

## Bilaga 2b. Sammanfattning av litteraturöversikten samt litteratursökningar

Detta är en metodbilaga till rapporten om *Konsekvenser för personer 70 år och äldre av smittskyddsåtgärder mot covid-19* avseende analyser av eventuella negativa konsekvenser på den fysiska och psykiska hälsan av rekommendationen och sätt att förebygga de negativa konsekvenserna av rekommendationen bland äldre. Denna metodbilaga visar en sammanställning av litteraturen identifierad i litteraturöversikten samt söksträngar för litteratursökningar. Det finns även två till metodbilagor. Bilaga 1: *Modellering av spridning av covid-19 i gruppen personer 70 år och äldre - effekt av rekommendationen om begränsning av kontakter*. Samt bilaga 2a: *Psykiska och fysiska konsekvenser av pandemin och sätt att minska dem*.

Consequences	Scientific articles	Comment
Marginalization	D ´cruz <i>et al.</i> (India) <i>An invisible human rights crisis: The marginalization of older adults during the COVID-19 pandemic – An advocacy review</i> <a href="https://www.sciencedirect.com/science/article/pii/S0165178120324811">https://www.sciencedirect.com/science/article/pii/S0165178120324811</a>	This review article shows that marginalization and human rights deprivation emerged as a common pathway of suffering for the elderly during COVID-19. The implications of the emergent themes are discussed in light of psychosocial wellbeing and impact on the quality of life.
	Monahan <i>et al.</i> (US) <i>COVID-19 and Ageism: How Positive and Negative Responses Impact Older Adults and Society</i> <a href="https://doi.apa.org/fulltext/2020-51010-001.pdf">https://doi.apa.org/fulltext/2020-51010-001.pdf</a>	This article explores positive and negative responses toward older adults during the COVID-19 pandemic and the expected short- and long-term consequences such as impacting beliefs about and treatment of older adults, intergenerational relations, and individuals' mental and physical health.
		This article discusses policy changes to health care (triaging, elder abuse), employment (layoffs, retirement), and education about ageism.
Isolation	Keir <i>et al.</i> (UK) <a href="https://www.nature.com/articles/s41598-020-70483-3.pdf">https://www.nature.com/articles/s41598-020-70483-3.pdf</a>	The study focuses on social isolation, loneliness and physical performance in older-adults, using fixed effects analyses of a cohort study
Lack of physical activity	*Plagg <i>et al.</i> (Italy) <i>Prolonged social isolation of the elderly during COVID-19: Between benefit and damage</i>  <a href="https://www.sciencedirect.com/science/article/pii/S0167494320300807?via%3Dihub">https://www.sciencedirect.com/science/article/pii/S0167494320300807?via%3Dihub</a>	Plagg <i>et al.</i> states that social isolation may lead to reduced opportunities for physical activity, representing an additional health-damaging burden in the long run.

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	<p>Gustavsson <i>et al.</i> (Sweden)</p> <p><i>Compliance to Recommendations and Mental Health Consequences among Elderly in Sweden during the Initial Phase of the COVID-19 Pandemic</i></p> <p><a href="https://www.ncbi.nlm.nih.gov/pmc/articles/PMC7432611/pdf/ijerph-17-05380.pdf">https://www.ncbi.nlm.nih.gov/pmc/articles/PMC7432611/pdf/ijerph-17-05380.pdf</a></p>	<p>Social distancing has forced people to give up on physical activities and sports, activities that have been shown to prevent mental health problems.</p>
	<p>Sepúlveda-Loyola <i>et al.</i> (Brazil)</p> <p><i>Impact of social isolation due to COVID-19 on health in older people: Mental and physical effects and recommendations.</i></p> <p><a href="https://link.springer.com/article/10.1007/s12603-020-1469-2">https://link.springer.com/article/10.1007/s12603-020-1469-2</a></p>	<p>The narrative review included 41 articles, involving 20,069 individuals (58% women) from Asia, Europe and America. The main outcomes were anxiety, depression, poor sleep, and physical inactivity. Results showed that the mental and physical health, as well as physical activity in older people are negatively affected during the social distancing for COVID-19. Recommendations include multicomponent program with exercise and psychological strategies.</p>
	<p>Narici <i>et al.</i> (Italy, Denmark, UK etc.)</p> <p><i>Impact of sedentarism due to the COVID-19 home confinement on neuromuscular, cardiovascular and metabolic health:</i></p> <p><a href="https://www.tandfonline.com/doi/pdf/10.1080/17461391.2020.1761076?needAccess=true">https://www.tandfonline.com/doi/pdf/10.1080/17461391.2020.1761076?needAccess=true</a></p>	<p>The paper describes the impact of sedentarism on the human body at the level of the muscular, cardiovascular, metabolic, endocrine and nervous systems and is based on evidence from several models of inactivity, including bed rest, unilateral limb suspension, and step-reduction.</p>
	<p>Moro <i>et al.</i> (Italy)</p> <p><i>When COVID-19 affects muscle: effects of quarantine in older adults</i></p> <p><a href="https://www.ncbi.nlm.nih.gov/pmc/articles/PMC7385699/pdf/ejtm-30-2-9069.pdf">https://www.ncbi.nlm.nih.gov/pmc/articles/PMC7385699/pdf/ejtm-30-2-9069.pdf</a></p>	<p>According to this study sedentariness is associated with numerous negative health outcomes and increase risk of fall, fractures and disabilities in older adults.</p>
	<p>Palmer <i>et al.</i> (authors from Italy, Spain, Sweden, Finland, and the UK)</p> <p><i>The potential long-term impact of the COVID-19 outbreak on patients with non-communicable diseases in Europe: consequences for healthy ageing</i></p> <p><a href="https://link.springer.com/content/pdf/10.1007/s40520-020-01601-4.pdf">https://link.springer.com/content/pdf/10.1007/s40520-020-01601-4.pdf</a></p>	<p>Home-isolation is also likely to lead to a reduced number of hours spent outdoors, which may affect vitamin D levels. Low sunlight exposure periods are associated with vitamin D concentrations. This can have relevant health consequences as low levels of vitamin D are associated with numerous NCDs and a higher prevalence of multimorbidity. Further, evidence exists on a link between vitamin D deficiency and impaired</p>

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Violence and abuse	No studies found	immune function, potentially leading to autoimmunity and increased risk of infections.
Substance misuse	<p data-bbox="495 464 703 488">*Girdhar <i>et al.</i> (India)</p> <p data-bbox="495 533 1099 587"><i>Managing mental health issues among elderly during COVID-19 pandemic</i></p>	<p data-bbox="1189 464 1861 596">This article reviewed the mental health issues faced by elderly due to enforced social isolation and various methods to mitigate the adverse effects of social isolation. Findings suggest that social isolation and quarantine puts elderly at a higher risk for various physical and mental health problems, including substance abuse.</p>
Dietary changes	No studies found	
Health aspects		
Slip and fall accidents	<p data-bbox="495 726 734 750">Pablo A <i>et al.</i> (Argentina)</p> <p data-bbox="495 759 1093 810"><i>Prolonged social lockdown during COVID-19 pandemic and hip fracture epidemiology</i></p> <p data-bbox="495 826 1003 849"><a href="https://link.springer.com/content/pdf/10.1007/s00264-020-04769-6.pdf">https://link.springer.com/content/pdf/10.1007/s00264-020-04769-6.pdf</a></p>	<p data-bbox="1189 726 1890 802">Despite testing negative for SARS-CoV-2, CT patients were less active and frailer than PCT patients, depicting an epidemiological shift that was associated with higher mortality rate.</p>
	<p data-bbox="495 900 734 924">Hongzhi Lv <i>et al.</i> (China)</p> <p data-bbox="495 927 1093 1003"><i>Epidemiologic characteristics of traumatic fractures during the outbreak of coronavirus disease 2019 (COVID-19) in China: A retrospective &amp; comparative multi-center study</i></p> <p data-bbox="495 1011 1093 1034"><a href="https://www.sciencedirect.com/science/article/pii/S0020138320305222?via%3Dihub">https://www.sciencedirect.com/science/article/pii/S0020138320305222?via%3Dihub</a></p>	<p data-bbox="1189 900 1883 976">The epidemiological characteristics of traumatic fractures amid the epidemic changes dramatically, and more attempts should be focused on the prevention of low energy injuries of elderly population.</p>
Mental health symptoms: anxiety and worry	Gustavsson <i>et al.</i> (Sweden)	<p data-bbox="1189 1050 1850 1101">In Gustavsson <i>et al.</i> a high proportion reported that they worry about various things (e.g. their health.)</p>
	*Girdhar <i>et al.</i> (India)	<p data-bbox="1189 1155 1877 1206">Girdhar <i>et al.</i> states that social distancing leads to loneliness that in turn may lead to anxiety.</p>
	Sepúlveda-Loyola <i>et al.</i> (Brazil)	<p data-bbox="1189 1230 1823 1281">Sepúlveda-Loyola <i>et al.</i> found elevated levels of anxiety during the quarantine.</p>

Consequences	Scientific articles	Comment
Mental health symptoms: depression	Gustavsson <i>et al.</i> (Sweden)	In Gustavsson <i>et al.</i> a half of the respondents reported decreased mental health in term of feeling depressed.
	*Banerjee <i>et al.</i> (India) <i>Social isolation in Covid-19: The impact of loneliness</i> <a href="https://www.ncbi.nlm.nih.gov/pmc/articles/PMC7405628/pdf/10.1177_0020764020922269.pdf">https://www.ncbi.nlm.nih.gov/pmc/articles/PMC7405628/pdf/10.1177_0020764020922269.pdf</a>	Banerjee <i>et al.</i> found that the pandemic has led to increased prevalence of depression.
	*Girdhar <i>et al.</i> (India)	Girdhar <i>et al.</i> suggests that loneliness leads to increased depression rates.
	Sepúlveda-Loyola <i>et al.</i> (Brazil)	Sepúlveda-Loyola <i>et al.</i> found elevated levels of depression during the quarantine.
Mental health symptoms: sleep problems	Gustavsson <i>et al.</i> (Sweden)	In Gustavsson <i>et al.</i> a half of the respondents reported decreased mental health in term of having sleep problems.
	*Girdhar <i>et al.</i> (India)	Girdhar <i>et al.</i> states that social distancing leads to loneliness that in turn may lead to insomnia and sleep problems.
	Sepúlveda-Loyola <i>et al.</i> (Brazil)	Sepúlveda-Loyola <i>et al.</i> showed that people during quarantine had higher levels of sleep disturbance and poorer sleep quality.
Problems related to the musculoskeletal system and connective tissue	Narici <i>et al.</i> (Italy, Denmark, UK etc.) <a href="https://www.tandfonline.com/doi/pdf/10.1080/17461391.2020.1761076?needAccess=true">https://www.tandfonline.com/doi/pdf/10.1080/17461391.2020.1761076?needAccess=true</a>	Just few days of sedentary lifestyle are sufficient to induce muscle loss, neuromuscular junction damage and fibre denervation, insulin resistance, decreased aerobic capacity, fat deposition and low-grade systemic inflammation.
	Moro <i>et al.</i> (Italy)	Sedentariness is associated with numerous negative health outcomes and increase risk of fall, fractures and disabilities in older adults.

Consequences	Scientific articles	Comment
	Keir <i>et al.</i> (UK) <a href="https://www.nature.com/articles/s41598-020-70483-3.pdf">https://www.nature.com/articles/s41598-020-70483-3.pdf</a>	Social isolation, loneliness and physical performance in older-adults: fixed effects analyses of a cohort study
Other somatic health problems	*Newman <i>et al.</i> (US) The value of maintaining social connections for mental health in older people.  <a href="https://www.ncbi.nlm.nih.gov/pmc/articles/PMC7261393/pdf/nihms-1592666.pdf">https://www.ncbi.nlm.nih.gov/pmc/articles/PMC7261393/pdf/nihms-1592666.pdf</a>  *Plagg <i>et al.</i> (Italy)  Palmer <i>et al.</i> (Authors from Italy, Spain, Sweden, Finland and the UK) <i>The potential long-term impact of the COVID-19 outbreak on patients with non-communicable diseases in Europe: consequences for healthy ageing</i> <a href="https://link.springer.com/content/pdf/10.1007/s40520-020-01601-4.pdf">https://link.springer.com/content/pdf/10.1007/s40520-020-01601-4.pdf</a>	Newman <i>et al.</i> discusses the strong association between social isolation and loneliness, and negative health outcomes including cardiovascular and autoimmune problems.  Plagg <i>et al.</i> showed that social isolation and loneliness increase the risk of vascular diseases.  Social distancing and quarantine restrictions will reduce physical activity and increase other unhealthy lifestyles, thus increasing NCD risk factors and worsening clinical symptoms. Vitamin D levels might decrease and there might be a rise in mental health disorders. We suggest ways to define an integrated strategy that could involve both public institutional entities and the private sector to safeguard frail individuals and mitigate the impact of the outbreak.
Dental problems Reduced access to care	No studies found  *Chong <i>et al.</i> (China) <i>Mental health of older adults during the COVID-19 pandemic</i>  <a href="https://www.ncbi.nlm.nih.gov/pmc/articles/PMC7302944/pdf/S1041610220001003a.pdf">https://www.ncbi.nlm.nih.gov/pmc/articles/PMC7302944/pdf/S1041610220001003a.pdf</a>	Chong <i>et al.</i> showed that many adults have experienced reduced access to specialist services and hospitals due to the pandemic.
Cognitive problems	*Newman <i>et al.</i> (US)	States that social isolation and loneliness may lead to neurocognitive problems
Suicide	*Banerjee <i>et al.</i> (India)	Banerjee <i>et al.</i> showed that loneliness, which is common in the old-age group, may lead to increased risk of suicide.

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Is it possible to prevent the negative consequences?	<p>*Wand <i>et al.</i> (Australia) <i>COVID-19: the implications for suicide in older adults</i></p> <p><a href="https://www.ncbi.nlm.nih.gov/pmc/articles/PMC7235297/pdf/S1041610220000770a.pdf">https://www.ncbi.nlm.nih.gov/pmc/articles/PMC7235297/pdf/S1041610220000770a.pdf</a></p>	According to Wand <i>et al.</i> , loneliness and social isolation are well-recognized risk factors for suicide in late life (that isolation/loneliness may lead to psychiatric illness (e.g. affective disorders, depression, PTSD) that in turn are known risk factors for suicide.
Efforts to support physical activity	<p>Moro <i>et al.</i> (Italy)</p> <p>Souza <i>et al.</i> (Brazil)</p> <p><i>High and low-load resistance training produce similar effects on bone mineral density of middle-aged and older people</i></p> <p><a href="https://doi.org/10.1016/j.exger.2020.110973">https://doi.org/10.1016/j.exger.2020.110973</a></p> <p>Goethals <i>et al.</i> (France)</p> <p>Impact of Home Quarantine on Physical Activity Among Older Adults Living at Home During the COVID-19 Pandemic: Qualitative Interview Study</p> <p><a href="https://aging.jmir.org/2020/1/e19007/pdf">https://aging.jmir.org/2020/1/e19007/pdf</a></p>	<p>Models of physical inactivity have been widely studied in the past decades, and most studies agreed that is necessary to implement physical exercise (such as walking, low load resistance or in bed exercise) during periods of disuse to protect muscle mass and function from catabolic crisis.</p> <p>High and low-load resistance training produce similar effects on bone mineral density of middle-aged and older people: A systematic review with meta-analysis of randomized clinical trials</p> <p>Given the results of our study, it seems necessary to globally communicate how important it is for older adults to maintain physical activity at home. We are concerned about the level of independence and mental health state of older adults after the end of quarantine if there is no appropriate campaign to promote physical activity among them at home.</p>
Use of physical activity to improve mental health	<p>Callow <i>et al.</i> (Kanada, US)</p> <p><i>The Mental Health Benefits of Physical Activity in Older Adults Survive the COVID-19 Pandemic</i></p> <p><a href="https://www.sciencedirect.com/science/article/pii/S1064748120304000?via%3Dihub">https://www.sciencedirect.com/science/article/pii/S1064748120304000?via%3Dihub</a></p>	These results suggest that performing even light physical activity during the COVID-19 pandemic may help alleviate some of the negative mental health impacts that older adults may be experiencing while isolated and adhering to SDG during the COVID-19 pandemic.

\*editorials, comments

## Litteratursökningar konsekvenser för den psykiska hälsan:

Litteratursökningen genomfördes i databaserna: PubMed, Web Of Science och Google Scholar. Kombinationer av följande söktermer användes i databassökningarna:

- quarantine
- isolation/ social isolation
- covid-19/coronavirus
- mental health/mental disorders/psychiatric/psychological/psychosocial/ suicide/depression/anxiety/affective/distress/fear
- aging/ageing/older adults/elderly

Sökningen genomfördes under perioden augusti-september 2020.

## Litteratursökningar konsekvenser för den fysiska hälsan:

Litteratursökningen genomfördes i två databaser: PubMed, LitCovid Kombinationer av följande söktermer användes i databassökningarna:

- quarantine
- isolation/ distancing
- covid-19
- diabetes/musculoskeletal/coronary/heart/cardiovascular/fracture/joints
- aging/ageing/older adults/elderly

Sökningen genomfördes av informationsspecialist under perioden augusti-september 2020.

Från LL-HS omvärldsbevakning har följande söksträngar använts sedan maj 2020 i Scopus, Web of Science och ProQuest,

### **Covid-block Scopus**

(TITLE-ABS-KEY ( "Wuhan coronavirus" OR "Wuhan seafood market pneumonia virus" OR "COVID19\*" OR "COVID-19\*" OR "COVID-2019\*" OR "coronavirus disease 2019" OR "SARS-CoV-2" OR sars2 OR "2019-nCoV" OR "2019 novel coronavirus" OR "severe acute respiratory syndrome coronavirus 2" OR "2019 novel coronavirus infection" OR "coronavirus disease 2019" OR "coronavirus disease-19" OR "novel coronavirus" OR coronavirus OR "SARS-CoV-2019" OR "SARS-CoV-19" ) )

### **Covid-block Web of Science**

TS=(“Wuhan coronavirus” OR “Wuhan seafood market pneumonia virus” OR “COVID19\*” OR “COVID-19\*” OR “COVID-2019\*” OR “coronavirus disease 2019” OR “SARS-CoV-2” OR SARS2 OR “2019-nCoV” OR “2019 novel coronavirus” OR “severe acute respiratory syndrome coronavirus 2” OR “2019 novel coronavirus infection” OR “coronavirus disease 2019” OR “coronavirus disease-19” OR “novel coronavirus” OR coronavirus OR “SARS-CoV-2019” OR “SARS-CoV-19”)

### **FYSISK AKTIVITET**

#### **Bevakningssöksträng MEDLINE (WoS)**

(MH=(physical activity OR life style OR motor activity OR physical fitness OR posture) OR TS=(exercise OR "physical fitness" OR sedentary OR "physical activity" OR (physically NEAR/5 (active OR inactive OR passive)) OR occupational sitting OR (lifestyle NEAR/5 (active OR inactive OR passive)))) AND (TS=(“Wuhan coronavirus” OR “Wuhan seafood market pneumonia virus” OR “COVID19\*” OR “COVID-19\*” OR “COVID-2019\*” OR “coronavirus disease 2019” OR “SARS-CoV-2” OR SARS2 OR “2019-nCoV” OR “2019 novel coronavirus”

OR "severe acute respiratory syndrome coronavirus 2" OR "2019 novel coronavirus infection" OR "coronavirus disease 2019" OR "coronavirus disease-19" OR "novel coronavirus" OR coronavirus OR "SARS-CoV-2019" OR "SARS-CoV-19"))

### **Bevakningssöksträng ProQuest**

((ti,ab,su(exercise OR "physical fitness" OR posture OR fitness OR sedentary OR (physical AND (active OR inactive)) OR "occupational sitting" OR "sitting time" OR (lifestyle AND (active OR inactive)))) AND (ti,ab,su(coronavirus-2019 OR 2019-nCoV OR 2019nCoV OR nCoV OR COVID-19 OR "covid 19" OR covid19 OR coronavirinae OR coronavirus OR corona-virus OR coronaviridae OR betacoronavirus OR CoV-2 OR CoV2 OR sarscov2 OR SARS-COV-2 OR "novel CoV" OR ((wuhan OR hubei OR huanan) AND ("severe acute respiratory" OR pneumonia)))) AND la.exact("ENG"))

MATVANOR

### **Bevakningssöksträng ProQuest**

((su,ab,ti(diet OR "feeding behavior" OR fasting OR "diet records" OR dietetics OR "food preferences" OR "food labeling" OR dietary OR nutrition OR "food habits") NOT (su,ab,ti("eating disorder" OR "disordered eating" OR nervosa)) NOT (su.exact("animals" OR "rats" OR "animal feeding behavior" OR "animal models" OR "mice")))) AND (TIABSU(coronavirus-2019 OR 2019-nCoV OR 2019nCoV OR nCoV OR COVID-19 OR "covid 19" OR covid19 OR coronavirinae OR coronavirus OR corona-virus OR coronaviridae OR betacoronavirus OR CoV-2 OR CoV2 OR sarscov2 OR SARS-COV-2 OR "novel CoV" OR ((wuhan OR hubei OR huanan) AND ("severe acute respiratory" OR pneumonia))))

ÖVERVIKT/FETMA

### **Bevakningssöksträng Scopus**

(( TITLE ( obesity OR "body weight" OR overweight OR bmi OR "body mass index" OR "weight loss" OR "weight reduction" ) OR KEY ( obesity OR "body weight" OR overweight OR bmi OR "body mass index" OR "weight loss" OR "weight reduction" ) ) AND NOT TITLE-ABS-KEY(biomarker OR inhibitor OR rat OR mice OR animal)) AND TITLE-ABS-KEY ( "systematic review" OR "meta analysis" OR "literature review" OR "scoping review" ) AND ( EXCLUDE ( SUBJAREA,"NEUR" ) OR EXCLUDE ( SUBJAREA,"PHAR" ) OR EXCLUDE ( SUBJAREA,"Nonhuman" ) )

### **Bevakningssöksträng MEDLINE (WoS)**

((((MH=(obesity OR "body mass index" OR overweight OR "body weight" OR "weight loss") OR TS=(obesity OR "body mass index" OR overweight OR "body weight" OR "weight loss" OR BMI OR "weight reduction")) AND TS=("systematic review" OR "literature review" OR "scoping review" OR "meta analysis") NOT TS=( biomarker OR inhibitor OR rat OR mice OR animal))) AND LANGUAGE: (English)

### **Bevakningssöksträng ProQuest**

(ti,ab,su(obesity OR "body mass index" OR overweight OR "body weight" OR "weight loss" OR BMI OR "weight reduction") NOT ti,ab,su("animals" OR "eating disorders" OR "anorexia nervosa" OR "feeding and eating disorders" OR "animal models" OR "rats")) NOT subt.exact("rodents" OR "mice" OR "calves" OR "cattle" OR "hogs")