

The present outbreak of measles has renewed the debate about immunisation. RUTH NICHOL reports.

Building up debate on immunity

TO IMMUNISE or not to immunise? It's a question now facing thousands of parents. Like fluoridation of water, an issue that once seemed a matter of simple commonsense is becoming a battle between two determined lobbies.

While vans with loud hailers cruise the streets of Porirua exhorting parents to get their children immunised against measles, the anti-immunisation lobby is warning of the dangers of doing so.

Parents are left wondering what is right for their child.

For those of us brought up before a measles vaccination was available, it's hard to see the illness in the same light as other once-common childhood diseases such as polio or diphtheria.

Isn't it something that children catch and get over?

For most Western children, the answer is yes. While the disease still kills many children in Third World countries, it is extremely unlikely to cause the death of a healthy, well-nourished New Zealand child.

But even here it can kill — two deaths in the past few weeks prove that. Children with chronic illness, or those being treated for cancer, are particularly susceptible because they have less effective immune systems.

Measles can also cause serious short-term, as well as some long-term, health problems. About one in 10 children who contract measles are likely to develop eye or middle ear infections, pneumonia or croup. In one in a 1000 cases a child will develop encephalitis or die.

The president of the Pediatric Society, Athol Arthur, says even healthy children are at risk of

such complications. "Good health may improve their ability to cope with them, but I don't think it reduces the risk of getting them."

Medical officer of health for the Wellington Area Health Board, Gillian Durham, says people are less aware of the consequences of measles because they are less visible than, for example, a child wearing callipers after contracting polio.

"I think there really is an attitude problem about a variety of childhood illness. Complications from measles, particularly chest infections, are not that visible. And children who develop encephalitis may have disabilities afterward, but because at any one time their numbers are small the problem doesn't seem great."

The measles vaccine was introduced into New Zealand almost 30 years ago and the immunisation level is now at about 80 per cent, compared with the 95 per cent level medical experts believe is needed to prevent epidemics.

In many areas, including the Wellington suburbs affected by the latest outbreak, the level is well below 80 per cent.

Robyn Greening, manager of the board's West Coast public health service, says this is largely because the board has failed to provide information to parents in their first language. Steps taken this week to rectify that have resulted in huge numbers of children being immunised.

"The minute there is understanding there is action," she says.

In November last year the measles vaccination given to babies at 15 months was replaced by the measles, mumps and



REGIONAL Nurse Jane Glass gives Edward Gunn, 15 months, a measles vaccination injection while his mother, Jane Lewis, holds him.

rubella (MMR) vaccination already used in Britain and the United States.

Dr Durham says overseas studies suggest the money saved by the three-in-one vaccine outweighs the cost of administering it by about 14 to one.

"If you look at things such as the saving in not having to treat the acute illnesses and their long term effects, and the savings in lost wages for parents staying home to look after their children, the benefits far outweigh the costs."

According to Dr Stewart Reid, a member of the Communicable Diseases Control Advisory Committee, the measles vaccine is not 100 per cent effective; about one in every 20 vaccinated do not gain immunity.

However, with a 95 per cent

vaccination level, a high level of protection is still possible. In the United States, for example, where compulsory vaccination was introduced in 1979 (children cannot start school without proof of vaccination) the incidence of measles has dropped almost 100 per cent.

Recent localised outbreaks, largely in densely populated inner city areas, have been attributed to a low level of vaccination among pre-schoolers.

Hilary Butler, founder of the Immunisation Awareness Society, is unimpressed by the American experience.

She quotes her own figures showing that many of those now contracting measles in the United States have been immunised. "The rate failure is now so high among vaccinated children in

the United States that something else must be going on," she says. "To say that measles is totally preventable is a lie."

More worrying to parents, though, are the claims her society makes about possible side effects of the MMR vaccination, and about the long-term effects of vaccinations generally.

She cites figures recently obtained from the American Food and Drug Administration, showing that between November last year and April this year, 854 children given the MMR vaccination suffered side effects severe enough to warrant compensation.

Long term, she says, the introduction of animal viruses into humans through the use of live vaccines has resulted in the development of debilitating illness-

es such as chronic fatigue syndrome or ME. "I would rather die from polio than have chronic fatigue syndrome."

Medical experts don't deny that side effects occur, Dr Reid says about a quarter of all children given MMR will experience symptoms such as a sore arm, a slight fever, a rash, or swollen, painful cheeks.

However, the chances of developing encephalitis is less than one in 1,000,000. And no one in the medical world appears to accept links between vaccination and the development of immunosuppressive illnesses.

However, while conventional medicine has no doubt over the benefits of immunisation, no one favours compulsory immunisation.

"I think people have the right

to choose whether their children are immunised," Dr Reid says.

"What we are in favour of is a system of compulsory choice, so that when a child starts school, or perhaps pre-school, their immunisation status is looked at and they are offered a catch-up programme, or else their parents can make a deliberate decision not to have them immunised."

It's a popular view. Dr Arthur talks of having parents make a positive decision to opt out, rather than opting out by default while Dr Durham says: "That would really be a challenge for us. It would actually make us put the arguments for and against immunisation much more clearly, and in the first language of the people who have to make the decision."

Secrets of the whisky cask

By JOHN MILLER

SCOTTISH scientists probing the key to the unique flavour of whisky have found that highly complex chemical reactions have more influence on it than the compounds used to make it.

A Strathclyde University research team sponsored by the Scotch Whisky Association, is trying to predict how whisky will mature and which barrel should be used to ensure that whisky from a particular distillery is consistent.

The bioscientists had to establish where 500 molecules produced by the chemical reactions come from, and how they fit into the chemistry that produces the flavour of whisky.

Though it is recognised that fermentation plays a role, the real key to its flavour seems to lie in the chemical reactions taking place during the maturation process.

Whisky traditionally acquires its flavour from different types of barley, peat smoke and the distillation process. Maturation in oak casks, a complex and lengthy process involving many different reactions, probably evolved as a form of storage. Now it is believed that while some of the final flavour comes from chemical reactions between molecules already in the distillate, parts such as the sweet woody aromas come from the breakdown of the cask.

During maturation, the alcohol and water penetrate the entire depth of the cask wood. The scientists found that as the whisky matures, the inner faces of the cask quickly become devoid of phenols and the easily degradable lignin. As the cask ages, these molecules are found in the highest concentration deeper inside the wood.

Maturation limits the life of a cask in spite of less than 4 per cent of the lignin in the cask being broken down by the spirit it contains. In practice, most casks contain whisky for 50 years or till the aroma of the whisky indicates that the degradable lignin has been used up and can no longer contribute to its flavour.

Team member John Piggott says the maturation process could in theory be speeded up, but in practice this would prove difficult because the effect of one reaction on the others cannot yet be predicted.