

## Do YOU believe in the three second rule? Scientists reveal whether food dropped on the floor is safe to eat (if it's picked up quickly enough)

By Nicky Harley

Who hasn't picked up a piece of dropped food from the floor, given it a quick blow and assumed it was still safe to eat?

To many of us, it is second nature to apply the age-old pseudo-scientific 'three second rule' on such occasions, telling ourselves we're safe if the food hit the floor only momentarily.

The idea that food is not contaminated if it is retrieved quickly has been believed for many years - but there has not been extensive proof that this is the case.



Jammy dodger: Scientists found that processed food like bread and jam did not show any signs of bacteria after being dropped on the floor

Now though, the doubt is out as scientists have finally investigated the theory to discover whether the rule is fact or fiction.

Five food items were tested by Manchester Metropolitan University (MMU) to see whether the three-second rule could be trusted.

Bread with jam, cooked pasta, ham, a plain biscuit and dried fruit were all dropped on the floor and left

for three, five and 10 second intervals.

These were selected as they are commonly eaten foods and all have different water activity levels; a key factor in whether items will sustain bacterial growth in the three seconds before they are picked up from the floor.

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After the study, the foods were examined to ascertain whether or not harmful bacteria found on the floor was then found to be growing on the dropped food.

The study revealed that dropped foods with a high salt or sugar content were safer to eat after being retrieved, as is less chance of harmful bacteria surviving on such items.

Eating processed food from the floor poses the lowest risk - one of its few benefits - given that it generally contains such high levels of sugar and salt.

Both the ham, a salty product, and the sugary bread and jam fared well in the test. When retrieved from the floor within three seconds, the foodstuffs showed little sign of bacterial growth.

The dried fruit and cooked pasta, on the other hand, showed signs of klebsiella after three seconds - a bacteria which can potentially lead to a wide range of diseases such as pneumonia, urinary tract infections, septicaemia and soft tissue conditions.



After being dropped on the floor dried fruit was found to have traces of harmful bacteria klebsiella

Biscuits proved to be a food relatively safe to eat after being dropped on the floor for three seconds, five seconds or ten seconds, due to their low water content.

MMU technical officer Kathy Lees said: 'No specific organisms were detected on the biscuit, which has a low water activity level and low adhesion ability.

'Ham is a processed meat preserved with salt and nitrates which prevents the growth of most bacteria. 'The cooked pasta had a slightly increased yeast count after five seconds and very low levels of Klebsiella were detected at all contact times, three, five and ten seconds.'

The dried fruit also displayed Klebsiella after five and ten seconds and the yeast count was too numerous to count.

'The bread and jam showed no bacterial growth after time on the floor, which can be linked to the high sugar content of the jam which makes it unlikely to support microbial growth.'

The university food sciences team who carried out the survey on behalf of cleaning experts Vileda also tested a used child's dummy after it had been dropped on the floor and discovered growth of E. coli.

MMU's Kathy Lees said: 'The child's dummy, which all our case studies admitted dropping on the floor regularly and then returning to their children, showed very low levels of E coli, Pseudomonas and yeasts. Pseudomonas is an opportunistic bacterium which can potentially cause health problems in immunocompromised people.'

Lindsey Taylor, of Vileda said: 'Five mothers took part in the study and admitted dropping dummies and food almost daily and letting their children have them.

'Our advice is to minimise risk and keep your floor clean by regularly mopping. 'Mop heads need to be replaced every three months.

'Ideally, floors should also be mopped once a day, yet a third of Brits only mop once a week.'
All case studies said they only embraced the three second rule when at home, with all admitting they would discard anything dropped on the floor when out in public.

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