

A young child with blonde hair, shirtless and wearing blue denim shorts, is playing in a large mud puddle. The child's face, arms, and legs are covered in mud. The child is holding a small dark object in their right hand. The background is a grassy area with a fence and trees.

More and more research is suggesting that we parents are becoming a bit over-zealous in our warfare on germs. Liz Donnelly investigates.

more germs please

It seems children who are on a friendly basis with every day germs may be less sensitive to their environment which subsequently reduces their chances of developing allergies, such as eczema and asthma.

In New Zealand, we are privileged to have access to good water, hygienically preserved food and hardcore disinfectants to eradicate many germs around the home. But are we doing our children any favours when we insist on using hospital-strength cleaners in every corner of our homes? Apparently not!

In order to function properly, young children need to be exposed to bugs. This is what teaches the immune system how to regulate itself, to learn what to attack and what to turn a blind eye to. Some experts believe one of the consequences of our super-hygienic lifestyles is that we don't get enough exposure to germs, triggering an increase in immune system disorders such as asthma and eczema.

The hotly contested 'hygiene hypothesis' says if children aren't exposed to germs in early childhood, they may become overly sensitive to their environment – skipping straight along the road to allergies. So, point those toddlers in the direction of a big mud puddle!

Common germs

So what exactly is a good germ, and what is not? The word 'germ' refers to four types of micro-organisms, as follows:

Bacteria: Each square centimetre of skin averages about 100,000 of these lovelies! But they're not all bad; some of the thousands of different kinds of bacteria found in and on our bodies are 'helper germs' aiding digestion and nutrient absorption. But, for the majority, they cause infections and can make you sick. In fact, every imaginable part of our body is crawling with bacteria. Yummol!

Viruses: Chickenpox, measles and flu, are caused by viruses (along with many other illnesses). These joyriding germs die quickly if they're not aboard something alive - be it animal, plant or human.

Fungi, mould, mildew: Plant-like gremlins that thrive in steamy conditions and cause conditions such as athlete's foot, asthma and breathing problems.

Protozoa: These not so famous single-cell organisms also love the damp and lead to diseases such as malaria and dysentery. Chlorine in the water takes care of the majority of these.

A child's body needs stimulus in order to learn to identify the presence of germs and do battle with them – even before a child is born. During pregnancy, the placenta lets through small amounts of innocuous allergens and microbes that need to be dealt with. By the age of three years, the small human body has learned most of what it needs to know to fight against future germs.

But what if your three-year-old hasn't had sufficient battle preparation?

Once we catch a germ, the immune system fights it off by producing a swathe of antibodies. And once it's over that illness, the body retains a blueprint of the offending germ so next time it is better equipped to eradicate the nasty faster. Your child's 'back catalogue' of these blueprints is what develops into a robust immune system.

The best long-term strategy to wage war against germs is to keep your child's immune system functioning at full throttle. Paediatric Immunologist, Professor Rohan Ameratunga, says the key is "a balanced diet, immunisations, plenty of exercise, sufficient sleep and controlling of stress levels."

Although it is essential to use high hygiene standards around places, such as the toilet and food preparation, as a general rule you don't need to sterilise everything in sight. (Did you know, the number of germs on your fingertips doubles after you use the toilet and they stay alive on your skin for up to three hours if you don't wash and dry properly!)

Little children mostly catch germs when they put their hands in their mouths after touching things with germs on, including other kids, and in their naturally curious worlds that's very difficult to avoid. However, there are many things you can do to help build your children's immune systems through exposing them to some germs and warding off the nasty ones with hygiene basics.

Germ-friendly living

Hygiene basics

Teach your children to wash their hands with ordinary soap and water after going to the toilet and before meals – this is the simplest and most effective defence against the majority of germs. Teach them to count to 20 as they wash their hands (sing a song or chant a nursery rhyme together as a fun way of counting). Then teach them to count to 20 again when they dry their hands - not drying hands is almost as bad as not washing them at all!

Building immunity

For little hands that have been digging in the dirt for worms, picking flowers from the garden, or patting the neighbour's cat, the best thing to use to wash hands is plain soap and water. There is no need to use hospital-strength antibacterial hand wash.

Exposing children to everyday germs as well as normal childhood infections such as coughs, colds, runny noses at play groups, childcare centres, etc, helps to train the immune response.

Having pets or being exposed to pets regularly, particularly cats, can help confirm some protection from asthma. Also, expose them to farmyard animals where

possible, as this will help train a healthy immune system.

Stimulate immunity and fight infections by feeding your children good immunity foods:

- **Antioxidants Vitamin C and Beta Carotene** stimulate immunity and help fight infections. Eat oranges, lemons, grapefruit, pawpaw, strawberries, guavas, cabbage, broccoli, green peppers, pumpkin, sweet potato, butternut, broccoli, spinach, and peaches.
- **Omega-3 fatty acids** are also great for immunity. Eat fatty fish and other omega-3 enriched foods.
- **Zinc** stimulates the body to fight infections and can be found in fish, seafood (especially fresh and canned oysters), meat, poultry, eggs, cheese, milk, peanut butter and unprocessed grains and cereals.
- **Garlic and ginger** are 'natural antibiotics'.
- **Yoghurt** is especially beneficial if it contains lactobacillus and/or bifidobacterium cultures ('helper germs').

Remember, children's abilities to fight infections have to be developed over time and can only happen if they come into contact with these 'invaders' in the first place. Once children have a blueprint of the germ or virus, they are in a better position to fight it off the next time. ●

Some research suggests that kids who are on a friendly basis with everyday germs may be avoiding allergies.

