

Information for patients from JNNP

Handedness may play a part in nerve disease onset

Researchers have discovered that you are more likely to first get symptoms of a type of motor neurone disease in the hand or arm you use more often.

What do we know already?

Amyotrophic lateral sclerosis is a disease that kills off nerve cells. Eventually it can lead to paralysis. We don't know what causes it (although some cases are inherited), but scientists have speculated that it is linked in some way to intensive exercise in people with a genetic vulnerability.

Symptoms of ALS, such as muscle weakness and twitching, often start in the hands or feet. Researchers thought that, if ALS was linked to exercise, then symptoms would be more likely to start in the right hand if someone was right-handed and the left hand if they were left-handed.

So they surveyed a group of more than 500 people from a patient-support website, to see whether this was the case.

What does the new study say?

People whose symptoms started in their hands or arms were likely to have had the symptoms start on the same side as their dominant hand (i.e., the right side for right-handed people and left side for left-handed). About 64 in 100 people reported this to have been the case.

When symptoms started in the feet or legs, there was no particular concordance. The researchers say this might be expected, as people tend to use both their lower limbs equally, for walking or standing, but their handedness affects how much their right or left arms or hands get used.

How reliable are the findings?

Quite a few people in the study couldn't remember which side their symptoms started in, or gave more than one site for the beginning of the symptoms. The results rely on people remembering accurately where their symptoms began. It might also be the case that people were more likely to notice or remember when their dominant hand was affected – for example, you might not notice muscle weakness in your left hand, if you do most things with your right hand. Only when your right hand is affected might you realise there is a problem.

Where does the study come from?

The study was done by researchers at the John Radcliffe Hospital in Oxford and Kings College Hospital, London.

What does this mean for me?

If you have ALS, you might be curious to think back to where your symptoms started, and whether they were in your dominant or weaker side. But although these findings might help researchers work out the cause of ALS, they're unlikely to make much practical difference.

Turner MR, Wicks P, Brownstein CA, et al. Concordance between site of onset and limb dominance in amyotrophic lateral sclerosis. *J Neurol Neurosurg Psychiatry* 2011;**82**:853–4.
<http://jnnp.bmj.com/content/82/8/853.full>

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