

AcnePSP Question and Answer

QUESTION: Why does toothpaste sometimes help?

Some people use toothpaste as a means of speeding up the healing particularly bad spots. It seems that certain brands of toothpaste work better than others. Some of you who have tried toothpaste found it too irritant. You've asked what's in toothpaste that works so well against spots and why can't we base an acne treatment on it.

Toothpaste is designed to clean bacteria and food debris from the surface of the teeth and to prevent dental decay by acid producing (cariogenic) bacteria that live in the space between the gums and the teeth. Most toothpastes also help prevent more serious dental problems, freshen breath and some have abrasives to help keep teeth white. Because they are designed to clean surfaces, the main ingredients in toothpastes are detergents. Strong detergents such as sodium lauryl sulphate (SLS) kill bacteria if present in high enough concentrations. In other words, SLS in toothpaste might be able to kill acne bacteria in the skin as well as cariogenic bacteria in the mouth. Strong detergents like SLS will also strip the skin of the lipids it needs to maintain an intact water barrier. As a result, SLS is probably also responsible for the irritant and drying effects of toothpaste when applied undiluted to the skin. We couldn't use it as a treatment for acne because it isn't gentle enough in the amounts needed to kill acne bacteria. It is possible that other detergents might be more effective and less irritant than SLS.

Some toothpastes contain additional antibacterial agents. A common one is triclosan. Under laboratory conditions, acne bacteria are highly susceptible to the killing effects of triclosan. However, skin lipids potentially inhibit the action of triclosan so that it is unlikely to have a strong antibacterial effect in areas of skin such as the face where lots of sebum is often present. Triclosan is contained in a small number of treatments for skin prone to spots but is inferior to benzoyl peroxide.

Essential oils and their component such as thymol are commonly used to flavour toothpaste. Essential oils also have anti-inflammatory properties that might help reduce the redness of spots.

Hydrogen peroxide, which is included in some whitening toothpastes, is also antibacterial. It is quite possible that the combination of ingredients in certain toothpastes works better than any of the individual ingredients in killing acne bacteria and reducing inflammation.

Recreating the right mix of toothpaste ingredients as a new treatment for spots would be very difficult and the resulting product might not be well tolerated by the skin. However, we hope we've explained why some toothpastes are pretty effective against spots and others do nothing more than dry out the skin.