

If a baby *tests* positive on the rapid test and has also tested positive on the confirmatory (m.1555A>G gene change) blood test.

This confirms the m.1555A>G result was accurate. This change in DNA may increase the risk of antibiotic related hearing loss specifically with one group of antibiotics (aminoglycosides). Luckily aminoglycoside antibiotics are given through a drip (intravenously) and so are usually only given in the hospital setting. Aminoglycoside antibiotics may also be given as ear drops so please check with your doctor or pharmacist if eardrops prescribed contain an aminoglycoside. Other antibiotics are safe to use.

This gene change may have “reduced penetrance” and “variable expression”. What this means is that the effects of having this gene change, varies from person to person. Some people who carry this change are sensitive to even a single dose of aminoglycoside antibiotics, others are not and have no ill effects due to this gene change. In some people who carry this change the risk of hearing loss due to other causes may also be increased. The risk of this is unclear but good practice around sound exposure and use of headphones etc. is advised. Useful information about safe listening is available at:

<https://www.who.int/news-room/questions-and-answers/item/deafness-and-hearing-loss-safe-listening>

Anyone who has this gene change should avoid aminoglycoside antibiotics. If they need antibiotics a doctor will be able to prescribe safe and effective alternative antibiotics.

This gene change is passed along through the maternal line in families. Siblings and maternal relatives may benefit from avoiding aminoglycoside antibiotics. They too may be at risk of hearing loss from other sources and should also practice safe listening practices.

Some vaccines contain small amounts of aminoglycoside, which are used in the manufacture process. There is no known risk of hearing loss from these vaccines, and we would advise that people who carry this gene change should have their routine vaccine schedule as normal.

We know that this gene change is typically passed on from mothers to their children. Men can inherit the change, but they cannot pass it on - this is known as "mitochondrial" inheritance. As such, advise that maternal relatives should avoid aminoglycoside antibiotics (other classes of antibiotics are safe). Genetic testing is not routinely recommended in these individuals.