

Yes, actually my story starts with somebody from M. I. T. way back a professor here who went on to win the Macarthur prize in a whole variety of other things came to me and said look I had to stop running the marathon training for the marathon he was one of the early marathoners because the errors ankle that his knee and you came and said look I have adult onset attention deficit disorder should have never had a problem with the tension because I've always been running and that was my that's what stimulated me to get more into attention with my patience and then I came back to the whole idea about exercise and its effect on the brain and I bring my dog who's a Jack Russell and when I got this dog I took him to the vet the vet said you got to put him on Ritalin so my understanding I think our understanding and sciences that we need to move we are born movers so that's one of the key concepts and meaning if we didn't move we wouldn't be thinkers we weren't that means in kinds of movement we wouldn't be the kinds of thinkers no if you read The New York Times you see these warnings all the time don't sit sitting is the new smoking okay and that's need phrase it can capsule it's it and everybody's talking about this and studying and seeing how much more till they morbidity is increased as we sit and then we know from studies that when we stand or brains or that a little bit better than we are when we're sitting so that's why as a lecturer it's very hard to sit and doctor from or even with me I have to move around so that keeps me focused and what it does is because we're using muscles to stand using the large go to most of the core muscles all that it feeds back to the brain switches the brain on which feeds for to the prefrontal cortex which is where we. we generate our thoughts and this talk and where we learn as well as perform now we're getting more and more data more and more laboratories or are picking up on the effective of movement on the brain it's watershed event was nineteen ninety-five coming from worrying about the growing problem down the road with us boomers of Alzheimer's disease in cognitive decline there was a big Macarthur study multi countries looking at what were the things that prevented the onset of cognitive decline in aging well there are three one was often wait to was continuous learning three was exercise no even when they factor out the effects on the cardiovascular system the prevention of stroke exercise was really the most robust prevention for cosmic company declined and elves armors sies so this started a whole series of reports and that really was flowering right in the midst of when neuroscience was beginning to really take off so weeveryone's interested in it now because we know that the the main a major effect on our brain in fact probably the most effective thing that we can do and now we look at our brain is not as you know we look at is a muscle so the more we use it the better it is the better it grows so we're we're when we exercise we're using those nerve cells that we use to think , and learn and all of that