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LA PALESTRA E LO SPORT NON AGONISTICO COME AMBITO PER LA PROMOZIONE DELLE CORRETTE PRATICHE VACCINALI

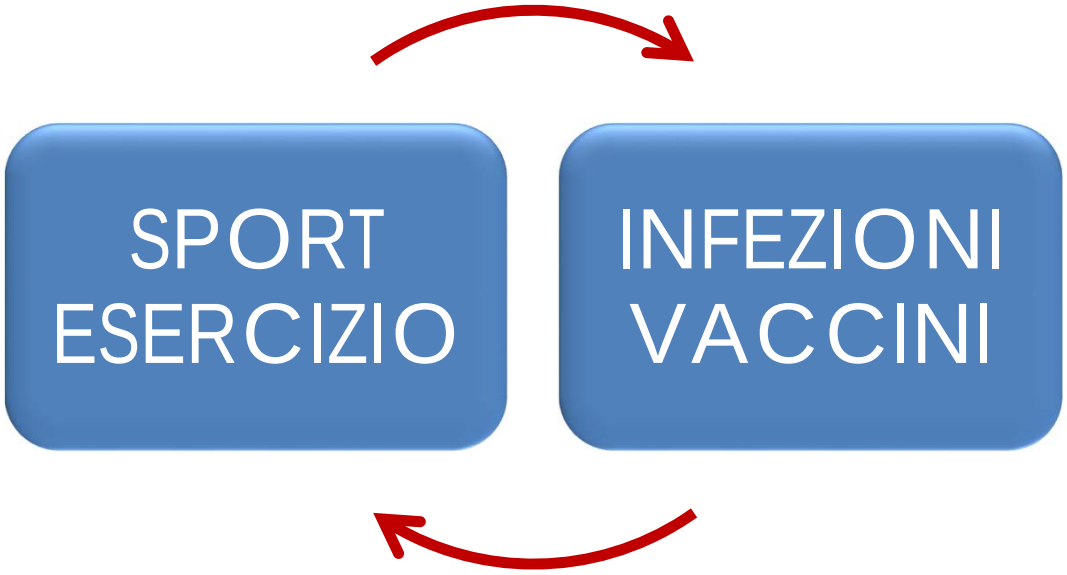
13.03.2021

Prof. Daniela Lucini

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Sezione Medicina dell'Esercizio e Patologie Funzionali. Humanitas Clinical and Research Center

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AMBITO NON AGONISTICO

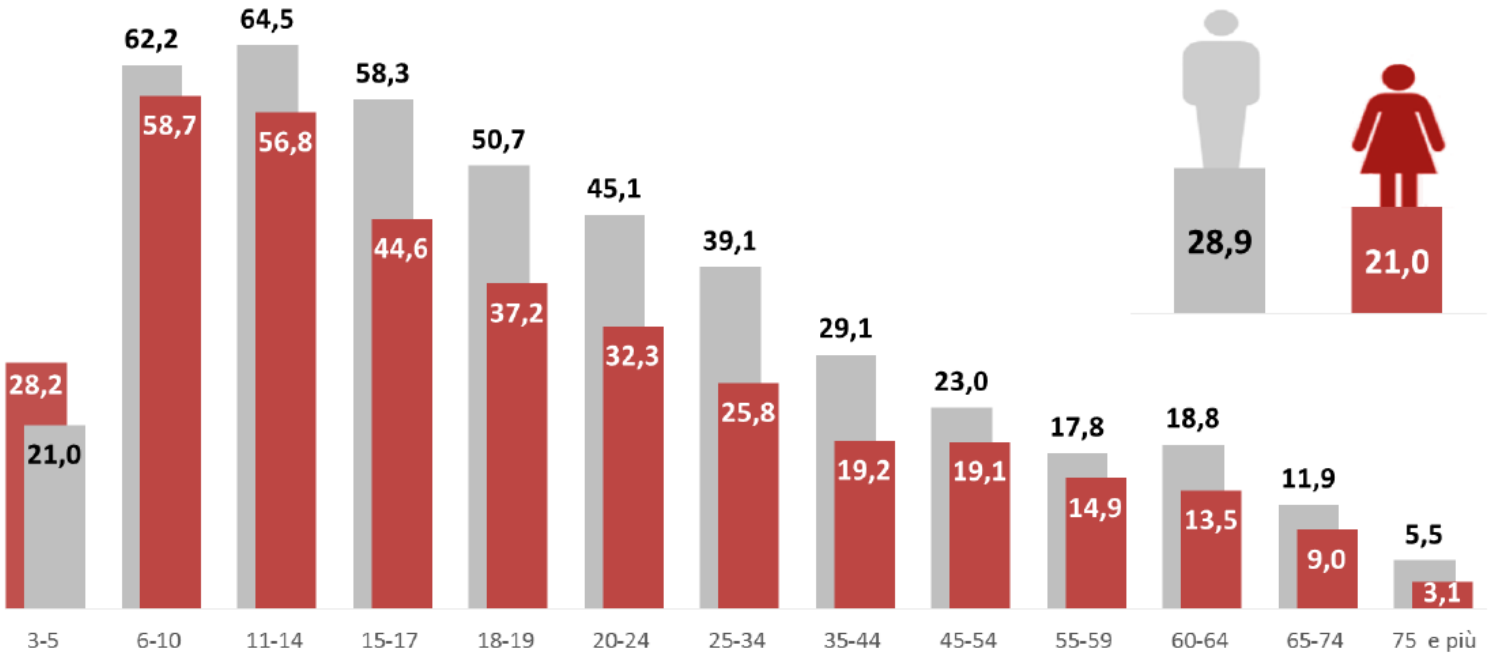


- Ambito in cui possibile promuovere corrette pratiche vaccinali
- Ambito in cui può essere maggiore la possibilità di contrarre infezioni

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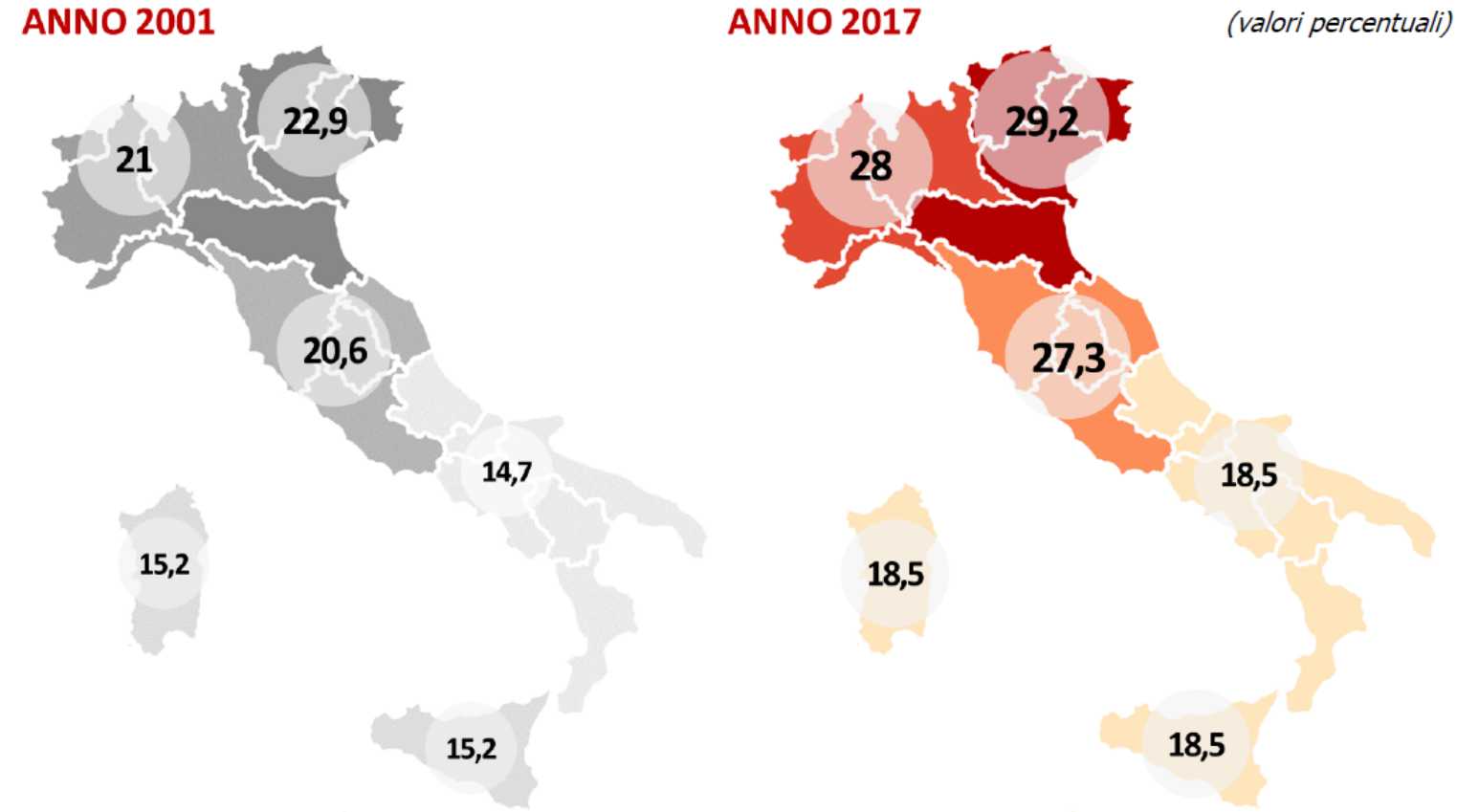
Persone di 3 anni e più che praticano sport con continuità per genere. Anno 2017 *(valori percentuali)*



Fonte: Elaborazioni del Centro Studi di CONI Servizi su dati ISTAT 2017

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Persone di 3 anni e più che praticano sport con continuità per area geografica. Anni 2001-2017



Fonte: Elaborazioni del Centro Studi di CONI Servizi su dati ISTAT 2001-2017

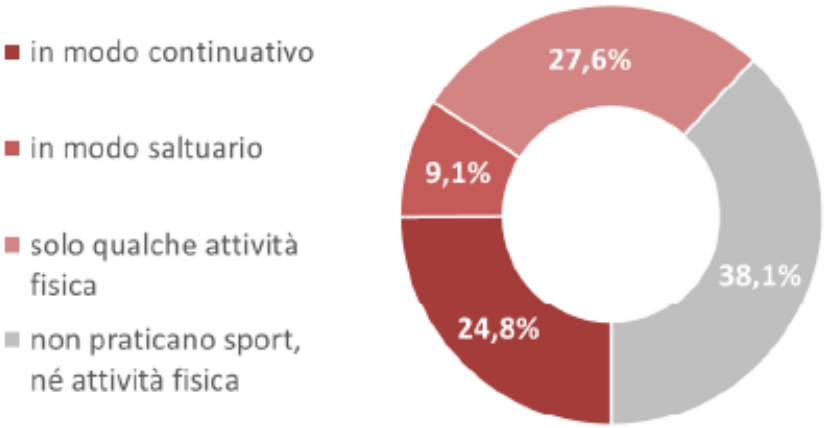
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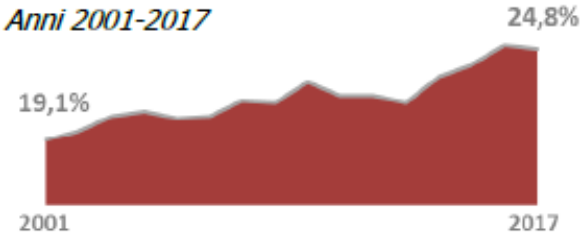
CONI SERVIZI

I NUMERI DELLO SPORT 2017

Persone di 3 anni e più per pratica sportiva
Anno 2017



Praticanti continuativi
Anni 2001-2017



Sedentari
Anni 2001-2017



Fonte: Elaborazioni del Centro Studi di CONI Servizi su dati ISTAT 2001-2017

https://www.coni.it/images/numeri_dello_sport/Rapporto_FSN_DSA_2017.pdf

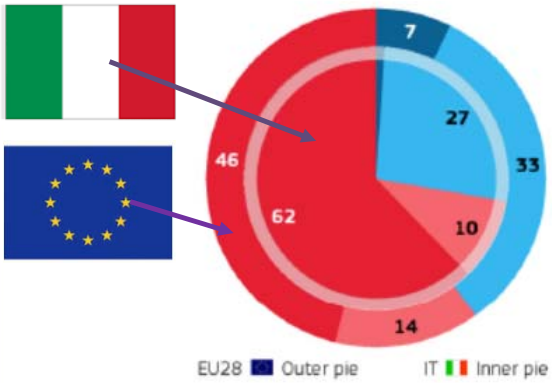
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1. FREQUENCY OF EXERCISE OR PLAYING SPORT

QB1 How often do you exercise or play sport?
(%)



	EU28		IT	
	EB88.4	EB88.4-EB80.2	EB88.4	EB88.4-EB80.2
Regularly	7	- 1	1	- 2
With some regularity	33	=	27	=
Seldom	14	- 3	10	=
Never	46	+ 4	62	+ 2
Don't know	0	=	0	=

Evolution 12/2017 (EB88.4) - 11-12/2013 (EB80.2)

QB1 How often do you exercise or play sport?
(%)

Never or seldom	EU28	IT
TOTAL	60	72
Gender		
Men	56	64
Women	64	79
Gender * Age		
Men 15-24	29	22
Men 25-39	49	48
Men 40-54	59	62
Men 55+	70	88
Women 15-24	47	45
Women 25-39	59	57
Women 40-54	64	78
Women 55+	72	95
Respondent occupation scale		
Self-employed	54	62
Managers	46	65
Other white collars	56	62
Manual workers	65	70
House persons	77	97
Unemployed	63	62
Retired	72	96
Students	27	37

Socio-demographic breakdown

https://ec.europa.eu/commfrontoffice/publicopinion/index.cfm/survey/getsurveydetail/instruments/special/surveyky/2164

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federazione
medico
sportiva
italiana

Certificazioni…..

Le certificazioni in ambito sportivo sono di tipo:

Agonistica → è obbligatoria ed è regolamentata dal Decreto del Ministro della Sanità 18 del febbraio 1982

Non Agonistica → è obbligatoria ed è regolamentata da: Decreto del Ministro della Salute del 24 Aprile 2013; dalla Legge del 9 Agosto 2013, n.98, Art. 42 bis; Legge 30 ottobre 2013, n.125; Decreto del Ministero della Salute dell'8 Agosto 2014 "Linee-guida di indirizzo in materia di certificati medici per l'attività sportiva non agonistica"; Nota esplicativa del 17 Giugno 2015 del Decreto del Ministro della Salute dell'8 Agosto 2014 e successiva Nota integrativa del 28 ottobre 2015

Ludico-Motoria → è facoltativa ed è regolamentata dal Decreto del Ministro della Salute del 24 Aprile 2013 e dalla Legge del 9 Agosto 2013, n.98, Art. 42 bis

Particolare ed Elevato Impegno Cardiovascolare → è obbligatoria ed è regolamentata dal Decreto del Ministro della Salute del 24 Aprile 2013

Agonistica per disabili → è obbligatoria ed è regolamentata dal Decreto del Ministro della Sanità 4 marzo 1993

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RILASCIO CERTIFICATO

Occasione per:

-vautazione stato di salute
-prescrizione esercizio
-verifica/consigli stato vaccinale

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RILASCIO CERTIFICATO



•Limitarsi alla rilevazioni di parametri/dati utili per identificare eventuali controindicazioni all'esecuzione di esercizio fisico in sicurezza (stato vaccinale)

OPPURE

• Rilevare parametri/dati utili anche ad indicare/prescrivere un corretto programma di esercizio fisico da eseguirsi in sicurezza

• Essere occasione per promuovere uno stile di vita corretto a tutto tondo (compreso consigli vaccinazioni)

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PERCHE'??



Discutere con la persona:

• il possibile link tra vaccinazioni ed esecuzione esercizio fisico:

- Frequentare palestre
- Esercitarsi all'aperto

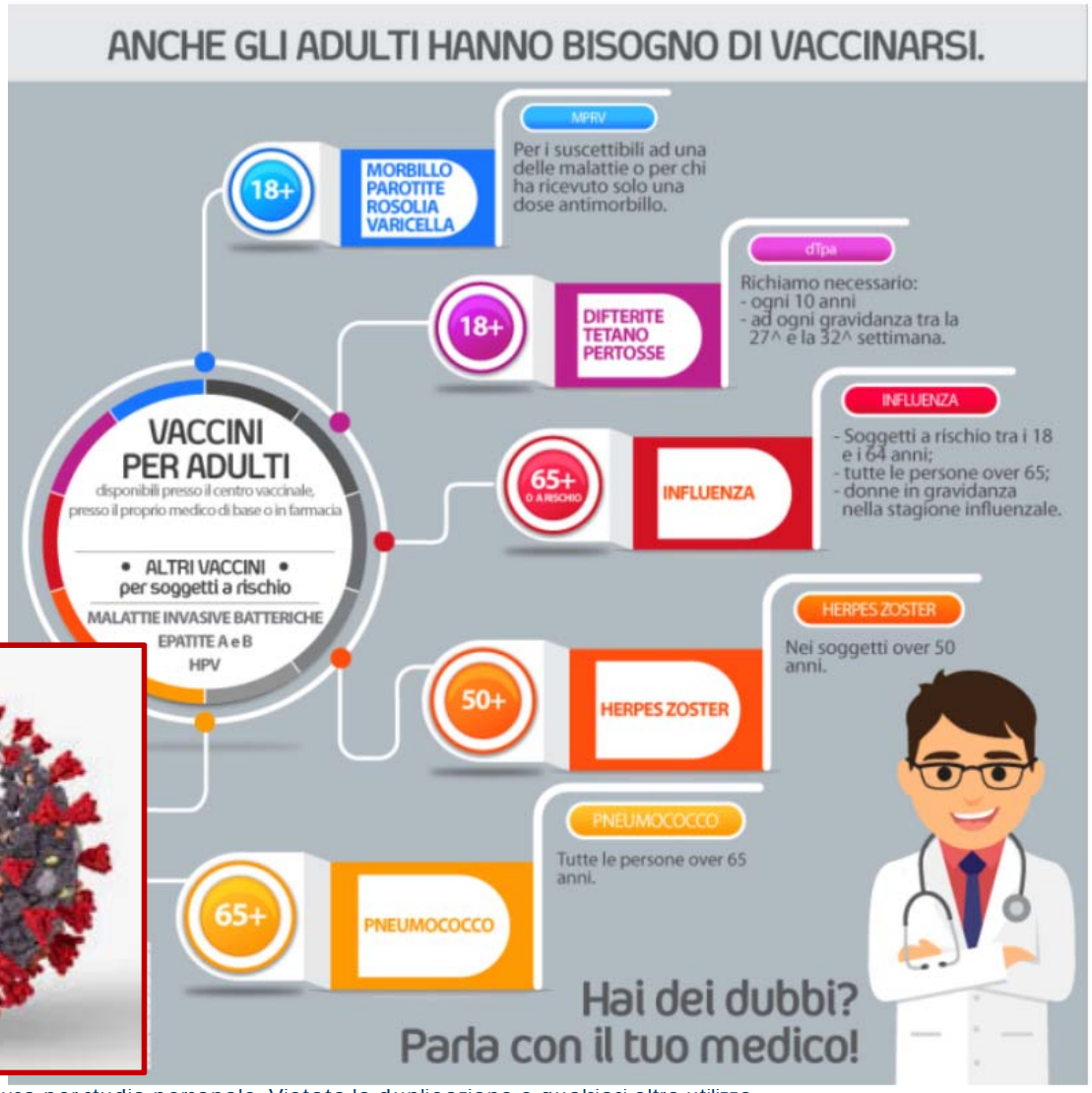
• altre strategie per ridurre possibilità di contrarre/trasmettere patologie infettive quando e dove si esegue attività fisica

- Lavagio mani, trasmissione patogeni, uso mascherine, ecc
- Abbigliamento
- Periodi di malessere

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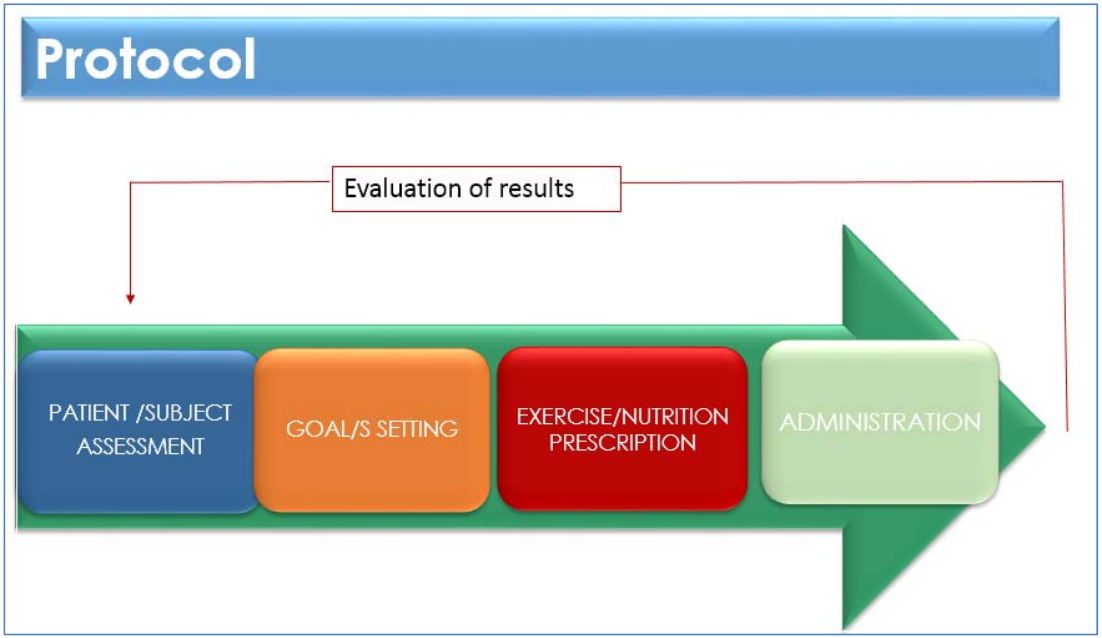


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Fare attività fisica deve essere uno strumento di benessere e non occasione per ammalarsi/infortunarsi!

Particolare attenzione a:

- soggetti in età pediatrica
- Anziani
- Soggetti con patologie croniche



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Environ Sci Pollut Res Int. 2018 Jul;25(20):19675-19686. doi: 10.1007/s11356-018-1822-8. Epub 2018 May 7.

Infection risk in gyms during physical exercise.

Andrade A[1], Dominski FH[2], Pereira ML[3], de Liz CM[2], Buonanno G[4].

Author information

Abstract

This study aimed to analyze the risk of infection (influenza and tuberculosis) for individuals participating in physical exercise. This was achieved by assessment of carbon dioxide (CO_2) concentrations, and examination of the physical characteristics of a number of gyms to determine whether there was a relationship to CO_2 levels. This study was performed in three different gyms ventilated with either split system or central system air conditioners. The risk of airborne infection (percent of susceptible persons infected) was estimated for each gym using the Wells-Riley model. The risk of infection increased during periods of peak occupancy where the ventilation required by occupants was greater. In each gym, the highest risk of infection occurred during the evening where occupancy and CO_2 levels were high. The infection risk for influenza was high in all situations due to the high quantum generation rate for this agent. This study suggests that inefficient ventilation in gyms is a significant problem, with high CO_2 concentrations resulting in impaired air quality and high health risks to users, including increased risk of infections such as influenza and tuberculosis.

PALESTRE, LUOGHI CHIUSI

↓

PROBLEMI AREAZIONE, CONDIVISIONE STRUMENTI

↓

RISCHIO MAGGIORE INFEZIONI

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HHS Public Access
Author manuscript
Infect Dis Clin North Am. Author manuscript; available in PMC 2018 December 01.

Published in final edited form as:
Infect Dis Clin North Am. 2017 December ; 31(4): 593–608. doi:10.1016/j.idc.2017.07.017.

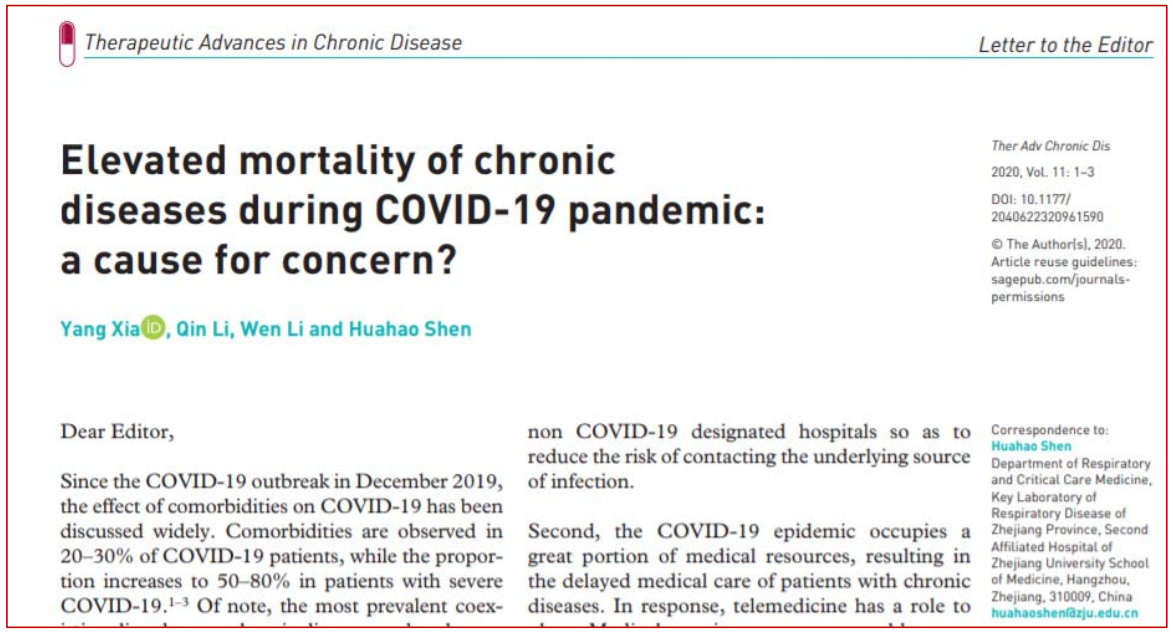
Influence of Aging and Environment on Presentation of Infection in Older Adults

Patologie croniche più facile infezione e prognosi peggiore

We have summarized pathophysiologic, clinical, and environmental influences on the presentation of infections in older adults. Healthcare professionals should understand those changes and the specific features that affect presentation of illness in older adults, especially at a time when the increasing geriatric population is referred to as the "geriatric demographic imperative"[76] or the "silver tsunami"[3]. Pope John XXIII once joked: "Men are like wine - some turn to vinegar, but the best improve with age."[77] Recognition of age-related changes as well as their treatable effects will aid in the prevention, early diagnosis and treatment of infections and other illnesses, ultimately improving clinical outcomes in this population.

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Therapeutic Advances in Chronic Disease — Letter to the Editor

Elevated mortality of chronic diseases during COVID-19 pandemic: a cause for concern?

Yang Xia, Qin Li, Wen Li and Huahao Shen

Ther Adv Chronic Dis
2020, Vol. 11: 1–3
DOI: 10.1177/2040622320961590

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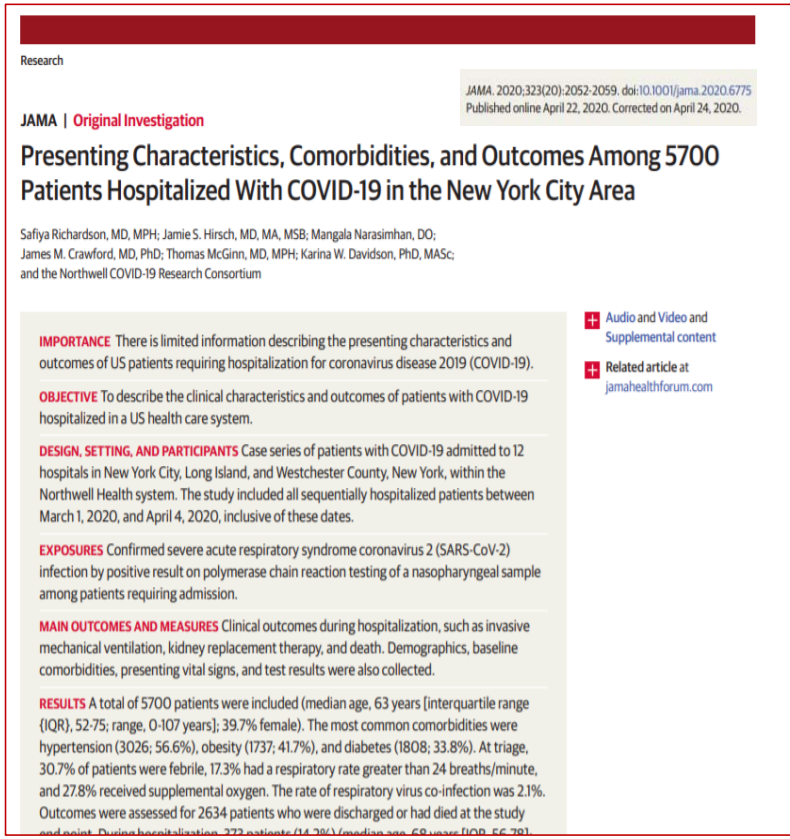
Dear Editor,

Since the COVID-19 outbreak in December 2019, the effect of comorbidities on COVID-19 has been discussed widely. Comorbidities are observed in 20–30% of COVID-19 patients, while the proportion increases to 50–80% in patients with severe COVID-19.[1–3] Of note, the most prevalent coex-

non COVID-19 designated hospitals so as to reduce the risk of contacting the underlying source of infection.

Second, the COVID-19 epidemic occupies a great portion of medical resources, resulting in the delayed medical care of patients with chronic diseases. In response, telemedicine has a role to

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Research

JAMA. 2020;323(20):2052-2059. doi:10.1001/jama.2020.6775
Published online April 22, 2020. Corrected on April 24, 2020.

JAMA | Original Investigation

Presenting Characteristics, Comorbidities, and Outcomes Among 5700 Patients Hospitalized With COVID-19 in the New York City Area

Safiya Richardson, MD, MPH; Jamie S. Hirsch, MD, MA, MSB; Mangala Narasimhan, DO; James M. Crawford, MD, PhD; Thomas McGinn, MD, MPH; Karina W. Davidson, PhD, MASc; and the Northwell COVID-19 Research Consortium

IMPORTANCE There is limited information describing the presenting characteristics and outcomes of US patients requiring hospitalization for coronavirus disease 2019 (COVID-19).

OBJECTIVE To describe the clinical characteristics and outcomes of patients with COVID-19 hospitalized in a US health care system.

DESIGN, SETTING, AND PARTICIPANTS Case series of patients with COVID-19 admitted to 12 hospitals in New York City, Long Island, and Westchester County, New York, within the Northwell Health system. The study included all sequentially hospitalized patients between March 1, 2020, and April 4, 2020, inclusive of these dates.

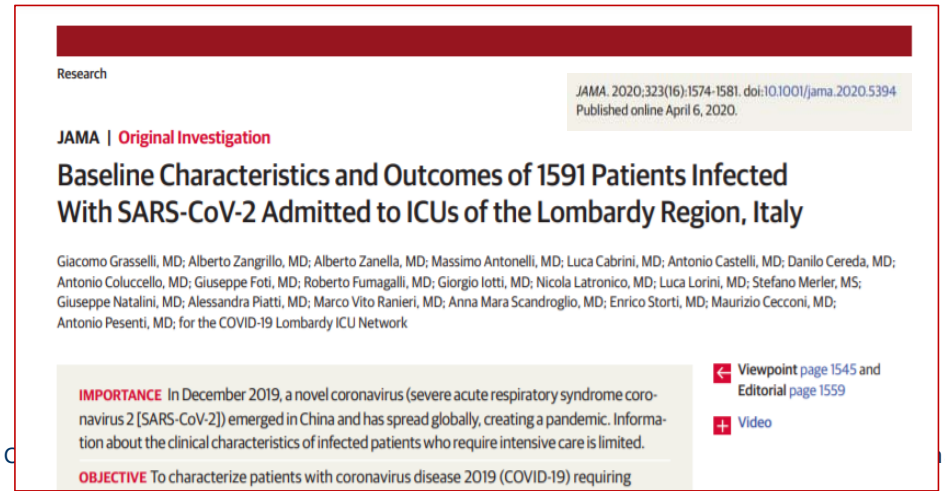
EXPOSURES Confirmed severe acute respiratory syndrome coronavirus 2 (SARS-CoV-2) infection by positive result on polymerase chain reaction testing of a nasopharyngeal sample among patients requiring admission.

MAIN OUTCOMES AND MEASURES Clinical outcomes during hospitalization, such as invasive mechanical ventilation, kidney replacement therapy, and death. Demographics, baseline comorbidities, presenting vital signs, and test results were also collected.

RESULTS A total of 5700 patients were included (median age, 63 years [interquartile range {IQR}, 52-75; range, 0-107 years]; 39.7% female). The most common comorbidities were hypertension (3026; 56.6%), obesity (1737; 41.7%), and diabetes (1808; 33.8%). At triage, 30.7% of patients were febrile, 17.3% had a respiratory rate greater than 24 breaths/minute, and 27.8% received supplemental oxygen. The rate of respiratory virus co-infection was 2.1%. Outcomes were assessed for 2634 patients who were discharged or had died at the study

Audio and Video and Supplemental content

Related article at jamahealthforum.com



Research

JAMA. 2020;323(16):1574-1581. doi:10.1001/jama.2020.5394
Published online April 6, 2020.

JAMA | Original Investigation

Baseline Characteristics and Outcomes of 1591 Patients Infected With SARS-CoV-2 Admitted to ICUs of the Lombardy Region, Italy

Giacomo Grasselli, MD; Alberto Zangrillo, MD; Alberto Zanella, MD; Massimo Antonelli, MD; Luca Cabrini, MD; Antonio Castelli, MD; Danilo Cereda, MD; Antonio Coluccello, MD; Giuseppe Foti, MD; Roberto Fumagalli, MD; Giorgio Iotti, MD; Nicola Latronico, MD; Luca Lorini, MD; Stefano Merler, MS; Giuseppe Natalini, MD; Alessandra Piatti, MD; Marco Vito Ranieri, MD; Anna Mara Scandroglio, MD; Enrico Storti, MD; Maurizio Cecconi, MD; Antonio Pesenti, MD; for the COVID-19 Lombardy ICU Network

IMPORTANCE In December 2019, a novel coronavirus (severe acute respiratory syndrome coronavirus 2 [SARS-CoV-2]) emerged in China and has spread globally, creating a pandemic. Information about the clinical characteristics of infected patients who require intensive care is limited.

OBJECTIVE To characterize patients with coronavirus disease 2019 (COVID-19) requiring

Viewpoint page 1545 and Editorial page 1559

Video

COVID-19 MORTALITA' E PATOLOGIE CRONICHE

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The role of exercise in health is well known; here we discuss the specific role of exercise in vaccination responses. Chronic exercise or high levels of physical activity have been shown to be related to improved vaccination responses in older adults, illustrating improved immune function, and conferring potentially significant public health benefit. Acute exercise has recently been examined as a potential adjuvant to vaccination; its promise for clinical use warrants further investigation, given current data.

COMMENTARY

Human Vaccines & Immunotherapeutics 9:4, 907–910; April 2013; © 2013 Landes Bioscience

http://dx.doi.org/10.4161/hv.23365

Effects of exercise on vaccine-induced immune responses

Kate M. Edwards[1,*] and Robert Booy[2]

[1]Exercise Health and Performance Research Group; University of Sydney; Lidcombe, NSW Australia; [2]National Centre for Immunisation Research and Surveillance of Vaccine Preventable Diseases; University of Sydney; Sydney, NSW Australia

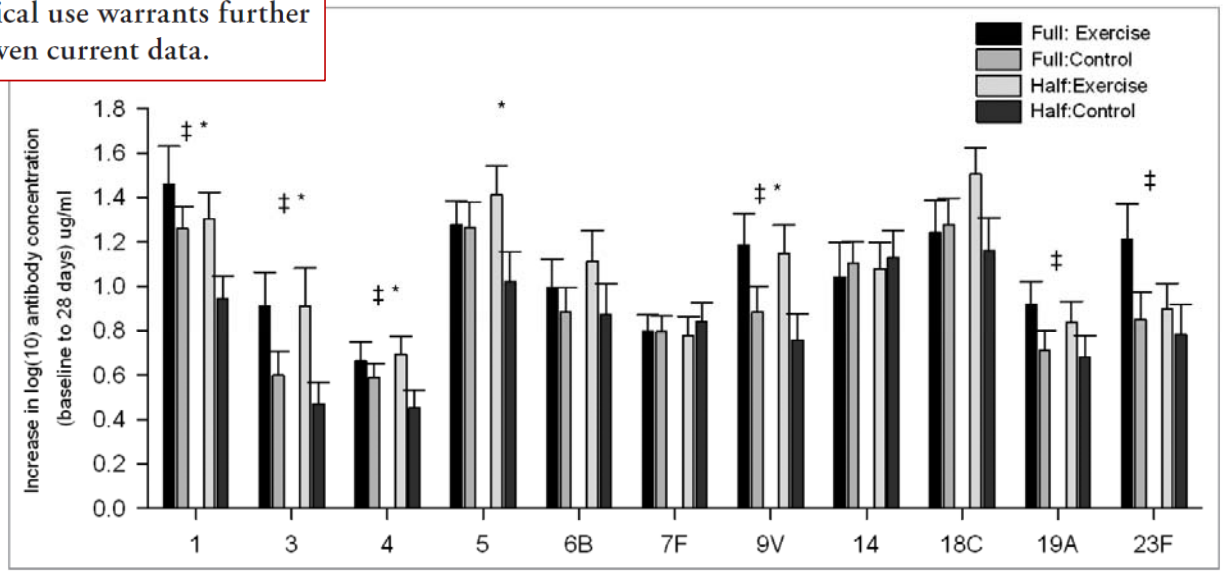


Figure 1. Change scores for pneumococcal strains from baseline to 28 d for all groups. ‡, significant effect of exercise over both full and half dose; *significant effect of exercise within half dose groups.

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Brain, Behavior, & Immunity - Health 1 (2020) 100009

Contents lists available at ScienceDirect

Brain, Behavior, & Immunity - Health

journal homepage: www.editorialmanager.com/bbih/default.aspx

Full Length Article

Acute exercise decreases vaccine reactions following influenza vaccination among older adults

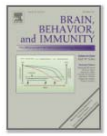
4.1. Conclusion

Acute exercise had no detrimental effect on vaccination response in healthy older adults and it reduced vaccine reactions experienced in the first days following influenza vaccination. These findings support the ability of pre-exposure to one bout of resistive exercise to reduce post-vaccination vaccine reactions in older adults, and future studies may determine whether chronic exposure to such exercise or other modalities, including shorter, intense exercise bouts, may enhance immune responsiveness and efficacy of vaccinations in older adults. The mechanism for exercise-effects on vaccine reactions is likely different to those for antibody generation and immunocompetence and symptom responses. Given that little is known about factors effecting vaccine reactions, further work to elucidate the mechanical factors of vaccine reactions is warranted.

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Brain, Behavior, and Immunity
Volume 39, July 2014, Pages 33-41



Review

The effects of exercise on vaccination responses: A review of chronic and acute exercise interventions in humans

April R. Pascoe [a], Maria A. Fiatarone Singh [a, b], Kate M. Edwards [a]

Show more

https://doi.org/10.1016/j.bbi.2013.10.003

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Highlight

- Both chronic exercise and a single acute bout show promise as interventions to improve vaccine responses, but the clinical importance and optimal protocols are not known.

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Cochrane Database of Systematic Reviews

[Intervention Review]

Exercise prior to influenza vaccination for limiting influenza incidence and its related complications in adults

Authors' conclusions

From the available evidence, we found that exercising before influenza vaccination is neither beneficial nor harmful. However, study data were limited and of low quality. Small sample sizes, study design limitations, exercise types, and focus on biochemical rather than participant-centred outcomes strongly influenced our findings.

Citation: Grande AJ, Reid H, Thomas EE, Nunan D, Foster C. Exercise prior to influenza vaccination for limiting influenza incidence and its related complications in adults. *Cochrane Database of Systematic Reviews* 2016, Issue 8. Art. No.: CD011857. DOI: 10.1002/14651858.CD011857.pub2.

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Published in final edited form as:
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Exercise and Respiratory Tract Viral Infections

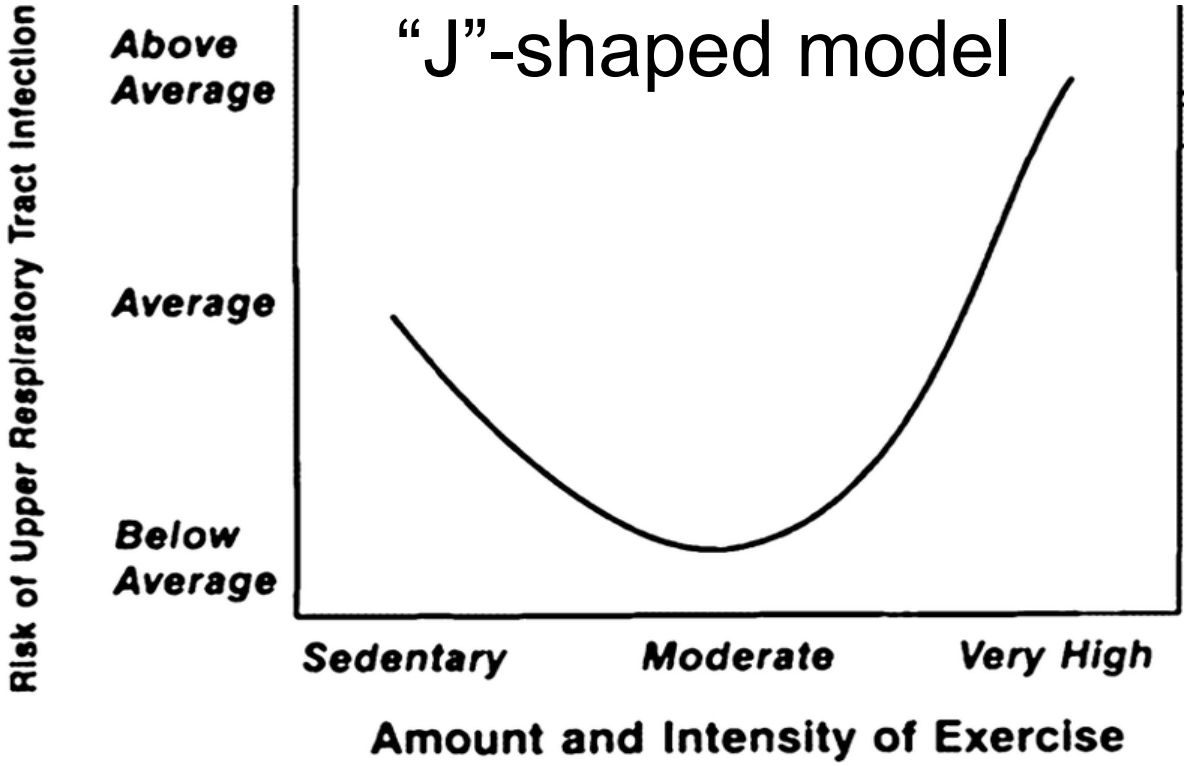
Prolonged, intense exercise causes immunosuppression, while moderate intensity exercise improves immune function and potentially reduces risk and severity of respiratory viral infection. Here, based upon available evidence, we present a model whereby moderate exercise-induced increases in stress hormones reduce excessive local inflammation and skew the immune response away from a Th1 and towards a Th2 phenotype, thus improving outcomes following respiratory viral infection.

This article has provided evidence to support the hypothesis that moderate intensity exercise reduces inflammation and improves the immune response to respiratory viral infections. We hypothesize that acute and chronic moderate exercise induces a level of stress hormones that down-regulates excessive inflammation within the respiratory tract and aids in activating innate anti-viral immunity shifting the immune response towards a Th2 profile (Fig. 4), thereby balancing the Th1/Th2 responses to prevent an excessive Th1 immune reaction to these pathogens. Prolonged, intense exercise may do this as well but may shift the balance too much towards Th2 and away from Th1 actually allowing the virus to gain a better foothold and cause greater pathology. Further research is necessary to examine cellular and molecular mechanisms through which exercise modulates immune function. Additionally, human studies should

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EXERCISE & IMMUNE FUNCTION



Reproduced from Nieman D.C: Exercise, infection and immunity. International Journal of Sports Medicine 1994 15: S131–S141

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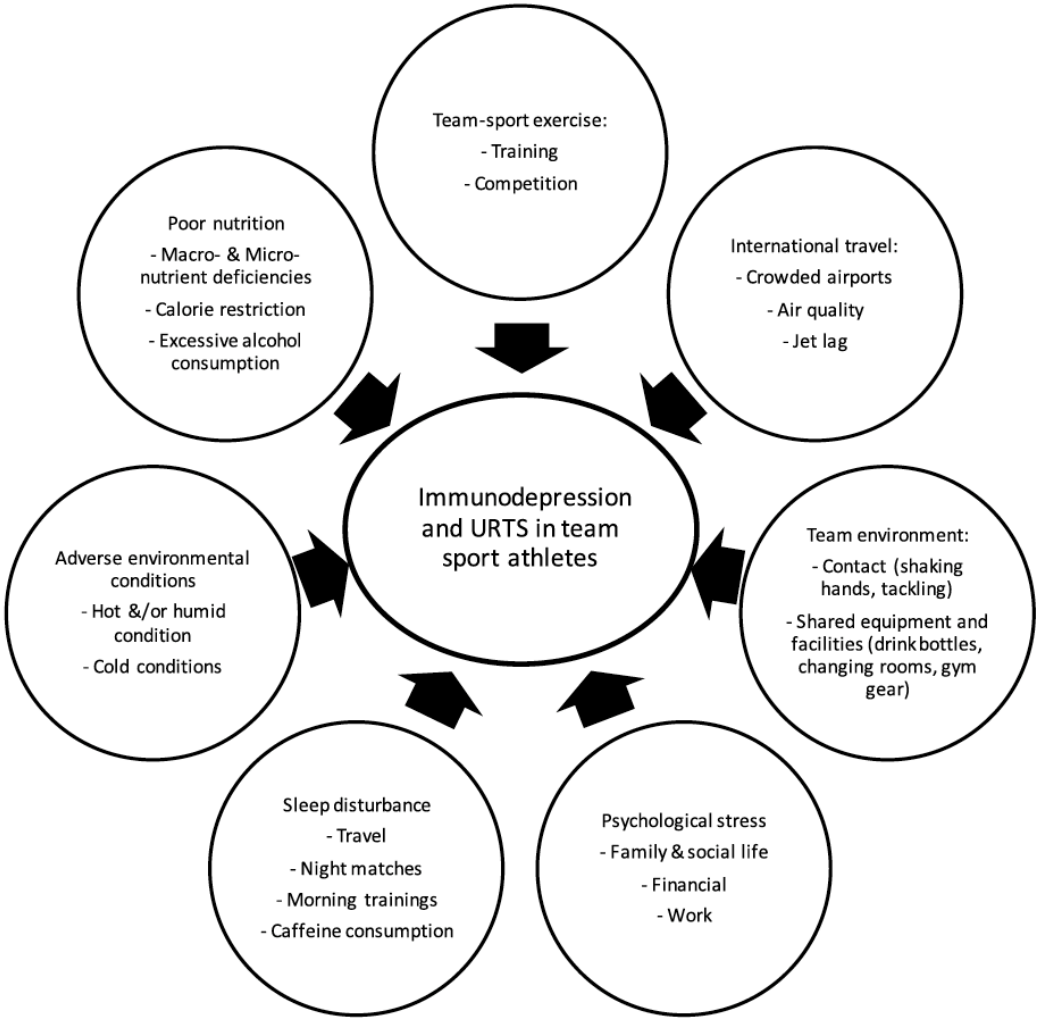


Fig. 1. Stressors that can reduce immunity and increase URTS risk in team-sport athletes (adapted from Walsh [85]).

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POSSIBILE REVISIONE DEL MODELLO «J-SHAPED CURVE»

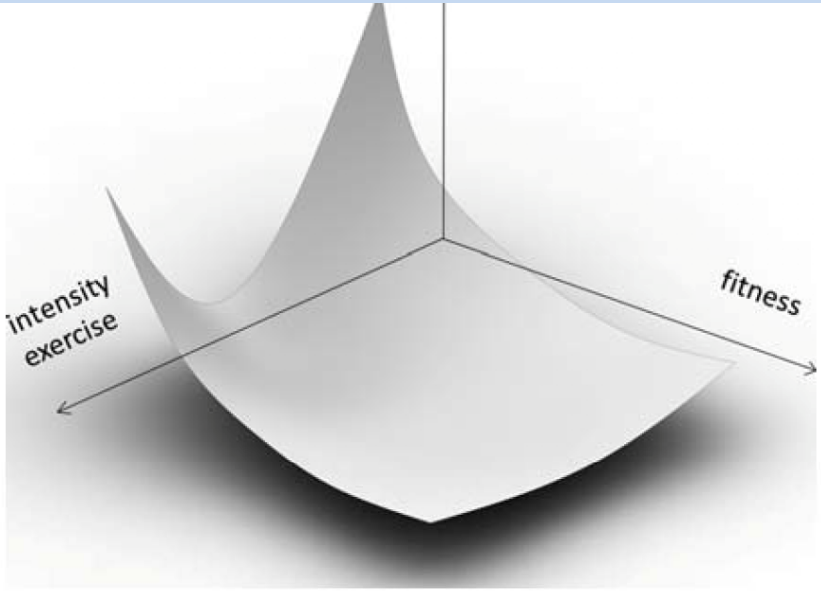


Fig. 1 A model of the relationship between upper respiratory tract infection (URTI) risk and intensity of exercise. The evidence suggests a "J-shaped curve" in the relationship between risk of URTI and exercise intensity in lower fitted individuals. As fitness increases, odds favouring the infection would decrease in the extremes of the curve which tends to a flat line.

British Medical Bulletin 2009;**90**

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Exerc Immunol Rev. 2020;26:8-22.

Can exercise affect immune function to increase susceptibility to infection?

Richard J. Simpson[1], John P. Campbell[2], Maree Gleeson[3], Karsten Krüger[4], David C. Nieman[5], David B. Pyne[6], James E. Turner[2], & Neil P. Walsh[7]

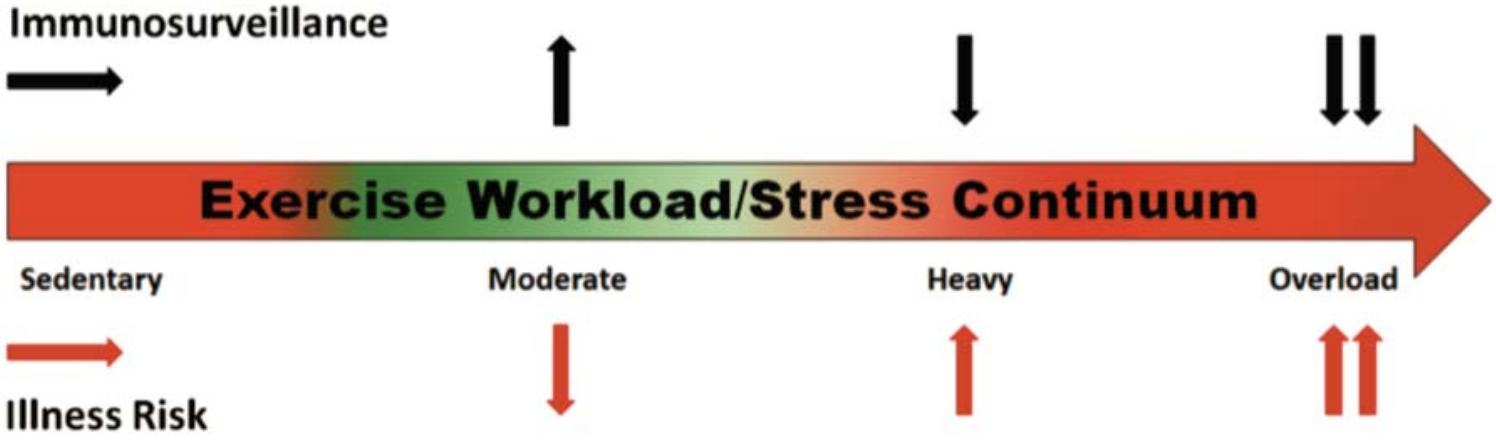
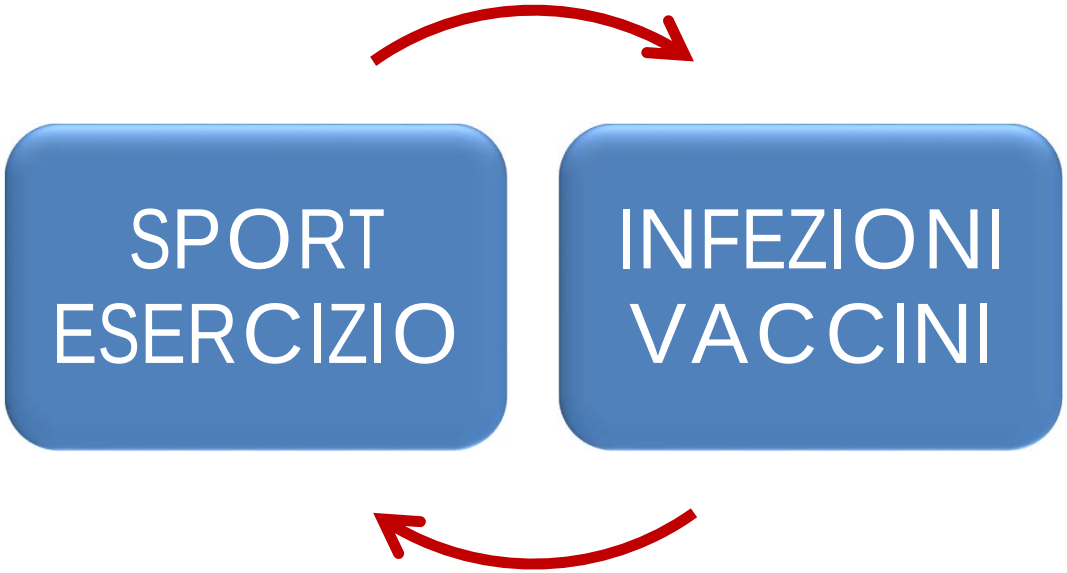


Figure 1:
Schematic model of the exercise workload/stress continuum and the relationship between immunosurveillance measures and risk of illness as the exercise workload is increased to moderate, heavy and overload.

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IN CONCLUSION……



- Ambito in cui possibile promuovere corrette pratiche vaccinali
- Ambito in cui può essere maggiore la possibilità di contrarre infezioni

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