**BUGS LURK WITHIN**

**Bags of salad are a ‘breeding ground for deadly salmonella – allowing bugs to thrive’**

**BY SHAUN WOOLLER**

17th November 2016, 6:00 pm

Juices from the leaves help the bacteria "survive and thrive" - causing a potential health hazard, experts warn

**BAGS of ready-washed salad leaves are a breeding ground for deadly food-poisoning bug salmonella, a study found.**

Scientists say juices that seep from the foliage help the bacteria “survive and thrive” – causing a potential health hazard.

Tests showed the fluids – which trickle from leaves that are damaged during harvesting – increase pathogen growth 2,400-fold and boost its ability to cause illness.

The risk of harm is escalated further because the juices allow the bugs to stick to leaves so strongly that even “vigorous washing” cannot remove them all.

The Food Standards Agency says there are[more than 500,000 cases of food poisoning in the UK each year, with 48,000 caused by fruit, veg, nuts and seeds.](https://www.thesun.co.uk/news/1462484/major-public-health-warning-after-two-people-died-from-e-coli-linked-to-bags-of-mixed-salad/)

Dehydration caused by the illness can be life-threatening.

Study leader Dr Primrose Freestone, from the University of Leicester, advised shoppers to wash all leaves and eat them as quickly as possible after opening the bag.

She added: “Even microliters of the juices – less than 1/200th of a teaspoon – enabled Salmonella to grow in water, even when it was refrigerated.

“These juices also helped the Salmonella to attach itself to the salad leaves so strongly that vigorous washing could not remove the bacteria.

“This strongly emphasises the need for salad leaf growers to maintain high food safety standards as even a few Salmonella cells in a salad bag at the time of purchase could be become many thousands by the time a bag of salad leaves reaches its use by date, even if kept refrigerated.

“Even small traces of juices released from damaged leaves can make the pathogen grow better and become more able to cause disease.

“It also serves as a reminder to consume a bagged salad as soon as possible after it is opened.

“We found that once opened, the bacteria naturally present on the leaves also grew much faster even when kept cold in the fridge.”

The salad can become contaminated with salmonella if it comes into contact with the faeces of animals or humans carrying the bacteria.

Ready-to-eat leafy greens sold in plastic bags are now the most common salad eaten today.

But there has been a number of outbreaks associated with fresh salad produce contaminated with Salmonella and [E. coli](https://www.thesun.co.uk/news/1730421/a-child-has-died-after-an-outbreak-of-deadly-e-coli-bug-at-a-school-in-scotland-health-bosses-say/)in recent years.

Dr Kimon Andreas Karatzas, Assistant Professor in Food Microbiology at the University of Reading, said: “Consumers should not forget that foodborne pathogens can be deadly.

“Salmonella can survive and thrive in fresh produce and more specifically in cut salad.

“Avoiding fresh produce is not a solution, but if possible, it would be preferable to buy uncut fresh produce over chopped, and to always wash it before you eat – even the ones that are already washed.

“Furthermore, keeping these foods in the refrigerator is important.”

Julie Ashmore, from the Institute of Food Science and Technology, said: “We should not stop eating bagged salad. They are an important part of consumers [five-a-day](https://www.thesun.co.uk/living/1881027/struggling-to-get-your-5-a-day-stock-up-on-canned-food-yes-really-says-expert/).”

The findings were published in the journal Applied and Environmental Microbiology.

The researchers are now working to find ways of preventing salad-based infections.