Exercise Considerations for Individuals with Cardiovascular Disease

Mary Woessner, PhD Candidate, MA
Victoria University
Institute of Health and Sport

INSTITUTE FOR HEALTH AND SPORT
VICTORIA UNIVERSITY
MELBOURNE AUSTRALIA

Cardiovascular Disease

Definition: Heart conditions that include diseased vessels, structural problems or blood clots

Heart Attack

Hypertension

Peripheral Arterial Disease

Coronary Artery Disease

Heart Failure

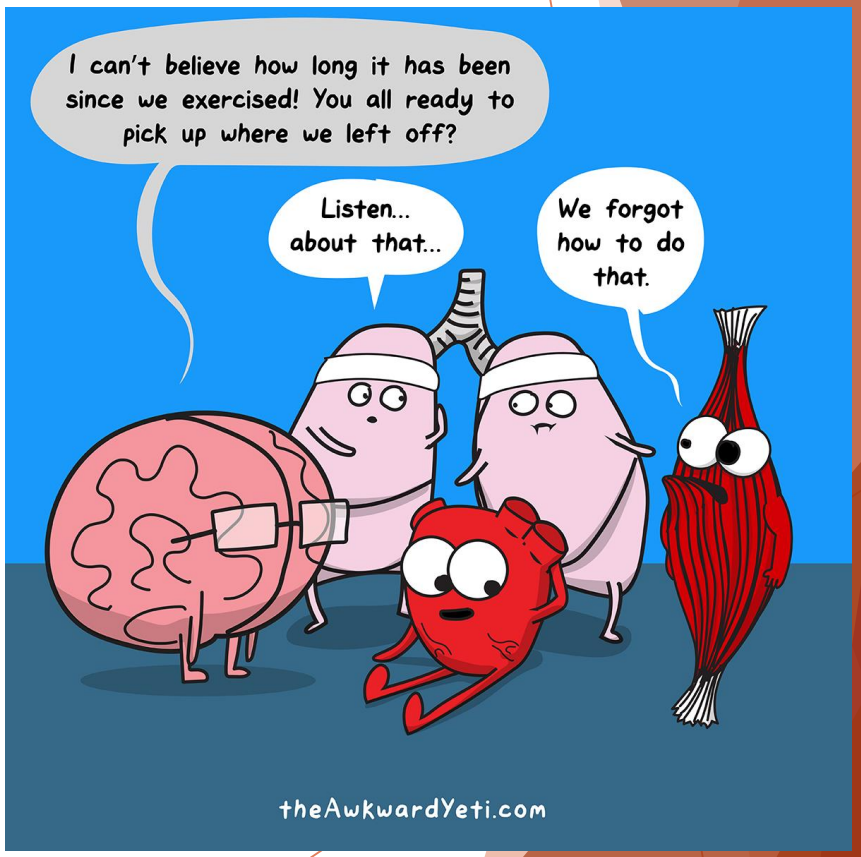
General Exercise Benefits for Individuals with Cardiovascular Conditions

RESISTANCE EXERCISE

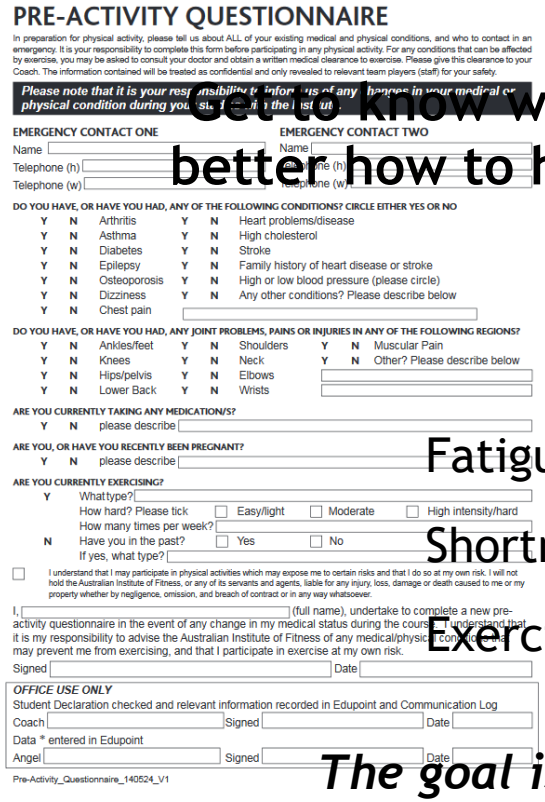
- Until 10-15 years ago, it was forbidden for cardiac patients in general! Now we know…
  - Muscle strength is an independent predictor for mortality in patients
  - Muscle strength is associated with the capacity to perform activities of daily living and quality of life

AEROBIC EXERCISE

- Aerobic capacity is also an independent predictor for mortality
- Most intensities of exercise are SAFE and recommended



General Principle 1: Understand Your Clients


PRE-ACTIVITY QUESTIONNAIRE

In preparation for physical activity, please tell us about ALL of your existing medical and physical conditions, and who to contact in an emergency. It is your responsibility to complete this form before participating in any physical activity. For any conditions that can be affected by exercise, you may be asked to consult your doctor and obtain a written medical clearance to exercise. Please give this clearance to your Coach. The information contained will be treated as confidential and only revealed to relevant team players (staff) for your safety.

Please note that it is your responsibility to inform us of any changes in your medical or physical condition during your [illegible] on the list up

EMERGENCY CONTACT ONE
Name
Telephone (h)
Telephone (w)

EMERGENCY CONTACT TWO
Name
Telephone (h)
Telephone (w)

DO YOU HAVE, OR HAVE YOU HAD, ANY OF THE FOLLOWING CONDITIONS? CIRCLE EITHER YES OR NO

Y	N	Arthritis	Y	N	Heart problems/disease
Y	N	Asthma	Y	N	High cholesterol
Y	N	Diabetes	Y	N	Stroke
Y	N	Epilepsy	Y	N	Family history of heart disease or stroke
Y	N	Osteoporosis	Y	N	High or low blood pressure (please circle)
Y	N	Dizziness	Y	N	Any other conditions? Please describe below
Y	N	Chest pain			

DO YOU HAVE, OR HAVE YOU HAD, ANY JOINT PROBLEMS, PAINS OR INJURIES IN ANY OF THE FOLLOWING REGIONS?

Y	N	Ankles/feet	Y	N	Shoulders	Y	N	Muscular Pain
Y	N	Knees	Y	N	Neck	Y	N	Other? Please describe below
Y	N	Hips/pelvis	Y	N	Elbows			
Y	N	Lower Back	Y	N	Wrists			

ARE YOU CURRENTLY TAKING ANY MEDICATION/S?
Y N please describe

ARE YOU, OR HAVE YOU RECENTLY BEEN PREGNANT?
Y N please describe

ARE YOU CURRENTLY EXERCISING?
Y What type?
How hard? Please tick Easy/light Moderate High intensity/hard
How many times per week?
N Have you in the past? Yes No
If yes, what type?

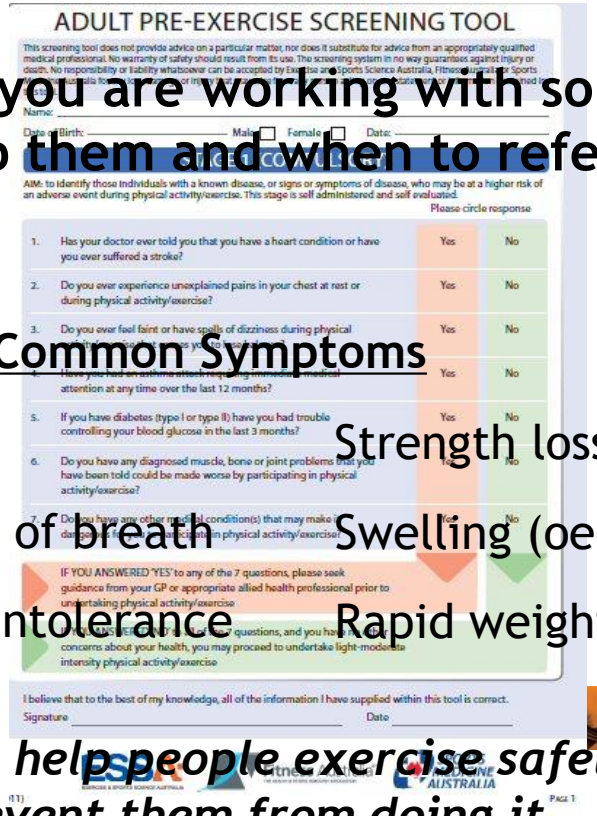
I understand that I may participate in physical activities which may expose me to certain risks and that I do so at my own risk. I will not hold the Australian Institute of Fitness, or any of its servants and agents, liable for any injury, loss, damage or death caused to me or my property whether by negligence, omission, and breach of contract or in any way whatsoever.

I, (full name), undertake to complete a new pre-activity questionnaire in the event of any change in my medical status during the course. I understand that it is my responsibility to advise the Australian Institute of Fitness of any medical/physical condition that may prevent me from exercising, and that I participate in exercise at my own risk.

Signed Date

OFFICE USE ONLY
Student Declaration checked and relevant information recorded in Edupoint and Communication Log
Coach Signed Date
Data * entered in Edupoint
Angel Signed Date

Pre-Activity_Questionnaire_140524_V1


ADULT PRE-EXERCISE SCREENING TOOL

This screening tool does not provide advice on a particular matter, nor does it substitute for advice from an appropriately qualified medical professional. No warranty of safety should result from its use. The screening system in no way guarantees against injury or death. No responsibility or liability whatsoever can be accepted by Exercise and Sports Science Australia, Fitness Australia, Sports Medicine Australia [illegible]

Name:

Date of Birth: Male Female Date:

[illegible] completion

AIM: to identify those individuals with a known disease, or signs or symptoms of disease, who may be at a higher risk of an adverse event during physical activity/exercise. This stage is self administered and self evaluated.

		Please circle response	
1.	Has your doctor ever told you that you have a heart condition or have you ever suffered a stroke?	Yes	No
2.	Do you ever experience unexplained pains in your chest at rest or during physical activity/exercise?	Yes	No
3.	Do you ever feel faint or have spells of dizziness during physical [illegible]	Yes	No
4.	[illegible] attention at any time over the last 12 months?	Yes	No
5.	If you have diabetes (type I or type II) have you had trouble controlling your blood glucose in the last 3 months?	Yes	No
6.	Do you have any diagnosed muscle, bone or joint problems that you have been told could be made worse by participating in physical activity/exercise?	Yes	No
7.	Do you have any other medical condition(s) that may make you [illegible] physical activity/exercise?	Yes	No

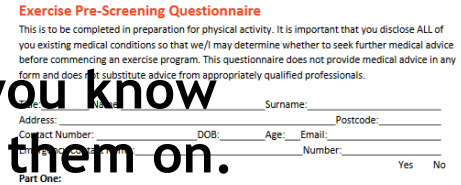
IF YOU ANSWERED 'YES' to any of the 7 questions, please seek guidance from your GP or appropriate allied health professional prior to undertaking physical activity/exercise

If you answered 'NO' to all the questions, and you have no other concerns about your health, you may proceed to undertake light-moderate intensity physical activity/exercise

I believe that to the best of my knowledge, all of the information I have supplied within this tool is correct.

Signature Date

(11) Page 1


Exercise Pre-Screening Questionnaire

This is to be completed in preparation for physical activity. It is important that you disclose ALL of you existing medical conditions so that we/I may determine whether to seek further medical advice before commencing an exercise program. This questionnaire does not provide medical advice in any form and does not substitute advice from appropriately qualified professionals.

Name: Surname:
Address: Postcode:
Contact Number: DOB: Age: Email:
[illegible] Number:

Part One: Have you ever been told that you have a heart condition?	Yes	No
Have you ever had a stroke?	Yes	No
Do you ever have unexplained pains in your chest at rest or during physical exercise?	Yes	No
Do you consistently feel faint or suffer from spells of dizziness?	Yes	No
Do you suffer from asthma and require medication?	Yes	No
Do you suffer from type I or II diabetes?	Yes	No
Do you suffer from any major muscle or joint conditions that may limit you or be aggravated by physical activity?	Yes	No
Do you suffer from any medical conditions that may be made worse by participating in physical activity?	Yes	No
Do you suffer from high blood pressure over 140/90 or low blood pressure below 100/80?	Yes	No

Disclaimer:
If you have answered no to all of the above questions and you are confident that you have no other concerns with your health then you may proceed to participate in physical activity. If you have answered yes to any of the questions above or are unsure, please seek a referral from your GP or allied health professional before commencing physical activity.

To the best of my knowledge all of the information I have provided on this tool is accurate. In the case that my medical condition changes over the course of my training I will inform my trainer and fill out a new exercise pre-screening questionnaire.

Client signature: Trainer signature:
Date: Date:

Get to know who you are working with so you know better how to help them and when to refer them on.

Common Symptoms

Fatigue — Strength losses

Shortness of breath — Swelling (oedema)

Exercise intolerance — Rapid weight gain

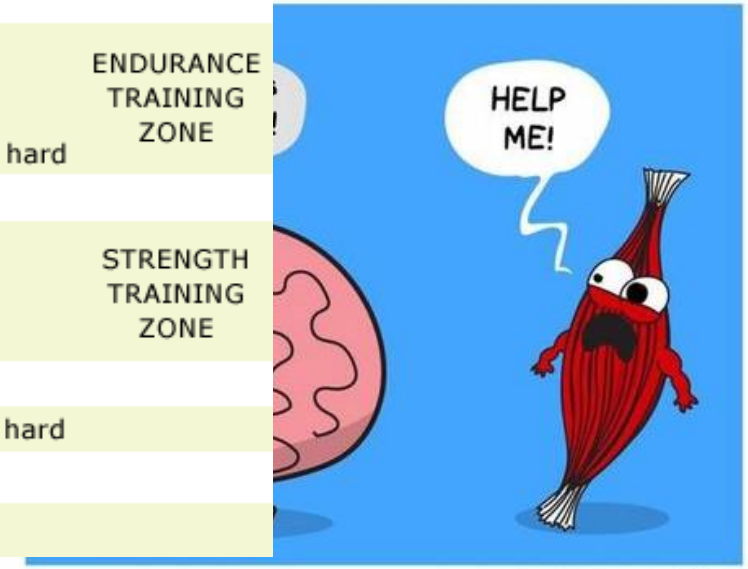
The goal is to help people exercise safely, not to prevent them from doing it.

Screening forms are a good tool (to be used by qualified professionals) to help you discuss a person's needs.

INSTITUTE FOR HEALTH AND SPORT
VICTORIA UNIVERSITY
MELBOURNE AUSTRALIA

General Principle 2: Help Monitor Intensity

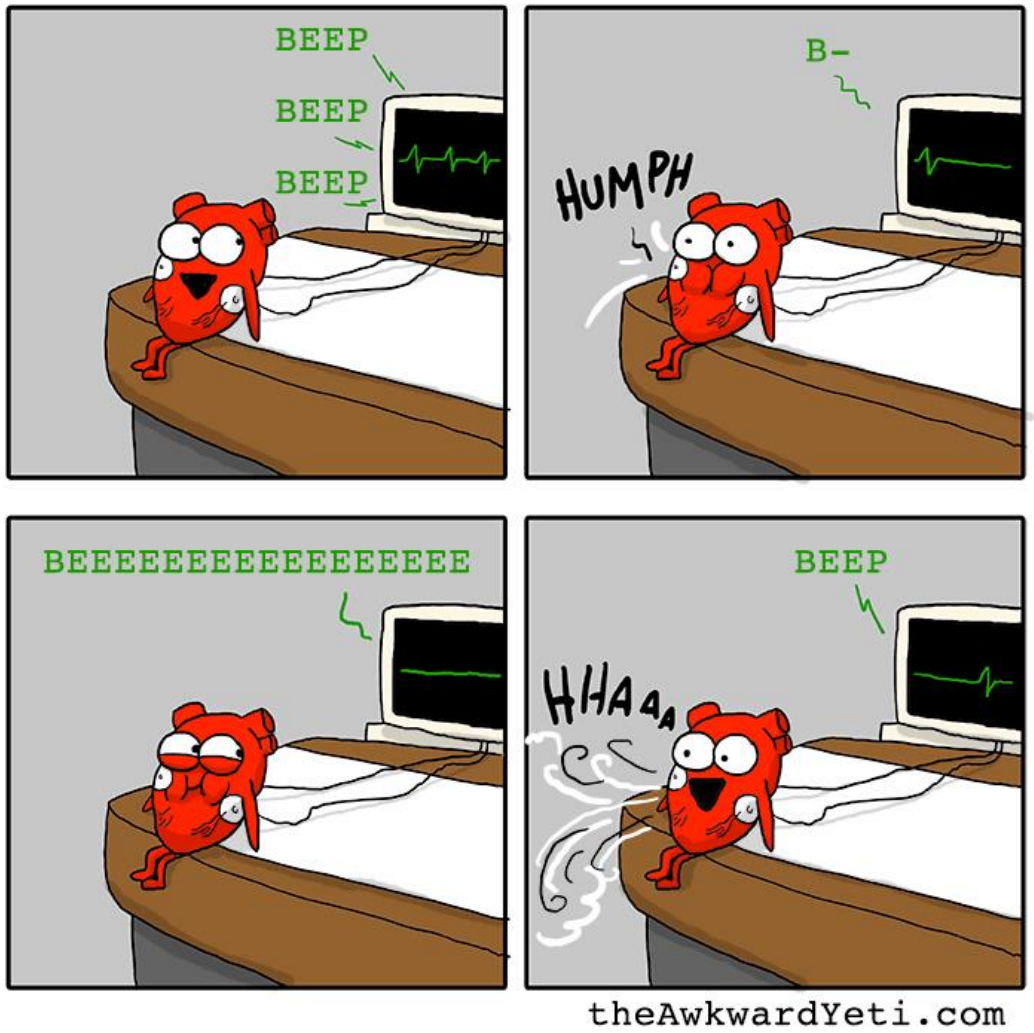
- There is no **one way** to monitor intensity
- But giving people a "scale" to think about can help them understand their intensity help them stay safe.



theAwkwardYeti

	Least effort		
	6		
	7	very, very light	
	8		
	9	very light	
	10		
EFFORT	11	fairly light	ENDURANCE TRAINING ZONE
	12		
	13	somewhat hard	
	14		
	15	hard	STRENGTH TRAINING ZONE
	16		
	17	very hard	
	18		
	19	very, very hard	
	20		
	Maximum		

General Principle 3: Encourage normal breathing during Resistance Exercise



General Principle 3: Longer Warm-up and Cool Down

"If you haven't exercised in a while, you may need to stretch and warm up before you stretch and warm up."

Disease Specific Considerations

Hypertension: High Blood Pressure

Definition: A systolic blood pressure over 129mmHg and/or a diastolic pressure over 79mmHg.

Exercise DO's:

"Regular aerobic exercise has been shown to lower daytime systolic and diastolic blood pressure by up to 3.2mmHg and 2.7mmHg respectively." (1)

- Aerobic programming is essential
- Exercising at lower intensities appears to lower BP as much and sometimes more than high intensities (2)

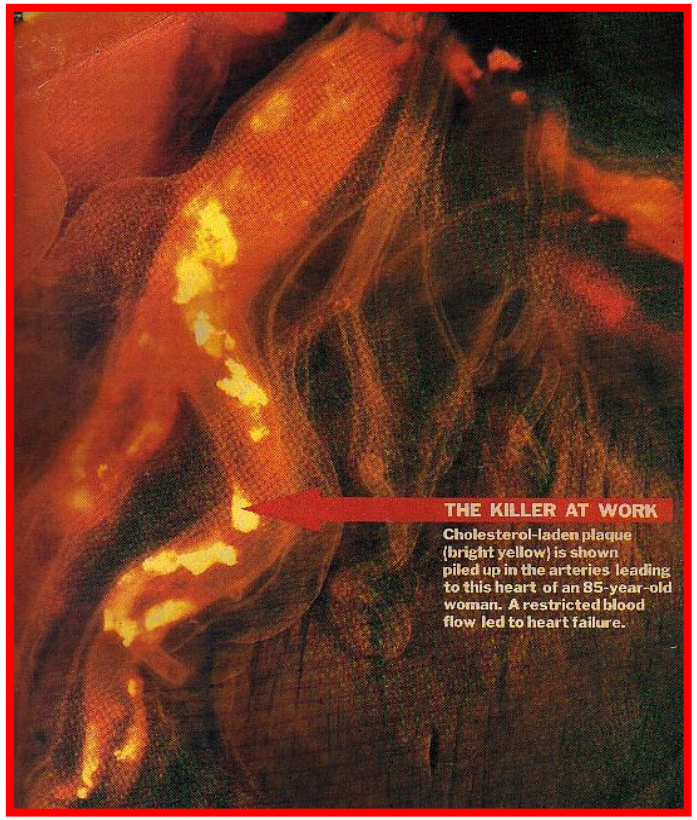
Exercise Considerations:

- Avoid Isometric resistance exercise (where they push against a force with no movement)
- Minimize positional changes (getting up and down)

References: 1. 2016 Hypertension Guidelines, Australian Heart Foundation; 2. ACSM 3rd Edition: "Exercise management for persons with chronic diseases and disabilities"

Coronary Artery Disease

Definition: A disease that obstructs blood supply, oxygen and nutrients from the heart (can lead to a heart attack)



Exercise DO's:

- Longer warm up and cool down (≥ 10 min)
- Low intensity aerobic activities

Exercise Considerations:

- Individuals are often on blood thinners-risk of bleeding
- Any chest pain-STOP
- They need to be able to identify their own symptoms

Heart Failure

Definition: Heart Failure is a cardiac disorder where the heart is unable to pump blood required to meet the body's metabolic needs.

Exercise DO's:

- ANY kind of exercise is better than nothing
- Work within "safe" ranges (GP prescribed)
- Low level resistance training is safe as short as 3 weeks post heart attack (with stable status)

Exercise Considerations:

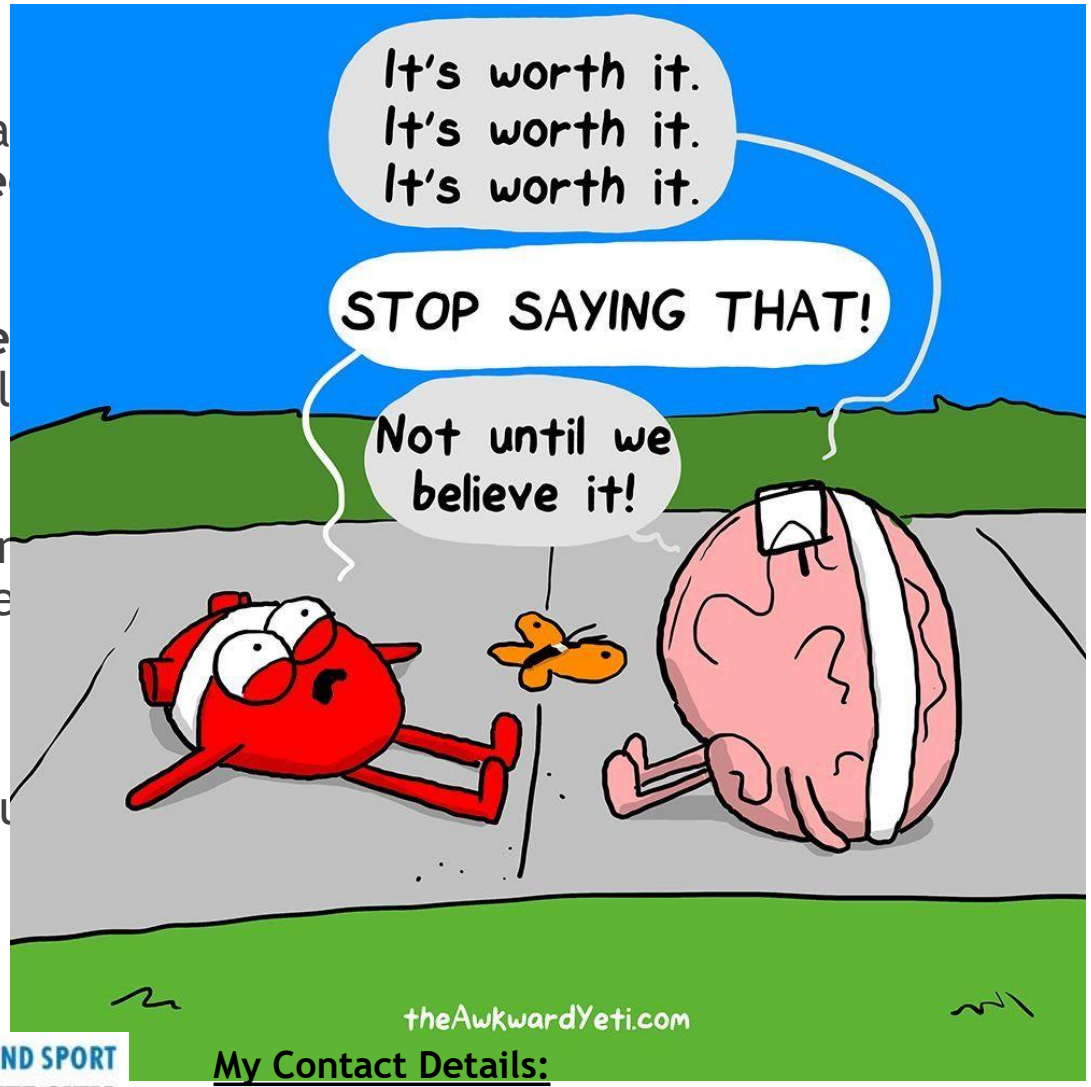
- They need to be able to identify their own symptoms

INSTITUTE FOR HEALTH AND SPORT
VICTORIA UNIVERSITY
MELBOURNE AUSTRALIA

References: 1. 2010 ESSA Position Stand: Chronic Heart Failure; 2. 2000, Pollock et al. Resistance exercise in individuals with and without cardiovascular disease: benefits, rationale, and prescription an advisory from the committee on exercise, rehabilitation, and prevention, council on clinical cardiology.

Take Home Messages

- We are a
  more pe
- **Exercise**
  especiall
- Get to kn
  attendee
  possible
- Know you
  arise!



INSTITUTE FOR HEALTH AND SPORT
VICTORIA UNIVERSITY
MELBOURNE AUSTRALIA

My Contact Details:
Mary.Woessner@vu.edu.au