# Joint Centre for Ageing Better and The Physiological Society response to 'Coronavirus: lessons learnt'

For more information on the inquiry, please visit: https://committees.parliament.uk/work/657/coronavirus-lessons-learnt/

## Executive summary:

- Older people face a significantly higher risk of severe Covid-19 illness and death. Between 28 December 2019 and 16 October 2020, 89% of deaths involving Covid-19 in England and Wales occurred in the 65 and over age group, with 42% occurring in those aged over 85 (Office for National Statistics, 2020). Amongst 20,133 English, Welsh and Scottish hospital inpatients with a Covid-19 diagnosis, the median age was 73 years (Docherty, et al., 2020).
- Other social distancing measures like the closure churches, cafes, social clubs and day centres, mean that older people are likely to spend more time at home and be less active. This is particularly important in winter months, when physical activity levels traditionally fall, comorbid disease states can worsen and other viral infections become more prevalent.
- Those who are already more functionally limited may suffer the most from Covid-19. The combination of anabolic resistance, where the body is less able to build muscle protein from amino acids (Cuthbertson, et al., 2005), and lack of anabolic stimulus, resulting from inactivity (Breen, et al., 2013), can have dramatic functional consequences, perhaps tilting the balance from being able to do something basic like rise from a chair, and not.
- Those belonging to Black, Asian and other minority ethnic (BAME) communities are also at greater risk of dying from Covid-19. This is due in part to socio-economic inequalities and an increased likelihood of underlying health conditions, as well as their being more likely to work in sectors such as health and social care where they will be more exposed to the virus (University of Manchester, 2020). Increased risk of Covid-19 hospitalisation, disease severity (resulting in the need for ICU admission or mechanical ventilation) and death rise with body mass index (BMI) above the healthy weight range.
- In the absence of vaccines or cures, physical activity (with tailored exercise or physical activity goals) represents the single most impactful way in which older people can reduce the risk of developing severe Covid-19, improve recovery, and limit deconditioning and frailty from home confinement.
- We also call upon UK public health agencies to launch a National Covid-19 Resilience Programme to support older people through the pandemic and to keep them healthy over the winter. This would encourage appropriate exercise and physical activity; support optimal nutrition; enhance mental health and wellbeing and support behaviour change to embed these behaviours. This programme might be supported by a digital platform and by national broadcasters, e.g. regular televised activity classes.

## Consultation response:

**The deployment of non-pharmaceutical interventions like lockdown and social distancing rules to manage the pandemic**

Covid-19 affects multiple organs and can manifest with different patterns and severity of disease. Older people face a significantly higher risk of severe Covid-19 illness and death. Between 28 December 2019 and 16 October 2020, 89% of deaths involving Covid-19 in England and Wales occurred in the 65 and over age group, with 42%

occurring in those aged over 85 (Office for National Statistics, 2020). Amongst 20,133 English, Welsh and Scottish hospital inpatients with a Covid-19 diagnosis, the median age was 73 years (Docherty, et al., 2020).

It is entirely proper then that viral transmission to older people should be minimised, given Covid-19's disproportionate impact on them.

Mitigation measures associated with lockdowns such as travel restrictions and business closures, shielding (where older and vulnerable people are encouraged to stay indoors) or personal choice to limit leaving the home, reduce the potential for exposure to the virus. However, they also make it harder for older people to exercise outdoors and so have unintended negative effects on the body such as a loss of muscle mass.

Other social distancing measures like the closure churches, cafes, social clubs and day centres, mean that older people are likely to spend more time at home and be less active. This is particularly important in winter months, when physical activity levels traditionally fall, comorbid disease states can worsen and other viral infections become more prevalent.

A physiological approach can help us understand how to reduce the risks to older people posed by Covid-19 itself and by the impacts of lockdowns. Physical activity is an important factor in staying healthy and is likely to play a role in Covid-19 resilience. Lockdowns can also have a detrimental effect on the mental health and wellbeing of older people as well as impact on nutrition (both in terms of calorie balance and ensuring appropriate levels of vitamins and minerals). The Physiological Society and the Centre for Ageing Better brought together physiologists, nutritionists, geriatricians, physiotherapists and clinicians to discuss three critical areas where the impact of the pandemic and lockdown on older people required greater consideration.

**The impact on BAME communities and other at-risk groups**

Those who are already more functionally limited may suffer the most from Covid-19. The combination of anabolic resistance, where the body is less able to build muscle protein from amino acids (Cuthbertson, et al., 2005), and lack of anabolic stimulus, resulting from inactivity (Breen, et al., 2013), can have dramatic functional consequences, perhaps tilting the balance from being able to do something basic like rise from a chair, and not.

People who have arthritis or other conditions that affect mobility may have previously relied on swimming or non-weight-bearing exercise classes to maintain activity levels. Older people who are unable to exercise in the home or by walking are particularly vulnerable to deconditioning if exercise classes are cancelled to reduce virus spread or if they are unable to attend due to confinement in their home.

Frailty is a syndrome that combines the effects of ageing with the outcomes of multiple long-term conditions and a loss of fitness and physiological reserves. It is associated with decline in immune and endocrine function, sarcopenia (progressive and generalised loss of skeletal muscle mass and strength) and a proinflammatory state. Of people over 85 years of age, about one in four is living with frailty (The Physiological Society, 2019).

The frail may be at greater risk of poor outcomes from Covid-19 and from the negative impacts of home confinement. For example, a frail older person may lose the motivation or confidence to get out of a chair – the British Geriatrics Society warns that loss of confidence is strongly correlated with objective impairment of abilities and higher falls risk (British Geriatrics Society, 2019).

Age is an independent risk factor for severe Covid-19 disease. However, risk rises with comorbidities, which may accompany chronological age (Cunningham, et al., 2020). Chronic cardiac disease, uncomplicated diabetes, non-asthmatic chronic pulmonary disease and chronic kidney disease, were the most common comorbidities observed in an analysis of 20,133 English, Welsh and Scottish patients with Covid-19 (Docherty, et al., 2020). A different study found "critical care patients with Covid-19 were disproportionately non-white, from more deprived areas and more likely to be male and obese." (Richards-Belle et al, 2020).

Those belonging to Black, Asian and other minority ethnic (BAME) communities are also at greater risk of dying from Covid-19. This is due in part to socio-economic inequalities and an increased likelihood of underlying health conditions, as well as their being more likely to work in sectors such as health and social care where they will be

more exposed to the virus (University of Manchester, 2020). Increased risk of Covid-19 hospitalisation, disease severity (resulting in the need for ICU admission or mechanical ventilation) and death rise with body mass index (BMI) above the healthy weight range.

It has been suggested that disparities in excess weight may explain some of the differences in outcome linked to Covid-19 for older adults and some Black, Asian and minority ethnic groups (Public Health England, 2020).

What are the physiological challenges to address as older people recover from Covid-19?

Covid-19 can cause or worsen frailty indirectly, e.g. deconditioning, or directly, e.g. lung disease, muscle wasting and neurological impacts. Mental health may also suffer and the need for rehabilitation and mental health support may be quantitatively and qualitatively different from those of people who are younger. Risk of "long Covid", where people experience long term effects of Covid-19, is greater in women and rises with age and body mass index (BMI).

**Government communications and public health messaging**

*A National Covid-19 Resilience Programme*

In the absence of vaccines or cures, physical activity (with tailored exercise or physical activity goals) represents the single most impactful way in which older people can reduce the risk of developing severe Covid-19, improve recovery, and limit deconditioning and frailty from home confinement.

We also call upon UK public health agencies to launch a National Covid-19 Resilience Programme to support older people through the pandemic and to keep them healthy over the winter. This would encourage appropriate exercise and physical activity; support optimal nutrition; enhance mental health and wellbeing and support behaviour change to embed these behaviours. This programme might be supported by a digital platform and by national broadcasters, e.g. regular televised activity classes.

Encourage appropriate exercise

A tailored exercise programme should be made available nationally, focusing on older people with key Covid-19 risk factors (obesity, type 2 diabetes, cardiovascular disease and sarcopenia). This should offer indoor physical activity recommendations designed for people with different levels of fitness. It will need to be designed in conjunction with exercise scientists and older people themselves, and will need to generate benefits within a short space of time. This could draw on the "Make Movement Your Mission" model (www.facebook.com/groups/MakeMovementYourMission) or similar schemes, with public health authorities across the UK (Public Health England, Public Health Scotland, Public Health Wales and the Public Health Agency in Northern Ireland) rolling a programme like this out nationally. A broader intervention to support increased activity levels with guidelines detailed enough to cover "when", "how" and "how frequently" to exercise, which should be provided using multiple channels. As well as a digital platform, the national broadcasters should promote the benefits of physical activity by running regular televised activity classes. These should be developed in conjunction with exercise scientists in order to ensure that the approach is suitable for older people with different underlying levels of fitness and frailty.

Support optimised nutrition

Clear guidance about the importance of a healthy balanced diet containing sufficient levels of protein, with an appropriate energy content. This advice should be linked explicitly to wider environmental changes (such as product reformulation) to maintain health and the body's resilience against Covid-19, so that older people are supported to understand the direct link between behaviour, health and resilience.

Enhance mental health and wellbeing

Using communities (both virtual and physical) to counter loneliness and isolation in order to improve mental health. Virtual communities, such as the community that has formed around Make Movement Your Mission, can

also be of benefit to mental health – existing organisations and charities could be supported to explore widening the participation of older people in virtual communities using social media and video conferencing.

'Super bubbles'

Explore viability of allowing older people to form "super bubbles" to enable them to interact in slightly larger groups (e.g. four people across two households), provided social interactions are restricted beyond the super bubble.

Embed behaviour change

None of this will work unless we can successfully re-build older adults' confidence and support them to stay active and keep well. Therefore, we will need to be able to enlist the help of relatives, care workers and other professionals to reinforce messages around resilience in their day-to-day interactions with older people in their families or for whom they care. There may also be a role for NHS Volunteer Responders to play in supporting this behaviour change, perhaps through telephone befriending or other schemes, provided appropriate safety checks have been carried out. The health system should repeat the approach taken at the start of the first national lockdown in March to identify and proactively contact those at highest risk to offer support and advice, using social prescribing link workers and the NHS responders.

References

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