Questions our community is likely to ask

Will exercising increase my risk of getting MND?

The research suggests that prolonged and frequent strenuous physical activity may be a risk factor in MND, as exercise causes changes in the activity of a number of genes that have previously been linked to the disease.

However, these findings do not provide sufficient evidence to clearly state that exercise increases risk in all forms of MND. Indeed, in the vast majority it is unclear if there is any risk or at most, a very subtle risk.

The research does provide stronger evidence to suggest that the risk may be higher in people who also carry certain risk genes and who may already be 'genetically primed' to developing MND later in life. This view is based on the finding that people who carried an alteration in the C9orf72 gene (the most common inherited MND gene) developed disease symptoms at an earlier age if they also participated in strenuous leisure activity.

Based on these findings in C9orf72 MND, their theory is that excessive exercise is only potentially detrimental in people who already carry a pattern of risk genes for the disease, but much more research will be needed in order to prove that this is the case.

Should I stop exercising?

The relationship between exercise and risk of MND is so much more complex than simple 'cause and effect'. The current evidence doesn't provide a clear enough picture to make recommendations. However, the researchers stress that for the majority of individuals, the numerous health benefits of a physically active lifestyle will markedly outweigh the risks.

What type of exercise puts me most at risk?

The study doesn't include information on the specific types of exercise carried out.

What part of exercise causes the increased risk – the length of an exercise session / the frequency of exercise / the type of exercise?

The research considered "high-intensity, frequent, leisure-time exercise" carried out earlier in life. There is not information on the specific types of exercise carried out.

How would I know if I had the gene type that is a risk factor?

The C9orf72 gene is usually found in people where there is a clear family history of MND and/or a related condition, frontotemporal dementia (FTD).

Can I be genetically tested?

Genetic testing is usually performed as part of the diagnostic process only where there is a family history of MND or FTD. If there is no family history then testing is currently not usually carried out or recommended. If you have questions about genetic testing, you should discuss the options and process with your GP.

I have XX family members with MND. Does that mean I should stop exercising?

The researchers do not make any recommendations on exercise. However they do stress that the numerous health benefits of a physically active lifestyle markedly outweigh the risks.

What is the increased risk to me if I have the gene type and I exercise?

The researchers were not able to calculate the level of increased risk as the people with the C9orf72 gene variant involved in the study had all been diagnosed with MND. What they have reported is that people who had reported a high level of strenuous physical exercise earlier in life were more likely to develop the disease at an earlier age than those who reported a more sedentary lifestyle.

There is lots of research into possible links between rugby and football and neurological conditions which seemed to be around heading the ball or head injuries. Is this the same research?

The analysis of this study didn't show any evidence to support a link between head injury/trauma and MND, but that was not the focus of the study, so further research in that particular area will be needed.

I'm training for a marathon to run in memory of my relative who died of MND. Is it safe for me to carry on training?

The researchers do not make any recommendations on exercise, but do stress that the numerous health benefits of a physically active lifestyle markedly outweigh the risks – and outside of the c9orf72 inherited form of MND. Any risk is likely to be low.

Is the MND Association going to fund further research around this so we can pinpoint specifics? If not, why not?

Research in this area has become so much more sophisticated in recent years, thanks not only to the incredible advances in genetic research and gene-hunting technology, but also developments in

computing technology and artificial intelligence. The Association has funded a considerable amount of genetic research over the past decade (for example as a key partner in the international Project MinE programme) and we will continue to support innovative studies that aim to combine the genetic pieces of the jigsaw with epidemiology research to build up a clearer picture of the complex and subtle factors that predispose people to developing MND.