated with colloidal silver. Colloidal silver products are often marketed as dietary supplements or topical products with various health-related claims, including that it kills disease-causing agents such as bacteria, viruses, and fungi (alternative to prescription antibiotics); treats diseases such as cancer, HIV/AIDS, diabetes, tuberculosis, syphilis, scarlet fever, shingles, herpes, pneumonia and prostatitis; promotes bladder and lung health; and stimulates the immune system.

EVIDENCE FOR EFFICACY: Official drug compendia such as the United States Pharmacopeia and National Formulary have not listed colloidal silver products since 1975 due to lack of evidence of effectiveness and growing concerns about possible toxicity. Colloidal silver products are still advertised and available in New Zealand as an alternative therapy.

The scientific literature comprises numerous studies showing that silver in various forms does possess in vitro antimicrobial activity, but there is no clinical evidence of effectiveness. Whilst the intake or application of small amounts of colloidal silver is unlikely to be harmful, chronic use or use of

Herbal medicines are a popular health care choice, but few have been tested to contemporary standards. **POTION OR POISON?** summarises the evidence for the potential benefits and possible harms of well-known herbal medicines.

preparations with unstated or high silver content may lead to significant adverse effects.¹

A recent review by the National Center for Complementary and Alternative Medicine in the United States² concluded that:

- silver has no recognised function in the body and is not an essential mineral supplement
- silver should not be promoted as a cure-all or to treat a 'deficiency' of silver in the body
- claims made about the effectiveness of colloidal silver products for numerous diseases are unsupported scientifically
- colloidal silver products can have serious adverse effects
- the amounts of silver in supplements can vary greatly, which can pose risks to the consumer.

ADVERSE EFFECTS: Adverse effects are relatively unlikely if a product with a stated low amount of colloidal silver is used for a short time. Long-term use can lead to argyria (silver salts deposit in the skin, gums, nails, eyes, and internal organs causes a permanent bluish-grey discolouration).¹ Other possible adverse effects include neurological problems, renal damage, gastrointestinal upset, headaches, fatigue, and skin irritation.

DRUG INTERACTIONS: Although there is no supporting clinical evidence, it is possible that colloidal silver taken by mouth may interfere with the absorption of some drugs, e.g. penicillamine, quinolones, tetracyclines, and thyroxine.

Summary Message

Colloidal silver is widely marketed for a variety of health benefits. A range of potentially useful in vitro effects have been shown, but no scientific evidence of actual patient benefit. Adverse effects are possible and are more likely with products with high silver content or long-term use.

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