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# Danger: robots with knives could attack humans accidentally

Robots helping with everyday tasks around the home could accidentally inflict deadly wounds on humans, scientists have warned.

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Published: 5:17PM BST 07 May 2010

17 Comments ([http://www.telegraph.co.uk/science/science-news/7692660/Danger-robots-with-knives-could-attack-humans-accidentally.html#disqus\\_thread](http://www.telegraph.co.uk/science/science-news/7692660/Danger-robots-with-knives-could-attack-humans-accidentally.html#disqus_thread))

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**Link to this video** (<http://www.telegraph.co.uk/news/worldnews/europe/germany/7692725/Robotics-Soft-Tissue-Injury-Study.html>)

Homes of the future are often depicted as efficient spaces in which robots are programmed to carry out mundane domestic tasks, from cleaning to carrying out simple repairs or even preparing dinner.

But films like *I, Robot*, have imagined a world in which man-made machines programmed to serve humans turn against their creators - and a group of scientists has said this could happen.

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German researchers have warned that robots in the home could prove dangerous - particularly when armed with sharp objects.

To discover what would happen if a robot wielding a sharp tool - such as a knife or a screw driver - accidentally struck a person, researchers at the [Institute of Robotics and Mechatronics](http://www.dlr.de/en/desktopdefault.aspx), (<http://www.dlr.de/en/desktopdefault.aspx>) part of the national aerospace agency in Wessling, south-east Germany, [programmed a mechanical arm](http://www.youtube.com/watch?v=dMh6cHSG3ng&feature=player_embedded#!) ([http://www.youtube.com/watch?v=dMh6cHSG3ng&feature=player\\_embedded#!](http://www.youtube.com/watch?v=dMh6cHSG3ng&feature=player_embedded#!)) holding a variety of instruments to strike a series of substances that mimicked human tissue.

The robot stabbed and punctured a lump of silicone, a pig's leg and even a brave human volunteer's arm - causing damage that could potentially be lethal, according to the scientists.

So the team designed a prototype collision detection system which, they said, significantly reduced injuries.

The safety system uses sensors to detect when it has hit a new substance so it will stop movement.

While previous studies have examined the dangers of collisions with large robots, this is believed to be the first to examine the dangers of slashing injuries.

Sami Haddadin, Alin Albu-Schaffer and Gerd Hirzinger presented their findings on Thursday at the IEEE International Conference on Robotics and Automation in Anchorage, Alaska.

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17 comments

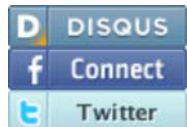
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Carl

05/30/2010 02:42 PM

Danger: llamas with hats could attack humans "accidentally"

<http://www.youtube.com/watch?v=kZUPCB9533Y> (<http://www.youtube.com/watch?v=kZUPCB9533Y>)

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Jenn

05/12/2010 05:01 PM

Thanks for the newsflash. I already saw all the Terminator movies.

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oskeeman

05/12/2010 04:51 PM

That does not compute Dr. Smith!

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Steve

05/10/2010 08:49 PM

What's the point exactly? Like: here's a robot with a screwdriver, but it can't actually use it because it can't press the tool into the screw hard enough to turn it - so it just sits around not stabbing people with it's useless screwdriver. Yea German engineering! It's not like the software makes the robot only cut the correct thing - it just renders it unable to cut anything. Wouldn't it be easier to just take the knife away?

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