

in a **Heartbeat...**

ISSUE No.9

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From the Director's Desk

Welcome to the latest edition of *In a Heartbeat*.

I hope you take this opportunity to read about more of the important research you've helped to make happen such as the latest development to protect against heart disease and diabetes.

You'll meet HRI Senior Research Fellow, Dr Colin Tso. We answer some fitness questions to help with exercising in the winter months and, as always, there's a delicious new recipe from *Heart Food – the Healthy Heart Cookbook*.

Enjoy your newsletter... and thank you again for your wonderful support.



Philip Barter

Professor Philip Barter
MBBS, PhD, FRACP
Director
The Heart Research Institute



High Density Lipoproteins to prevent Diabetes

Diabetes is associated with a loss of function within the cells in the pancreas that make insulin. This is a major problem

in both type-1 diabetes (the severe disease that afflicts children) and type-2 diabetes that affects many adults as they become overweight. We have found that high density lipoproteins, the blood component that carries "good" cholesterol and which has been shown to protect against heart disease, is also able to improve the function of insulin-synthesising pancreatic cells. We have found that high density lipoproteins prevent the death of these pancreatic cells and also stimulate them to secrete more insulin.

We are now seeking support for research designed to understand how high density lipoproteins have this effect and to use this knowledge to devise new ways of preventing the development of diabetes.

This research has major implications in the prevention and treatment of diabetes in both children and adults.

MEET the Team...

Dr Colin Tso is a cardiologist with a Bachelor of Medicine and Surgery and a PhD. He began his career starting as an intern to an advanced trainee in Cardiology.

Between 2000-2003, Dr Tso held the position of post-doctoral research fellow with the Harvard-Massachusetts Institute of Technology Health Sciences and Technology Division in Boston, USA (MIT). During his time there, he conceived the idea that adult progenitor cells contribute to the repair of the blood vessel wall in response to the type of vascular injury that triggers the development of atherosclerosis.

Dr Tso initiated this line of research, which he continues at The Heart Research Institute, leading to the first publication on progenitor-mediated vascular repair. Dr Tso was appointed Senior Research Fellow at The Heart Research Institute in



Dr Colin Tso
Senior Research Fellow of The Heart Research Institute,
Lipid Research Group

2006. Since joining the Lipid Research Group, Dr Tso's work has focused on progenitor-mediated vascular repair and its relationship with atherosclerosis.

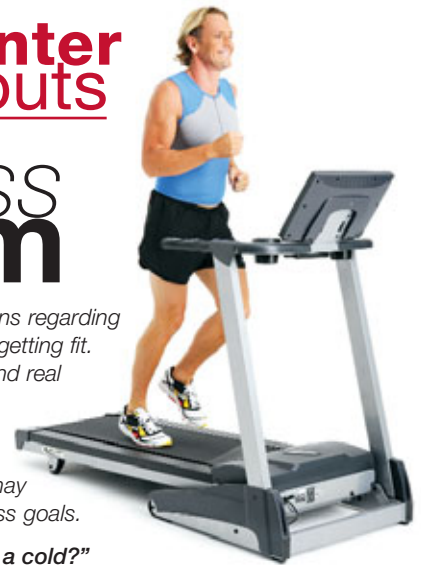
Dr Tso played an integral part in other areas of research during his appointment at MIT. He was one of the principle investigators in assessing photodynamic therapy, which is a novel method for the treatment of

blood vessel re-narrowing after coronary artery balloon angioplasty and stent implantation.

Since 1996, Dr Tso has presented his research works at numerous national and international scientific conferences including invited lectures delivered at the 1st Cardiovascular Interventional Symposium in Xiamen, China and the 2007 Essential Percutaneous Intervention Course (EPIC) in Sydney.

Dr Tso continues clinical work through his cardiology practice.

Fitness Forum



There are many misconceptions regarding good health, weight loss and getting fit. With the correct information and real commitment, we can begin to reduce the obesity crisis. Below we've outlined some questions and answers that may help you to achieve your fitness goals.

"Can I exercise when I have a cold?"

The answer generally is yes. Use the 'neck check' rule as a guideline. If your symptoms are all above the neck – e.g. sniffing, sneezing or an itchy throat – then you have the green light for exercise (though you should still take it a little easier than usual). But if your muscles ache, there's chest congestion, a fever, vomiting or diarrhoea, don't exercise until you're feeling better.

"I want to get rid of my bulging stomach (below the belly button) /my big thighs/my 'dinner lady arms' or my growing butt before the weather warms up again. What's the best way to go about it?"

It's a misconception that by exercising muscles in a certain area of your body, you will automatically lose weight in that area. For example, sit-ups to lose stomach flab, squats for the thighs and push-ups for floppy arms will all strengthen the muscles in these areas, but not get rid of the fat surrounding those muscles. **Fat comes off as your body chooses... not you.** And that process can only begin if you're burning off more than you're eating.

'Burn off' is best achieved by exercising so hard that you lose your breath for short periods of time... not the whole time you're exercising, but frequently. So if you're a walker, include hills or periods of very fast walking during the workout... same for joggers and cyclists.

"I eat all the right foods and exercise frequently, but I'm not losing any more weight. How come?"

The answer can be found by taking a close look at the way you're eating and the way you're exercising. Most people simply don't know enough about either. What exactly are you putting in your mouth? Do your exercise sessions include little challenges or spurts of greater intensity? A 40-minute walk around the park most days will only go so far towards removing decades of stubborn fat. We need to change our exercise routines every 4-6 weeks. Live by the F.I.T.T. Principle:

- Frequency** – Change how often you exercise. Vary 3 long sessions, with 5 short ones the following week.
- Intensity** – Challenge yourself by introducing 'effort spurts' into your workouts
- Time** – Modify the duration of your routines – e.g. 3 x 10 minute sessions one day... 1 x 30 minutes the next
- Type** – Change what you do – gym one day, a floor routine at home the next, then walking, etc.

Of course always check with your doctor before commencing any rigorous exercise.

Chocolate tiramisu with Raspberries

– with only 2g of saturated fat per serve!!

Ingredients

- 1/4 cup (60ml/2fl oz) hot strong black coffee
- 1 teaspoon sugar
- 1 tablespoon orange liqueur
- 6 sponge-finger biscuits (Savoardi)
- 1/2 cup (125g/4 1/2 oz) extra light cream cheese (5% fat)
- 1/3 cup (100g/3 1/2 oz) light custard (1% fat)
- 1 tablespoon vanilla sugar
- 1/2 teaspoon finely grated lemon zest
- 20g/3/4 oz finely grated dark chocolate (85% cocoa)
- 200g/7 oz fresh raspberries

OPTION

Instead of raspberries serve with:

- Strawberries
- Blueberries
- Cherries, pitted

Per serve:

802 kilojoules (191 calories)
7g protein
4g total fat (2g saturated fat)
Medium GI
29g total carbohydrate (2 exchanges)
3g fibre
143mg sodium

Makes 4 serves – each serving contains 1 x 1/2 serve of fruit.

Directions

1. Stir the sugar into the coffee until dissolved. Cool then stir the orange liqueur into the coffee.
2. Roughly break up the sponge fingers and evenly divide them between four 150ml/5fl oz capacity glass cups or dishes. Pour over the coffee and liqueur mix and gently press down the sponge fingers.
3. Using a wire whisk, gently whisk the cream cheese and custard until smooth. Whisk in the sugar and lemon zest. Pour over the sponge fingers. Cover the dishes with plastic wrap and chill in the refrigerator for at least 2 hours or overnight.
4. Remove from the refrigerator and bring just back to room temperature before serving sprinkled with grated chocolate and the fresh raspberries.

HEALTH BEAT

- **Berries** contain antioxidants called anthocyanins and proanthocyanins as well as vitamin C that helps protect blood vessels. Coffee and dark chocolate also contain antioxidants – the higher the cocoa content, the higher the antioxidants.

A gift in your will could save millions of lives in the years to come. For more information about this selfless act, we would be happy to send you our FREE booklet – *Time to Reflect*.

To receive your copy please email: legacy@hriuk.org or for **Legacy information only**, call 0808 234 4009.

If you have an interesting story, perhaps about winning a fight with heart disease, or you have some feedback to the newsletter, please e-mail our editor at administration@hriuk.org



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