

## Professor Sir Muir Gray, Director of the Optimal Ageing Programme at the University of Oxford.

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SIR MUIR GRAY CBE entered the Public Health Service by joining the City of Oxford Health Department in 1972 after qualifying in medicine in Glasgow. The first phase of his professional career focused on disease prevention, helping people stop smoking. He went on to develop the NHS screening programmes for pregnant women, children, adults and older people, and was appointed Chief Knowledge Officer of the NHS. He set up charities to promote urban walking and the Oxford based Centre for Sustainable Healthcare and Better Value Healthcare, publishing a series of How-to Handbooks, including *How to Get Better Value Healthcare*. In a 50-year mission to help people live longer better and cope with ageing, he published *Sod 70!* for septuagenarians, *Sod 60!* for the younger decade and the dietary *Sod It, Eat Well!* Through his research and experience he has developed a new paradigm to help people live longer better, to compress morbidity at the end of life, reduce the incidence of dementia and frailty and therefore reduce the need for social care. This is based in the new Optimal Ageing Programme at Oxford.

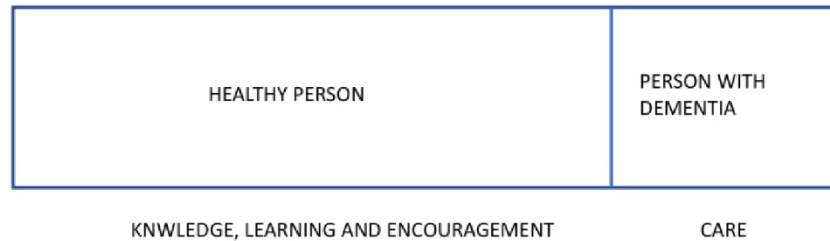
I am speaking for the Optimal Ageing Programme at Oxford. Our mission is to help people live longer, better. To compress that period at end of life when people are dependent on others. We know we can do that, because the evidence is that we can delay or prevent dementia, disability, frailty and dependency. There is a huge overlap between frailty and dementia, but they are separate empires, of course, dealing with this. I am going to tell you about what we do, and how it relates both to the prevention of dementia and to its management.

It is partly by developing a system. We have now got about 20 million people working to a common set of objectives, but it is more, it's a cultural revolution. We need to change the way people think. We need to rewire the brains of people, particularly of my colleagues in the medical profession. Because anyone who qualified before 2000 didn't hear about neuroplasticity. We were all taught the Ramón y Cajal until about 2000 and then the concepts came in. I was certainly never taught it, and even younger doctors in their fifties have never heard of it in medical school. So to change the way people think, we need to change language. Aiming to ban the word 'retirement', we are calling it a 'renaissance'. And the word 'care'; in the 1948 Assistance Act the younger disabled people - the deaf, dumb, blind and crippled, to be precise - were at least given education to help them overcome their disabilities. The ageing were simply to be given practical assistance in care homes.

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So I am going to tell you a little bit about the revolution. I just want to show you some images. Wittgenstein said that every idea is a picture, so the conventional view of the world is that there are two subgroups in the population: the healthy people, who need knowledge, learning and encouragement; and people with problems like dementia who need care.



This is a wrong model. Everybody needs knowledge, learning and encouragement, including those people who are living with dementia. So, here is the conventional model: there are healthy people and people with health problems. The healthy people get knowledge without knowing it. They get knowledge, learning and encouragement.



What we are seeing in our programme in Oxford is that we have discovered the elixir of life. It is called knowledge. It is consumed not through a bottle, but through learning. This is the model here. It is not a sharp cut off where there's some people get learning and other people get care. But we need to think of everybody needing knowledge, learning and encouragement.

- To prevent and mitigate isolation
- To increase physical ability and resilience and increase healthspan
- To promote knowledge and understanding about living longer better among older people and the wider population to counteract the detrimental effects of ageism
- To create an environment in which people can fulfil their potential
- To enable strengthening of purpose
- To support carers better
- To minimise and mitigate the effects of deprivation
- To reduce the risk of and delay or prevent dementia
- To prevent and minimise the effects of disease and multimorbidity
- To enable dying well as well as living well

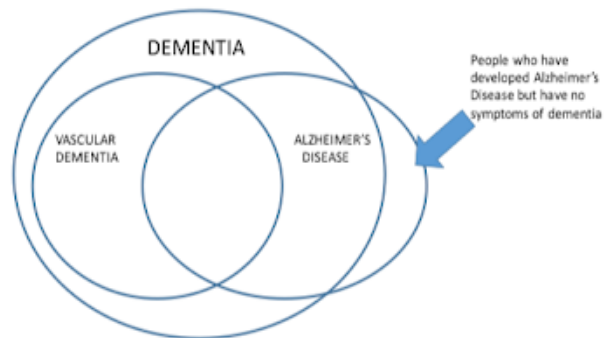
Here are the objectives of our system. As you see, it is a wide range. For example, to minimise and mitigate the effects of deprivation, not easy for individual professionals to do, but we have to think about these things, and to reduce the risk of and delay or prevent dementia.

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Actually, when we're out talking to people in bridge clubs, bowls clubs, mosques and churches and WIs, that last objective, to enable dying well as well as living well, is one of the key discussion points that we like to bring up; and Prince Philip was actually very helpful in doing that.

So here is our programme that focuses on the positive, on Brainability.

As you can see here, there is an overlap between Alzheimer's disease and vascular dementia and then there are other causes of dementias. Now we cannot prevent Alzheimer's at the moment, but we can reduce the risk of dementia.



We have based our work largely on the Lancet Commission for Dementia, prevention, intervention and care

DEMENTIA RISK REDUCTION STREAM	CONTRIBUTION OF ARTS
PROTECT THE BRAIN TISSUE	Reducing stress Sleeping better
KEEP THE BLOOD AND OXYGEN FLOWING	Music and movement Daily dozen
KEEP ENGAGED, POSITIVE AND WITH A PURPOSE	Join groups Join groups with a social purpose Work and purpose

You can see there in the Brainability programme three strategies: 'Protect your brain cells' – sleep better, control stress, avoid drugs including those prescribed by the NHS. 'Keep the blood flowing well' – exactly the same as for heart disease, because atrial fibrillation, for example, causes vascular dementia, just as it may cause a major stroke. Then this interesting one I've summarised as 'Keep engaged'. Here is the way we are seeing the arts and I've been focussing a bit more on music here at my college in Oxford. Let's just look at the different risk reduction streams:

Firstly, protect the brain tissue - the contribution of arts is in reducing stress and sleeping better. We know that disrupted sleeping patterns

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increases the of risk of dementia; and in terms of pre-sleep rituals, music has a very important part to play, so too does art. Stress - the medical profession has rediscovered stress – it stopped using that term, because it was not clear how it can be defined, but a combination of stress and inactivity undoubtedly causes inflammation; and inflammation is one of the contributory factors for dementia.

Secondly, keep the blood and oxygen flowing. I think the measures has got through that music and movement, that movement is of vital importance. The Academy of Royal Colleges also produced a fantastic report called, *Exercise - the Medical Cure* (2015).

What we found in the past is that as soon as someone had a long-term condition, the NHS moved to give them medication. Only medication. But we are now introducing activity prescribing. Michael Dixon's wonderful leadership has given us a platform. The plan is that in future whenever the GP hits the button to prescribe a drug, a social prescription will be automatically offered. That could be a music class, it could be a link to local activities, but something will happen. And every repeat prescription, something will happen. I am on about six drugs for a variety of health problems; and I get hundreds of words a year tucked into my drug boxes, but not a single word have I had on exercise or music or the arts, or anything other than medication, but we're going to change that.

Hopefully, the GP will give us nine seconds to say, 'Well, I'll prescribe the medication, but we're also going to prescribe something else very important.' But even if the GP forgets, or the locum GP doesn't know what is happening in the nearby neighbourhood, then the SPLW will be feeding the GP information systems, and this will happen automatically.

You can see there the good old daily dozen, so thirty-minute brisk walking, plus the daily dozen. We are focusing very much on housebound people in care homes too. So that's twelve minutes a day for strength, suppleness and skill, and 30-minute for stamina. – the four 'S' There is actually a fifth 'S' of fitness, called psychological.

Then this last fascinating issue of keeping engaged, positive and with a purpose. I was greatly encouraged when I saw the first editorial in the *Journal of the American Medical Association* for the 2020s – the first editorial in the *British Medical Journal* was on 'Rising to the challenge of multimorbidity', so that was very encouraging, by the four chief medical officers; and in *JAMA*, one of the big four, 'A Prescription for Longevity in the 21<sup>st</sup> Century: Renewing Purpose, Building and Sustaining Social Engagement, and Embracing a Positive Lifestyle' by

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Philip Pizzo, a very distinguished laboratory scientist, but look at the subheading (2019). – this is in the journal of a medical association. Isn't it fantastic, not a mention of the human genome?

So, starting to think about keeping engaged, joining groups – the group could be a painting group, choir or groups just enjoying arts. I am very interested in how we use digital inclusion. I asked after a friend's mother in her care home? They're very nice people, but she loved Schubert and no one had heard of Schubert. I will bet there are 1,743 people in care homes who love Schubert – that's one for every 4.7 care homes. So, let's get them together. I'm going to write to the Royal Opera House. I'll bet there's thousands of people housebound or in care homes who just love *Così fan Tutte*, so let's create a virtual club for them.

Then we think about the groups having a social purpose. So the groups we're developing for walking or cycling, they should be raising money for young artists, for young musicians. Camilla Cavendish's book, *Extra Time* is excellent in describing the Japanese concept of Ikigai purpose, so not just listening to arts, but supporting arts.

That leads me to finish on this issue of work and purpose. These are all summarised in our book *Increase Your Brainability and Reduce your Risk of Dementia*. The issues of work and purpose is very important. David Hockney is a wonderful example to us all. I'm in the Daily Mail once a week doing a video - last week I did a video about Hockney. At 83 he said, 'Well, working is just great!' and that's what he does to stay healthy.

So, I am trying to summarise about how the arts are playing a part in our programme to reduce the risk of or delay the onset of dementia, but I don't see a sharp cut off; and everything I was saying about groups and social purpose can apply equally to people with a diagnosis of dementia, as to those without.

Congratulations to Arts 4 Dementia (A4D), you are coming up the agenda very well thanks to your good work. Thanks also to Michael Dixon for blazing the way with SP.

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