Deadly outbreaks of _Listeria_ should become a thing of the past with genome tests

The bacteria that causes infections is notoriously hard to destroy but new technology can help identify contaminations. By Alve Smith

By Nigel Holt

We often assume honesty is a core value, but research shows this isn’t always the case. Many people seem to think that honesty is something that others expect from them. But when researchers ask people to choose between honesty and other values, they mostly choose honesty. It’s a paradox. A recent study found that people are more likely to tell the truth when they’re alone, rather than when they’re with others. This makes sense: when you’re alone, you’re less likely to be judged. And when you’re with others, you might feel pressure to conform. However, it’s not always easy to decide when to lie or when to be honest. This is especially true when it comes to medical settings. For example, if a patient is asked if they’ve had sex, they might be tempted to lie if they’re not ready to share the information. But if the truth is not revealed, it could lead to wrong diagnosis or treatment. Therefore, it’s important to find ways to encourage honesty without making people feel uncomfortable or judged.

Deadly outbreaks of _Listeria monocytogenes_ result from bad food handling, but the bacteria is hard to destroy. New technology can help identify contaminations.

The bacteria _Listeria monocytogenes_ is a pathogen, which causes severe illness in vulnerable people. It can be transmitted by raw meat, unpasteurized dairy products, and other ready-to-eat foods. The bacteria can survive in refrigerated foods, which makes it difficult to detect. However, recent advances in genome testing provide a promising solution.

### How genome testing works

Genome testing involves comparing a sample of DNA to a reference genome. If the sample contains _Listeria monocytogenes_, the test will show a match. This makes it possible to detect the bacteria even when it’s present in very low concentrations. As a result, genome testing can help prevent outbreaks by identifying contaminated products.

### The benefits of genome testing

1. **Early detection:** Genome testing can detect _Listeria monocytogenes_ even when it’s present in very low concentrations. This makes it possible to detect outbreaks early, which helps prevent the spread of the bacteria.
2. **Better targeting:** Genome testing can help identify the specific strain of _Listeria monocytogenes_ responsible for an outbreak. This makes it possible to target interventions and prevent future outbreaks.
3. **Time savings:** Genome testing can provide results faster than traditional methods. This makes it possible to detect outbreaks quickly, which helps prevent the spread of the bacteria.

### The challenges of genome testing

1. **Cost:** Genome testing is more expensive than traditional methods. This makes it difficult to use genome testing on a large scale.
2. **Access:** Genome testing is not available in all countries. This makes it difficult to detect outbreaks in countries without genome testing.
3. **Regulatory hurdles:** Genome testing is still in the early stages. This makes it difficult to implement genome testing on a large scale.

### Conclusion

Genome testing provides a promising solution to the problem of _Listeria monocytogenes_. But it’s not a silver bullet. It’s important to continue to invest in research and development to improve genome testing and make it more widely available.

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