

Reusing plastic bags a 'contamination risk'

October 8 2015, by Rachael Richards



Reusing carrier bags for different food products such as fresh meat to cheese and bread is putting consumers at risk of biological contamination, warns an Aston academic.

As the new 5p charge is introduced for carrier bags in England,

Professor Anthony Hilton claims that without understanding the need to have different bags for different uses, shoppers increase their chances of contamination from a range of bacteria.

The new charge has caused a surge in the number of 'bags for life' given out at supermarkets in the past few weeks. While admitting there are huge environmental benefits to this, Professor Hilton cautions that reusing plastic brings with it hazards which the public should be aware of to minimise any health risks.

Professor Hilton, Head of Biological and Biomedical Science at Aston University, said: "Reusing plastic bags is hugely beneficial to the environment but the public should be mindful of the ability of bacteria to contaminate and survive for long periods of time. Bacteria can easily transfer from different types of reusable bags to the hand and back again. What is more, using the same bag over and over for different purposes increases the risk of contaminating the bag with a whole host of bacteria."

Professor Hilton and his research team undertook a study of a three different types of bag. They investigated the ability of bacteria to survive on a bag and also the ease of transfer of bacteria from the skin to the bag, and the bag to the skin. Laboratory experiments revealed that:

- 1 million cells of *Staphylococcus aureus*, the bacteria commonly found on the hands but which can cause illness, survived over 8 weeks and took 16 weeks to disappear completely
- 1 million *E. coli* cells, known to cause diarrhoeal infection, survived 48 hours before becoming undetectable – enough time to cause illness
- 23% of bacteria on plastic bags can be transferred in a single touch on to hands

Professor Hilton adds: "We are not saying people shouldn't adopt reusable shopping bags. What is important is that the public understand the health risks, and think about which bags they are using for which produce. For example, carrying fresh meat wrapped in plastic can have huge contamination risks if you then use the same bag for carrying cheese or bread. Likewise, if you carry sports shoes one day and then shopping the next.

"Handles would normally be found to have bacteria that is found on the skin on them. Inside [bags](#), however, there is typically a much more diverse range of [bacteria](#), some which are associated with human disease. Clearly the picture of contamination of the bag is representative of what is carried in it."

Provided by Aston University

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