Commentary


doctoral study: The 2020's year will be perpetuated in world history due to the pandemic disease caused by a new coronavirus (COVID-19) and its various repercussions. Maintaining regular physical exercise during the pandemic may improve immune defense, assisting body and mind health. The immunity level is a protective factor against COVID-19, it is extremely important to be aware of groups that are potentially at higher risk, such as people living with HIV (PLWH) who already live with stigma and prejudice. However, due to great social restrictions imposed by different governments around the world, the practice of physical exercise without leaving home has become a major challenge, both to prescribe and to perform. The social isolation can drastically increase feelings of exclusion and loneliness during the COVID-19 pandemic period, aggravating the health status of PLWH.

Objective: The present text offer information and practical recommendations about physical exercises for PLWH during the pandemic of COVID-19.

Conclusion: We would like to highlight the importance of PLWH, to remain physically active during the COVID-19 pandemic, maintaining a good level of physical fitness capable of improving the responses of the immune system, while taking special care to not promote exaggerated overload, and influence the health and quality of life.

Keywords: Aids, virus, SARS-CoV-2, physical activity.
solidão durante o período da pandemia, podendo agravar o estado de saúde das PVHIV que já vivem com estigma e preconceito.

Objetivo: Este comentário se propõe a oferecer informações e recomendações práticas acerca dos exercícios físicos para PVHIV, durante a pandemia do COVID-19.

Conclusão: Destaca-se a importância das PVHIV permanecerem fisicamente ativas durante a pandemia do COVID-19, mantendo um bom nível de condicionamento físico capaz de fortalecer o sistema imunológico, sem deixar de tomar cuidados especiais para que tais exercícios não sejam realizados com sobrecarga exagerada, a fim de promover a saúde e de se evitarem efeitos negativos sobre sua saúde e qualidade de vida, sendo assim prejudiciais em alguma medida.

Palavras-chave: Aids, vírus, SARS-CoV-2, atividade física.

Physical Exercise for People Living with HIV during the COVID-19 Pandemic

The year of 2020 will be perpetuated in world history due to the new coronavirus pandemic and all related consequences(1). The virus infection was first reported at the end of 2019 in Wuhan, China. The new coronavirus (cov-2) can lead to severe acute respiratory syndrome (SARS-CoV-2)(2) also known as coronavirus disease of 2019: COVID-19. The COVID-19 infection can develop from a disease without symptoms or presenting mild symptoms but can also lead to major complications of the respiratory tract and outcomes as severe pneumonia, multiple organ failure, and consequently death. How the virus will affect the individual relates to immunological system status. The literature shows that elderly patients and those with reduced immune levels have a higher risk of disease evolution aggravation(2).

Adequate nutrition(3), prevention and therapy(4) and as well the level of physical fitness can be important to favor the immunological system to be ready to fight against the COVID-19 virus. The present text is not a recommendation of physical activity as treatment for infected people. We aimed to highlight the potential benefits of maintaining regular physical exercise during the pandemic, possibly improving immune defense to promote physical and mental health.

There are gaps in the knowledge on the relationship between COVID-19 and people living with HIV (PLWH)(6,7). The study by Zhao et al.(7), reported a case of infection by SARS-CoV-2 in an HIV-positive patient without detectable changes in RNA. Nevertheless, the authors demonstrated that immune deficiency caused by HIV promotes a delay in the antibody responses. In addition, according to Marziali et al.(8), social isolation can drastically increase feelings of exclusion and loneliness during the COVID-19 pandemic period. Furthermore, social isolation seems to aggravate the health status of PLWH, which in general live with a certain degree of social isolation due to the special care needed to treat the disease, in addition to stigma and prejudice(9).

Considering immunity level as a protective factor against COVID-19, it is extremely important to be aware of groups that are potentially at higher risk, such as patients infected with the immuno-deficiency virus (HIV). In addition to antiretroviral therapies (ART), the literature is consistent about the benefits of physical exercises for maintaining or increasing the number of TCD4 lymphocytes in PLWH,
improving quality of life, which relates
to physical fitness components(10-12).
However, due to great social restrictions
imposed by different governments
around the world, the practice of
physical exercise without leaving home
has become a major challenge for both to
prescribe and to perform it.

Recently, Chen et al.(13) pointed out
the importance of maintaining a regular
exercise routine during the COVID-19
pandemic, while taking precautions and
care. Furthermore, Ainsworth(14)
emphasizes the importance of physical
activity for promoting health in general
population. Nevertheless, specific
recommendations for PLWH in social
isolation are not found in literature,
characterizing a scientific gap. In that
context, the present commentary
proposes to offer practical
recommendations about physical
exercises for PLWH during the
pandemic of COVID-19.

Practical Recommendations

1. Initial indicators to start or
perform physical exercise: In use of
ART, viral load undetectable, asymptomatic and clinically stable.

2. Initially, to reduce social
isolation, whenever possible, establish
virtual video calls with other individuals
to perform group activities. This can
reduce the feeling of isolation and
loneliness(15).

3. Despite the opposite chronic
effect, immediately after exercise there
is a decrease in immunological
indicators, especially after intense
exercise(16). Therefore, it is important
that PLWH perform exercises in light
and moderate intensities. The use of
subjective perception of effort to control
intensity can be an interesting
strategy(17). According to ACSM(18)
the intensity for moderate domain
should be between 5 to 6 on the CR-10
Borg scale(19).

4. For PLWH previously trained,
aerobic exercise from 41 to 50 minutes
per session should be performed(20).
For the untrained, we recommend a
volume between 10-20 minutes daily,
progressing gradually (5-10 minutes per
2 weeks) until reach 41-50 minutes per
session.

5. Look for creative options, such
as the use of elastic bands(21) and
functional exercises using the body
weight in the case of choosing resistance
exercises. In this case, every 2 weeks,
progressively increase the training load
by 5-10%(11).

6. The resistance and aerobic
exercises combination can be an
interesting strategy(22).

7. Avoid very elaborate exercises
that were normally out of the exercise
routine, maintaining adequate nutrition
and hydration before, during and after
physical exercise sessions.

8. Perform physical exercises at
least 3 times a week on non-consecutive
days(23), possibly achieving 5 times a
week in physically active individuals.

9. Attention to sanitary issues of
hand hygiene, equipment, environment
and other parts of the body, before and
after the exercise session is required.

10. Perform physical exercises in
environments with good ventilation and
own equipment for individual use,
seeking exposure to the sun whenever
possible(13,25-27).

11. The PLWH can exercise
avoiding crowds, at locations where the
sanitary authorities permit, respecting
the social distancing and following
hygiene protocols. Outdoor physical
activities, avoiding crowding, can be
good alternatives for PLWH.

Conclusion

In summary, we would like to
highlight the importance of PLWH, to
remain physically active during the COVID-19 pandemic, maintaining a good level of physical fitness capable of improving the responses of the immune system, while taking special care so the exercises do not promote exaggerated overload and not influence negatively health and quality of live. Thereby, this text provides recommendations to promote safe physical exercise for PLWH.

Conflict of Interest Statement
There is no conflict of interest regarding this study.

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References


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