

Supporting Exercise, Nutrition and Health In Isolation

The CPAA COVID-19 Experience



Bob Barnard
Centre for Physical Activity in Ageing
Central Adelaide Local Health Network
29-5-20

Government of South Australia
SA Health

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Centre for Physical Activity in Ageing

The Centre for Physical Activity in Ageing was established in 1981 to contribute to the quality of life of individuals through the provision of specialised physical rehabilitation, wellness and education programs and through scientific research. A leader in its field the Centre for Physical Activity in Ageing was a finalist at the 2012 SA Health awards.

The Centre for Physical Activity in Ageing is a specialised rehabilitation unit of the Royal Adelaide Hospital that is located at the Hampstead Rehabilitation Centre.

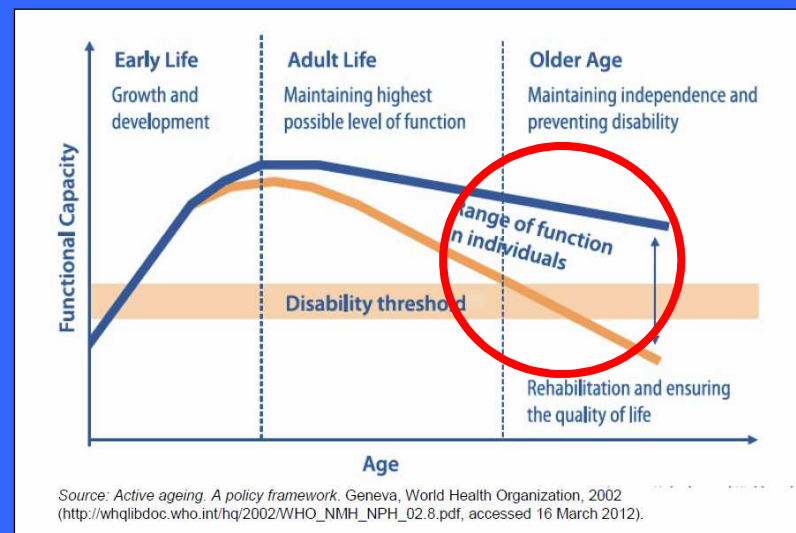
Rehabilitation facilities

On this page

- Rehabilitation facilities
- Services available
- Accessing services
- Referring clients
- Getting there
- Car parking and disabled access
- Contact



- 39 years of operation
- Sub-acute care, Community based rehabilitation, Telehealth
- 11,000+ client referrals
- Special Care pathways
 - Cardiac
 - Neurological
 - Metabolic
 - Falls and Balance
 - Frailty
 - Perioperative



Prescribing and Supervising Exercise by Remote Communication

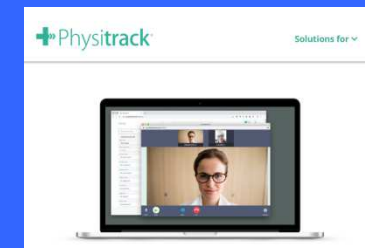
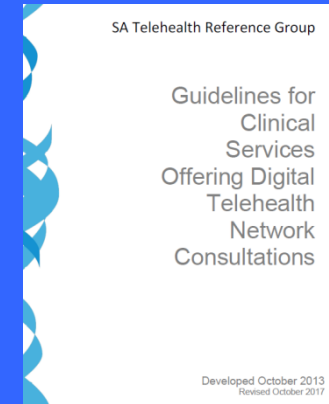
CPAA Previous History

- 2002 to 2004 – DVA Veterans 3 stage home support program
- 2004 – SARS Epidemic and Canadian HSEP
- 2006 – Active Ageing Australia developed its HAMP
- 2010 onwards – Increasing State based interest in Telehealth

Active Ageing Australia's – HAMP, HELP and recently MFLYW

Telehealth extensive research and development of modality options – both at State and Commonwealth level

SA Health Telehealth – various resources have been developed and used across a number of programs. HITH and RITH, Bariatric pathway.



Centre for Physical Activity in Ageing

Telehealth HAMP (Home Activity Monitoring Program)

- Active Ageing Australia
- 2006 to 2012
- Remote contact (n=428)
- Client self assessment
- GP review
- Exercise Resources
- Telephone Coaching
- Increase in PA
- Reduction in Falls



An evaluation of the effectiveness of the
Home Activity Monitoring Program



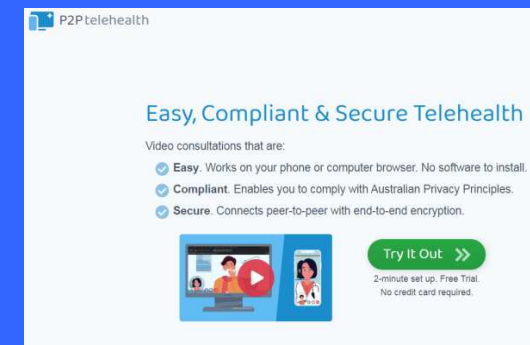
Ehrenberg-Bass
Institute for Marketing Science

“The use of telephone coaching (Eakin EG, et al, 2007) was a novel approach to assist with the delivery and follow-up required to implement the program.”

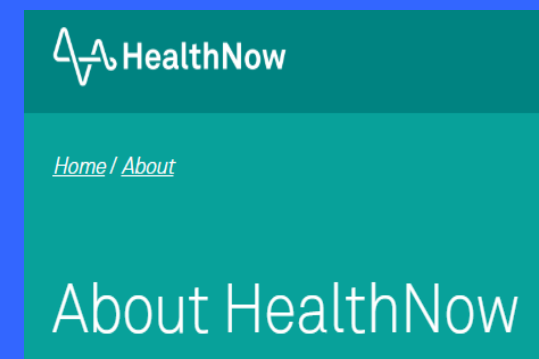
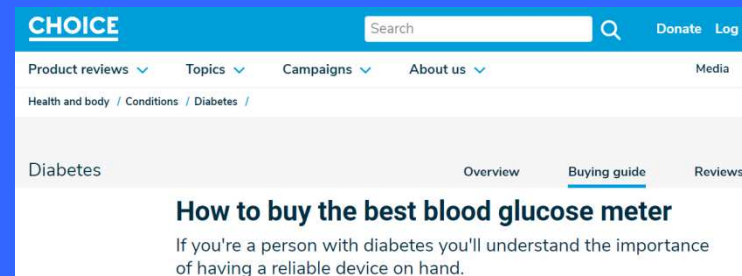
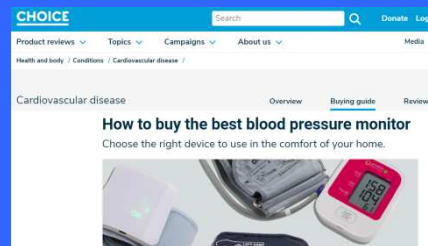
Recent program – Moving For Life Your Way

Telehealth Supported Physical Activity

- Goal of the service
- Patient Risk Factors
- Available Technology
- Accuracy of Data
- Exercise Prescription
- Implementation
- Monitoring
- Assessment of Outcomes



Best fitness tracker 2020: steps, sleep and HR monitoring wearables



Telehealth Supported Physical Activity

Evidence

Rawstorn JC, et al. Heart, 2016

Telehealth exercise-based cardiac rehabilitation: a systematic review and meta-analysis

Jonathan C Rawstorn,^{1,2} Nicholas Gant,² Artur Direito,¹ Christina Beckmann,³
Ralph Maddison¹

- 1) At least as effective as centre-based CREx for improving modifiable cardiovascular risk factors and functional capacity, and
- 2) Could enhance CREx utilisation by providing additional options for patients who cannot attend centre-based CREx.

Current Research

Ramage et al, BMJ Open, 2019


Open access

Protocol

BMJ Open Supervised exercise delivered via telehealth in real time to manage chronic conditions in adults: a protocol for a scoping review to inform future research in stroke survivors

Emily R Ramage,^{1,2} Natalie A Fini,^{3,4} Elizabeth A Lynch,⁵ Amanda Patterson,¹
Catherine M Said,^{2,6} Coralie English^{1,7}

COVID-19 January 2020



Government of South Australia
SA Health

**COMMUNICABLE DISEASE
CONTROL BRANCH**

- Please bring to the attention of all doctors -

Date: 10 January 2020 Contact telephone number: 1300 232 272 (24 hours/7 days)

NOVEL CORONAVIRUS PNEUMONIA IN WUHAN, CHINA

Chinese health authorities have reported 59 cases of viral pneumonia, with no deaths (at 5 January 2020), all confined to Wuhan city in Hubei Province, China. There is a common epidemiological link with the Wuhan South China Seafood City Market (also called the South China Seafood Wholesale Market and the Hua Nan Seafood Market). The market has been closed since January 1, 2020 for cleaning and disinfection.

China

China had commenced its COVID-19 lockdown in Wuhan on the 23rd January.

Australia

On 23 January, screening commenced for arrivals on flights from Wuhan to Sydney. Passengers were asked to present themselves if they had a fever or suspect they might have the disease.

On 25 January, the first case of a COVID-19 infection was reported, a Chinese citizen who arrived from China on 19 January. The patient was tested and received treatment in Melbourne.

COVID-19 March 2020

Australia

Various restrictions are put in place for from the 12th March travel, education, hotels, sport, a stay at home directive and closure of international and state borders.

Our shutdown commenced on 17th March.

Ongoing restrictions ultimately start to impact individuals, families and businesses during April.

On the 16th April the Australian national cabinet agrees to lift social distancing restrictions if three conditions are met.

SA HEALTH – YOUR TRUSTED
SOURCE OF COVID-19 INFORMATION

20 March 2020

COVID-19 UPDATE 1: FRIDAY 20 MARCH 2020

Dedicated facilities will soon open to care for South Australians as part of the State Government's plans to create additional capacity across the health system in response to the COVID-19 pandemic.

Both Calvary College Grove facility in Collinswood and the old Wakefield Hospital will be activated in the coming weeks to care for an additional 188 patients.

In addition, the Royal Adelaide Hospital will be a dedicated COVID-19 treatment facility for adults, Flinders Medical Centre for high risk pregnant women and the Women's and Children's Hospital will treat paediatric patients.

In other updates,

- > In recent days, the Commonwealth Government has announced new restrictions on visits to aged care facilities; overseas travel restrictions; and bans for non-essential indoor gatherings of greater than 100 people.
- > More information can be found on the Commonwealth Government's website www.health.gov.au

SOUTH AUSTRALIA COVID-19 CASES

Since 1 February 2020, there have been 42 confirmed cases of COVID-19 in South Australia.

All cases can be traced to direct have overseas travel, interstate travel or confirmed contact of a known case. There is no evidence of any community transmission within South Australia.

SA Health is your trusted source for information on COVID-19.

For more information visit our [website](http://www.sahealth.sa.gov.au) and follow us on [Facebook](https://www.facebook.com/sahealth) or [Twitter](https://twitter.com/sahealth).

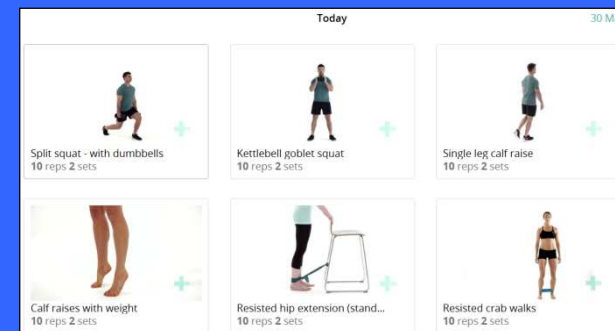
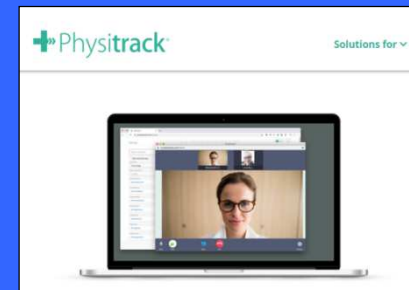
www.sahealth.sa.gov.au/COVID2019



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CPAA Transition to Telehealth

- 17th March with one day notice
- Numbers – 350+ clients to be transitioned
- Divided into 3 subgroups
 - A) High Risk (CHF, Pulmonary, Frail)
 - B) Stable Health (managed conditions)
 - C) Apparently Healthy (stable conditions)
- Rapid roll out of the various telehealth options
- Training and rapid access for staff to Health Direct and Physitrack
- Microsoft Teams and Zoom for staff meetings



CPAA Telehealth

Various platforms – Microsoft Teams, Health Direct, Physitrack plus inter-staff Zoom use

Key staff member coordinates training

CPAA staff coached in all platforms

Developed a script of questions

Developing the plan and recording the experience

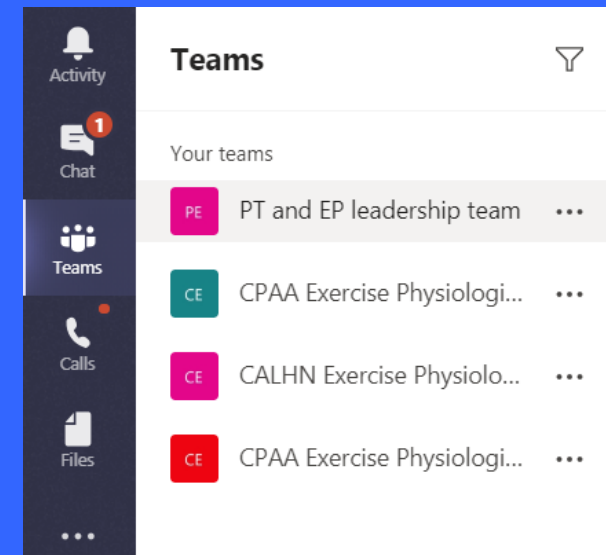
Broader Scope

GP's and AH via Medicare funding

Professional Association support – ESSA

National focus across Australia

Optional external providers – Telstra, Kaiser Permanente, Ochsner, Babylon Health



Telehealth Information and Support



Attending your appointment via a Video Call

Centre for Physical Activity in Ageing

Where appropriate, you can have your consultation online via a video call

Video calling is as convenient as a phone call, with the added value of face-to-face communication.

It can save you time and money, and brings your care closer to home.



Telehealth guidance for practitioners

16 April 2020

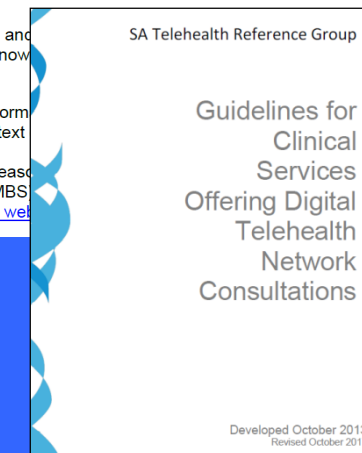
Registered health practitioners are playing a vital role in treating and



SA Health – eHealth Systems Using NetScaler VPN Remote Access SA Health Computing Device

We recommend you retain this document for future reference.

Should you require assistance connecting to VPN via an SA Health computing device, please contact the eHealth Systems Service Desk via 1300 138 913 or eHSServiceDesk@sa.gov.au



Australian Physiotherapy Association

Telehealth Guidelines

Response to COVID-19

March 2020



HOW TO USE MICROSOFT TEAMS

CPAA High Risk Group



Chronic Heart Failure

Joint Exercise Physiologist and Clinical Nurse case management

Stage 2 and 3, pre and post VAD and Heart Transplant

Intervention – Ax and GXT strength and aerobic self management focus 2 X per wk

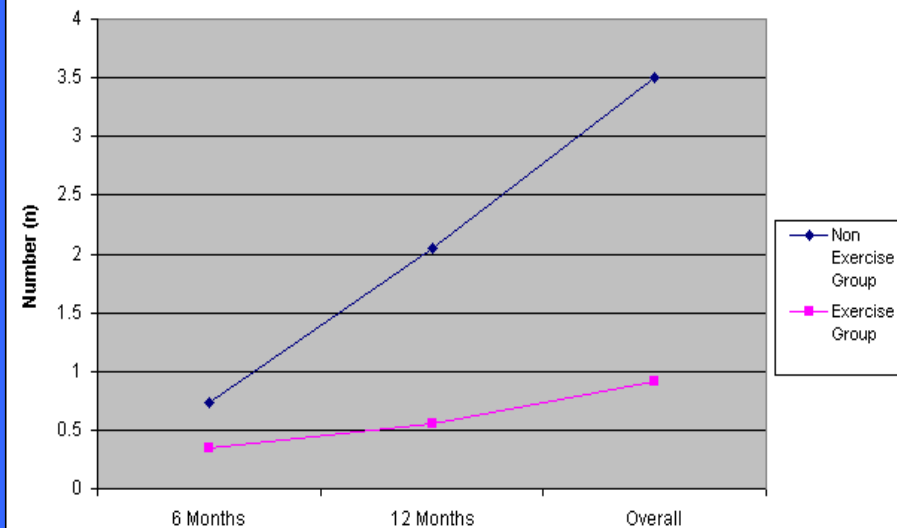
Reduced Acute Episodes in Exercising Chronic Heart Failure Patients



Presented by Bob Barnard

Caelum Schild, Robert Penhall, Dianne Littlechild
Centre for Physical Activity in Ageing
Hampstead Rehabilitation Centre
Adelaide, South Australia

Average Number Of CR Hospitalisations Per Person



Barnard, Schild, Penhall, Littlechild, 2012

CPAA High Risk Group



Chronic Heart Failure

Telehealth Intervention – Provided by both Exercise Physiologist and Clinical Nurse Ax and GXT (Individualized) strength and aerobic program with Self-Management focus

Patient participation at 9 weeks

CHF - 18 Heart Failure clients (6 female, 12 male)

34yr – 87yr

3 clients hospitalized

(1 fall, 1 myeloma, 1 ED)

Walking most days x 30mins around block >13RPE. Advised to break up into 2x10-15min efforts c necessary rest breaks
Has continued walking and HEP routine but getting bored. Bought a "Gym Master" (gym stick + dual resistance band) w
L foot pn from last Thurs 14/05 post walk. Ct suspects plantar fasciitis, GP appt tomorrow for rv. No changes in CHF Sx.
Consistent c letterbox walking 4x daily. No HEP this wk ("still a bit slack"). Encouraged to complete 1-2 times before call
Adductor pn improving steadily. Has gradually increased daily walking and ADL's. Advised to return to pre injury walking

Cardiac - 13 Cardiac Clients (7 female, 6 male)

29yr - 73yr

No hospitalizations

Has continued 6-7km walking every 2nd day. No changes in Sx but still reporting SOB c
Has continued c 2x30min jogging and boxing sessions c son 1-2x ptwk (15x3min efforts :
Has continued HEP as last 1/52. Still reporting mild chest discomfort; is now attributing to
Attempted Health Direct appt and phone call. No answer. Left message

CPAA Apparently Healthy Group



Descriptors – general post rehabilitation or chronic disease self-management (joint replacement, amputee, cancer, metabolic)

Numbers – 207 clients

Intervention – resource book (MFLYW, HAMP, Physitrack Exercise, telephone contact 2 to 3 weekly calls)

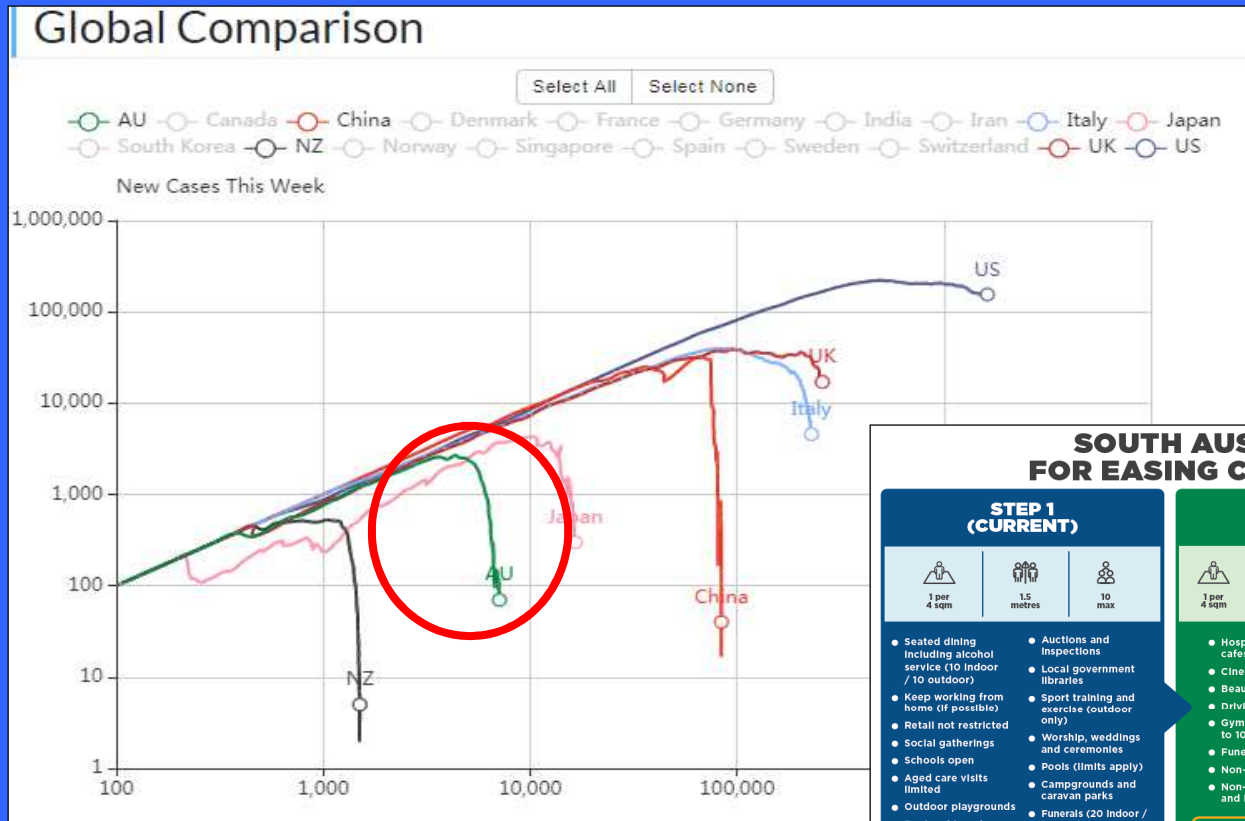
Outcomes – ongoing participation at this stage (9 weeks)

Plan – re-assess functional status post isolation

Walk	HAMP	MFLYW	Bike	Weights	Gardening	Housework
87%	21%	30%	11%	35%	26%	9%

COVID-19 an end to restrictions ?

CPAA Telehealth and Face to Face Patient Number 1



SOUTH AUSTRALIAN ROADMAP FOR EASING COVID-19 RESTRICTIONS

STEP 1 (CURRENT)	STEP 2 FROM 1 JUNE	FUTURE STEPS FOR CONSIDERATION*
<p>1 per 4 sqm 1.5 metres 10 max</p> <ul style="list-style-type: none"> Seated dining including alcohol service (10 Indoor / 10 outdoor) Keep working from home (if possible) Retail not restricted Social gatherings Schools open Aged care visits limited Outdoor playgrounds Regional travel Uni and TAFE face-to-face tutorials Community, youth and RSL halls Auctions and Inspections Local government libraries Sport training and exercise (outdoor only) Worship, weddings and ceremonies Pools (limits apply) Campgrounds and caravan parks Funerals (20 Indoor / 30 outdoor max) 	<p>1 per 4 sqm 1.5 metres 80 total max 20 max (per room/group)</p> <ul style="list-style-type: none"> Hospitality (seated at a table) at restaurants, cafes, wineries, pubs, breweries, bars Cinemas, theatres, galleries and museums Beauty, nails, tattoo, massage (non-therapeutic) Driving Instruction lessons Gyms and Indoor fitness (Indoor classes limited to 10 participants max) Funerals (50 max room limit) Non-contact outdoor sport (competition) Non-contact indoor sport (training and competition) and indoor recreation activities <p>From 25 June:</p> <ul style="list-style-type: none"> Contact outdoor sport (competition) Contact indoor sport (training) 	<ul style="list-style-type: none"> Larger gatherings Indoor contact sport (competition) Nightclubs and standing hospitality Shisha/hookah bars Casino and gaming venues Stadiums and larger entertainment venues Food courts Spas and saunas State border restrictions Travel into protected communities Indoor playgrounds and amusement arcades Fitness classes greater than 10 people

Updated 25 May 2020

*subject to public health assessment

If you have cold or flu symptoms, seek testing and stay home until you are well

Wash your hands often, wipe frequently touched surfaces, and cover coughs and sneezes

Vulnerable people like the elderly and people with chronic health conditions should talk to their doctor about what is appropriate for them

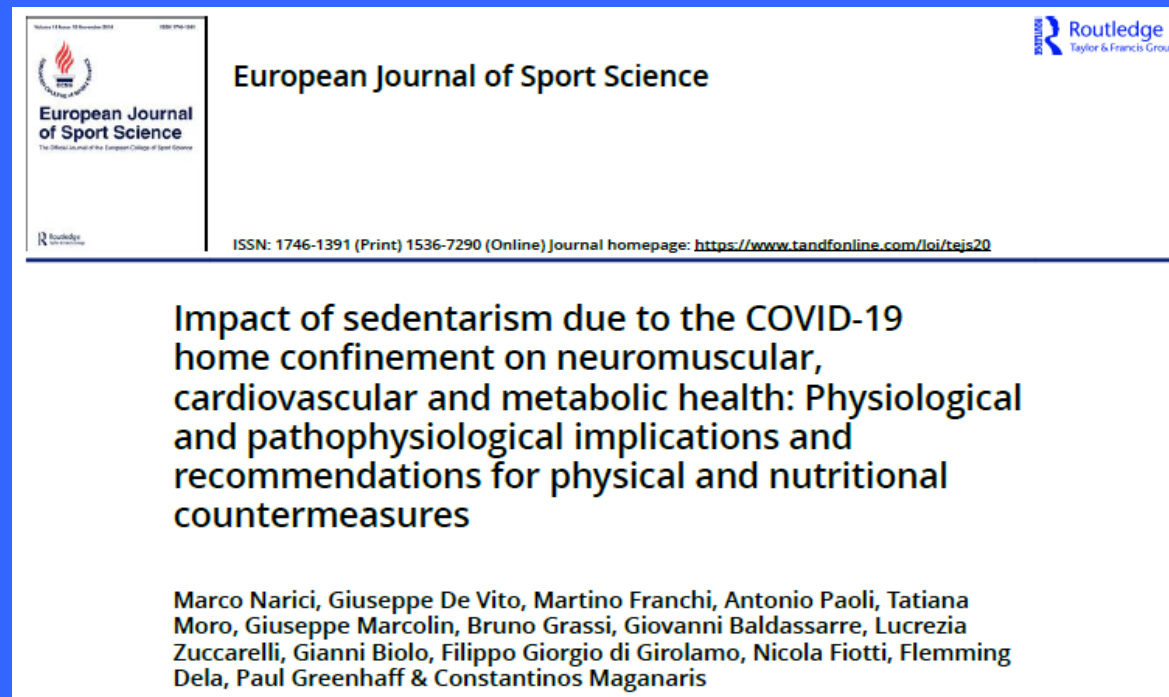
Download the COVIDSafe app to keep you, your family and your community safe

Summary

“Risks and health outcomes from inactivity.....what do we know ?”

Narisi et al, EJSS, May, 2020

- muscle wasting occurs rapidly...
- just few days of step reduction or bed rest, reduce insulin sensitivity, principally in muscle..
- aerobic capacity is impaired – cardiovascular system, peripheral circulation and oxidative system..
- fat deposition, associated with systemic inflammation and activation of antioxidant defences...



Summary



- CPAA clients – majority have remained physically active – supported by evidence
- Positive outcomes with the increased use of technology – supported by evidence
- Regular contact with our clients indicated that they were coping with moderate self-isolation
- Outcomes, Home-based Exercise Prescription and Remote Monitoring all require further study
- Psychological health within the community....how does this impact older adults ?



Today 30 May

<p>Split squat - with dumbbells 10 reps 2 sets</p>	<p>Kettlebell goblet squat 10 reps 2 sets</p>	<p>Single leg calf raise 10 reps 2 sets</p>
<p>Calf raises with weight 10 reps 2 sets</p>	<p>Resisted hip extension (stand... 10 reps 2 sets</p>	<p>Resisted crab walks 10 reps 2 sets</p>

COVID-19 and Health



COVID-19 ISOLATION & INACTIVITY Concerns for older people

Coronavirus (COVID-19) is predicted to spread into the community in Australia in the near future.

- Older people are at the greatest risk.
- Home quarantine and social distancing techniques are being used to contain spread of infection.
- This will mean that older people will not participate in their usual community based activities; socialising, sport, recreation, gym, exercise classes, even walking.
- Fear, isolation and inactivity will have immediate negative effects on older

Physical Activity during COVID-19



The WHO say Be Active during COVID-19!

The WHO have released some useful guidance on looking after your physical and mental health during the pandemic. Access #HeathyAtHome guidance [here](#), along with a useful Q&A [here](#).



How to stay fit and active at home during the coronavirus self-isolation

ISPAH member, Emmanuel Stamatakis, and colleagues have published some great advice for staying active while in isolation. Check out their article in The Conversation [here](#).



Coronavirus pandemic | Mental health | Quarantine | PA | SB |

ISPAH member, Stuart Biddle, talks about the implications of the coronavirus pandemic on physical activity, sedentary behaviour and mental health in [this Podcast](#).



remote sensing



Article

Remote Sensing in Human Health: A 10-Year Bibliometric Analysis

João Viana ^{1,2}, João Vasco Santos ^{1,2}, Rui Manuel Neiva ^{1,2}, Júlio Souza ^{1,2}, Lia Duarte ^{3,4}, Ana Cláudia Teodoro ^{3,4} and Alberto Freitas ^{1,2,4}



nutrients



Brief Report

25-Hydroxyvitamin D Concentrations Are Lower in Patients with Positive PCR for SARS-CoV-2

Antonio D'Avolio ^{1,4}, Valeria Avataneo ¹, Alessandra Manca ¹, Jessica Cusato ¹, Amedeo De Nicolò ¹, Renzo Lucchini ², Franco Keller ² and Marco Cantù ²

Rapid Review



The psychological impact of quarantine and how to reduce it: rapid review of the evidence

Samantha K Brooks, Rebecca K Webster, Louise E Smith, Lisa Woodland, Simon Wessely, Neil Greenberg, Gideon James Rubin

Comment

Can a virus undermine human rights?



Exceptional situations require exceptional measures. Faced with the magnitude of the health risks caused by the coronavirus disease 2019 (COVID-19) pandemic, national governments have had to quickly decide on every American without due process. In France, after the 2015 Paris terrorist attacks, an anti-terrorism law reduced civil liberties by curtailing judicial oversight of security tools. Many intellectuals argue that such

Published Online
April 20, 2020
[https://doi.org/10.1016/j.s2468-2667\(20\)30092-x](https://doi.org/10.1016/j.s2468-2667(20)30092-x)

Post COVID-19

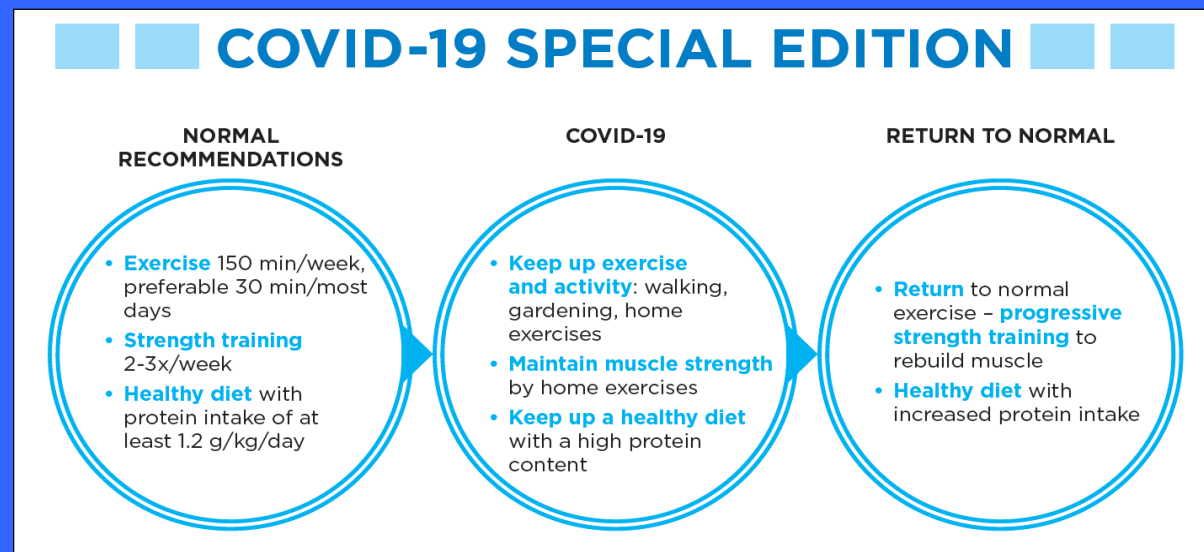
What have we learnt ? What is the new normal ? What is our plan ?

“The precise relationship between exercise dose (daily frequency and intensity) and muscle mass retention during prolonged periods of immobilisation or inactivity is not yet clear...”

Narisi, 2020

What functional outcomes do we want to achieve from exercise ?

What is clinically significant ? Decline, no change or an improvement ?



References and Links

For Exercise Programs and Exercise Prescription

Moving for Life Your Way

Active Ageing Australia

<https://activeageing.org.au/mflyw-foundations-launch/>

Canada's Physical Activity Guide

Public Health Agency of Canada

<http://physicalactivityplan.org/resources/CPAG.pdf>

Exercise For Older Adults – Health Care Provider Edition

U.S. Department of Health and Human Services Health

Resources and Services

<http://physicalactivityplan.org/resources/CPAG.pdf>