Episode Twelve **Tuesday October 23 (2001)**

Benchgerms

NORMAN SWAN: A marketing buzz word which always seems to be a winner is 'antibacterial'.

It's used on everything from toothpaste to soap, from bench wipes to dishwashing liquid, even to special hygiene rinses for your washing after it's already clean.

They always promise to save us from the sea of bacteria in which we live.

But, according to some experts, it's fuelling the current epidemic of antibiotic resistance.

ASSOC.PROF.JOHN TURNIDGE, ADELAIDE WOMEN'S AND CHILDREN'S HOSPITAL: We're particularly concerned by the emergence of antibacterials and particularly antiseptics in household cleaning products and a variety of things.

NORMAN SWAN: Dr John Turnidge chairs Australia's expert advisory group on antimicrobial resistance.

It's looking for ways to hold back the growing tide of antibiotic resistance in our community.

ASSOC.PROF.JOHN TURNIDGE: We know, from early scientific evidence, that one particular antiseptic, and probably more, can select for resistance to antibiotics and so that's just double jeopardy.

NORMAN SWAN: Antibiotic resistance is a major problem worldwide and there are several causes -- too many being used in agriculture, doctors prescribing too many antibiotics unnecessarily, and when you and I receive a script, we don't follow instructions.

But there is another way.

Germs can pass on resistance to others.

For example, once a bacterium learns how to defeat an antibiotic, it can spread its new-found knowledge to other bacteria.

ASSOC.PROF.JOHN TURNIDGE: They can borrow resistance genes, in other words genes that prevent the antibiotic working, from other bugs.

They can share their genes and they can do it and are doing it every hour of every day in our guts, on our skin and in the environment.

NORMAN SWAN: But this moving feast of resistance genes isn't confined to antibiotics.

Bacteria also develop resistance to the disinfectants and antiseptics we use to clean surfaces and our skin.

ASSOC.PROF.JOHN TURNIDGE: And we now know from some early scientific work that using the antiseptic will select for resistance to it but, because of the particular mechanism, it can also select for resistance to some antibiotics that are totally innocent partners otherwise.

NORMAN SWAN: The antiseptic that scientists are currently worried about is triclosan.

This has been an invaluable weapon in the fight against golden staph in hospitals but it's increasingly appearing in domestic products such as liquid hand washes, surface cleaners and even dishwashing liquid, where Dr Turnidge says it's not even needed.

ASSOC.PROF.JOHN TURNIDGE: There are no studies that I'm aware of that show that adding antibacterials to household products helps at all and, sadly, it's just playing on people's fears, people's fear of germs.

Fortunately, most germs aren't spring-loaded, they don't jump off the bench and attack us.

The germs that we should really worry about are the ones we get from our human colleagues rather than the ones that jump in from our environment.

NORMAN SWAN: While microbiologists like John Turnidge would like everyone to stop using triclosan at home, it can be impossible for the consumer to find out which products actually contain it.

The label 'antibacterial' is now used on a whole range of products.

Reading the small print may tell you what the active ingredient is but, then again, it may not.

ASSOC.PROF.JOHN TURNIDGE: My counsel would be if you find the word 'antibacterial' listed anywhere on the product, that's the one to shun.

You should be looking at the one, perhaps the same brand, that doesn't contain that word.

NORMAN SWAN: So are Australian homes really that dirty?

Do we really need to use antibacterials to protect us against the common everyday germs on kitchen bench-tops and in washing-up water?

Ironically, even hospitals don't use high-powered disinfectants that way.

MARY McDONALD, INFECTION CONTROL COORDINATOR: We use good old-fashioned detergent and elbow grease and that's all you need.

NORMAN SWAN: Mary McDonald is the Women's and Children's Hospital's infection control coordinator.

Hospitals now recognise the need to reserve their serious disinfectants and antiseptics for situations where the risk of infection is high.

MARY McDONALD: On rare occasions, you may have call for a disinfectant.

For example, if there's a major blood spill and it's going to be --

You clean it up but there's an area where there are nooks and crannies and you can't quite clean, then you might use a disinfectant but only if people's skin is going to come into contact with that surface.

But, ordinarily, all you need is soap and water.

The principle of cleaning is mechanical action.

You are mechanically, physically, trying to remove organisms.

You don't necessarily want to kill them.

From infection-control perspectives for your household surfaces, the most important thing is keeping them clean, and to keep them clean is to physically go over them with soap and water or a sponge with detergent on it and wipe the whole area clean and then dry it.

You don't need disinfectant.

NORMAN SWAN: In fact, the most important infection control procedure in hospitals and the home is washing your hands and, again, according to the experts, there's no need for antiseptics unless you're doing a surgical scrub.

Soap plus mechanical action is good enough.

MARY McDONALD: When you wash your hands, it's important that you rub all surfaces of your hands together, especially your fingertips and thumbs of your dominant hand, rinse these organisms off, and dry.

You are mechanically removing organisms.

You're not trying to kill them.

Keep it simple and keep it clean.

Detergent is enough.