

# in a Heartbeat...



RECIPE

## Chilli Beef\* Noodles



### Issue 13

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## From the Director's Desk

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

In this issue you'll read about more of the important research you've helped to make happen in recent months, including a major breakthrough by our Gene Regulation Research Group. There's a fascinating flashback on our 20 years of important research and an interview with the Leader of our Clinical Research Group.

Our resident fitness expert Guy Leech gives you 10 great ways to keep your children fit, healthy and active and as always there's a delicious new recipe, this one for Chilli Beef Noodles, from *Heart Food – the Healthy Heart Cookbook*.

I hope you enjoy your newsletter. Thank you for your wonderful support as we head into the next 20 years of saving lives.



## Update on the Gene Regulation Research Group

Over the past two years the Gene Regulation Research Group has been working on two major projects:

- “Androgens and Atherosclerosis” and
- “Anti-inflammatory properties of high density lipoproteins”

The first is now complete and the main findings have been published in the prestigious international journal, *Endocrinology*. The study demonstrated for the first time that calcification of advanced atherosclerotic lesions, is an androgen-sensitive process. It reveals a direct link between arterial calcification and the major male hormone, testosterone. This research may help to explain why long-term androgen users have increased calcification of their coronary arteries and are therefore at increased risk of developing heart disease.

The second project has generated an exciting and extremely important breakthrough that has major implications for success in our ongoing quest to discover new ways to prevent and treat atherosclerosis.

The new information that has arisen during the course of this second project paves the way for the development of new approaches to treatments that have the capacity to substantially reduce the still unacceptably high burden of heart disease in Australia and worldwide.

The first results of this project have been accepted for publication in the prestigious international journal: *Arteriosclerosis, Thrombosis and Vascular Biology*. The results have also provided the basis for a major research grant application to the National Health and Medical Research Council of Australia.

These major discoveries would not have occurred without the very generous support provided by **The Bruce & Joy Reid Foundation**.

**and have now reached the end of the beginning. I am absolutely confident that the quality of The Institute's work will in every way justify the trust of all who have helped and continue to help us. We have an opportunity to make a real contribution to the wellbeing of mankind and I am optimistic about our success in the years to come.”**

As the last 20 years have proven, Mr. Coates' optimism was well founded. The Heart Research Institute continues to make massive leaps towards the prevention of heart disease and is respected throughout the world for the quality of its work. All of which is made possible by your ongoing support.



*Philip Barter*

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

## The Heart Research Institute turns 20

*Dr Ralph Reader's vision of a world class Australian heart research organisation became a reality on Friday, 17th March 1989 when The Heart Research Institute was officially opened by the then Treasurer of the Commonwealth of Australia, The Hon. Paul Keating M.P. It's mission: The prevention and alleviation of atherosclerotic disease through research into its causes and mechanisms. Professor Roger Dean accepted the invitation to become the first Director of The Institute and helped attract researchers of international repute to join the Institute's staff.*

*The newly elected Chairman of the Board of Governors, Mr Alan Coates said at the time: "This is an institution that will explore new frontiers in a field with real possibilities for the prolongation of human life. We are up and running*



### Ingredients

- 200g/7oz bean vermicelli noodles
- 2 tablespoons peanut oil
- 2 small red chillies, finely diced
- 2 medium red capsicums sliced
- 1 medium green capsicum sliced
- 2 large yellow banana peppers, sliced
- 400g/14oz lean beef strips
- 2 teaspoons sweet paprika
- 1/3 cup tomato paste, no added salt
- 4 small flat mushrooms, trimmed and sliced
- 3 teaspoons oyster sauce
- 1/2 cup (125ml/4fl oz) salt-reduced beef stock

### \* Ingredient option

- Instead of beef make it with:
- Lean lamb strips
  - Lean pork strips
  - Tempeh, cut into strips

Makes 4 serves.  
Each serving contains  
5 1/2 serves of vegetables.

Per serve:  
1979 kilojoules (473 calories)  
28g protein  
15g total fat (4g saturated fat)  
Low GI  
55g total carbohydrate  
(3 1/2 exchanges)  
7g fibre  
361mg sodium

### Directions

1. Place noodles in a bowl. Cover with cold water following the packet instructions and set aside.
2. Heat half the oil in a large wok over a high heat. Add chilli, capsicum and peppers and stir fry for 4-5 minutes. Spoon capsicum mix into a dish and set aside.
3. Heat the remaining oil in wok. Stir fry meat for 2-3 minutes. Reduce heat and stir in paprika, tomato paste, mushrooms, oyster sauce and stock.
4. Stir the chilli, capsicum and peppers into the beef, cover and cook for 2-3 minutes or until heated through, stirring occasionally.
5. Drain the noodles and separate with a fork. Add noodles to the wok and stir until hot and serve.

### HEALTH BEAT

- **Bean vermicelli** (or bean thread) is a Chinese noodle made with starch from mung beans, peas and corn and has a low GI.
- **Tempeh** is fermented soy bean cake that looks similar to hard tofu but flatter, and with more intact beans. It has a firm texture and nutty flavour and all the goodness and health benefits of soy foods including isoflavones to help look after the heart.

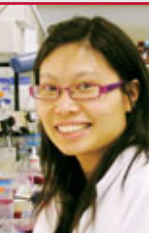
2008 saw several The Heart Research Institute researchers acknowledged internationally for the work they've undertaken at the Institute.



**Dr Sanjay Patel** – a cardiologist two thirds of the way through his PhD) was awarded the Arteriosclerosis, Thrombosis and Vascular Biology (ATVB) Conference Merit Award and invited to present his work on HDL and angiogenesis, and it was accepted as an oral paper at the American Heart Association Meeting, New Orleans.



**Dan Sieveking** – Dans work on androgens and angiogenesis was selected for the prestigious Late Breaking Basic Sciences Session at the American Heart Association to highlight innovative and novel science.



**Elaine Wat** – a 2nd year PhD Student in the Nutrition and Metabolism Group, won a Young Investigator Award for her research. Elaine presented her work at the joint 6th Congress of The Asian Pacific Society of Atherosclerosis and Vascular Diseases and the 10th Hong Kong Diabetes and Cardiovascular Risk Factors, East Meets West Symposium. Her paper was awarded one of

the 'Best Paper Presentation Prizes' at the conference. It explored the potential therapeutic benefits of dairy-milk phospholipids. Elaine's excellent work was also recognised by the International Atherosclerosis Society and the Regional IAS Chairman, Yuji Matsuzawa, who presented her with the Young Investigator Award.

**Congratulations to these fine young researchers.**

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 [inaheartbeat@hri.org.au](mailto:inaheartbeat@hri.org.au)

If you are interested in attending one of our **FREE** Director's Talk & Tours of The Heart Research Institute's new laboratories (including a light lunch) please call (02) 9241 4300 or e-mail [events@hri.org.au](mailto:events@hri.org.au)

If you do not wish to receive further issues of *In a Heartbeat* from The Heart Research Institute, e-mail your name and address or ID Number to [inaheartbeat@hri.org.au](mailto:inaheartbeat@hri.org.au) or tick the box and fax this page to (02) 9241 6668. Please include your ID Number: \_\_\_\_\_



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"There's no doubt that kids who are active have a better quality of life."

Guy Leech's



## Fitness Forum

Children who are physically active have leaner bodies, stronger bones and muscles, improved co-ordination and posture and fewer health problems as adults. They also concentrate better in school, have increased self-esteem, are less likely to suffer from depression or anxiety and have a better overall outlook on life. Unfortunately, today's children live in a world where it is more difficult to be active and easier to be sedentary. An epidemic of childhood obesity means that **our kids may be the first generation in history to have a shorter lifespan than their parents.**

*Helping your children to establish the habit of daily physical activity is one of the single most important things that we can do to set them up for a happy, healthy and prosperous life when they grow up. As parents, we can do a great deal to help our kids to be active.*

Here are 10 great strategies:

- 1. Play actively with your kids** People who get up earlier and get it done have a far better chance of building a habit that will continue for the rest of their lives. Once you break through those initial body aches, you'll find you actually start liking the whole experience. Imagine that! Games like tag, hide-and-seek and kicking a soccer ball around are all good examples of beneficial physically active games that also provide great opportunities for bonding.
- 2. Be a role model in both action and words** Kids imitate their parents. Children with active parents are usually active themselves.
- 3. Limit TV, computer and video games** Your home environment could be making your kids fat. For example, every two hours of TV watching or computer games per day increases your child's risk of being obese by 25% and of contracting diabetes by 10%. So set some rules... TV and video games are not as high a priority as your child's health.
- 4. Start where they're comfortable** Parents can help their children to take up and maintain a physical activity by making sure the activity is suited to the child's current physical and mental abilities... and by offering lots of encouragement. Keep it fun, simple and short and they'll come back for more.
- 5. Accept and love your child at any weight** Parents can place a lot of pressure on their kids by using judgemental language about a perceived lack of exercise, fitness or skills. Teach your children that physical activity is an important part of daily life, regardless of body type or fitness level.
- 6. Get smart about where you live** Your local environment is a strong predictor of regular physical activity for you and your children. Many people simply don't know the resources that are around them. Here are a couple of checklists to help you judge the quality of your local environment for walking and cycling. [www.walkinginfo.org/cps/checklist.htm](http://www.walkinginfo.org/cps/checklist.htm)  
[www.bicyclinginfo.org/cps/checklist.htm](http://www.bicyclinginfo.org/cps/checklist.htm)
- 7. Have a plan and involve your kids** Talk to your kids about the opportunities for physical activity surrounding them. Are there things they know that you don't? Involving the kids gives them a sense of ownership and they are more likely to view items on the list positively.
- 8. Create adventures** Children have wonderful imaginations and enjoy using them... so, create adventures. Instead of simply going for a walk, first do some research with your kids to identify birds or animals that live in the area... then set out on an expedition to 'find them in the wild'.
- 9. Sports** Organised sports offer a great opportunity and motivation for children to take part in daily activity. Encourage your children to try various sports, talking positively about them, provide transport to and from training, practice with them at home and lend your assistance to the school or sports club.
- 10. Camps, retreats and training days** Camps and training days are a terrific boost for children's skills and motivation in their chosen sport or hobby. They typically provide great opportunities for supervised physical activity in a fun and educational environment. (As a bonus, they also give us parents a break!)

For more information go to [www.guyleech.com](http://www.guyleech.com)

Guy Leech

## MEET the Team...

an interview with

**Prof. David Celermajer**  
Clinical Director of The Heart Research Institute and Group Leader, the Clinical Research Group



**IAH:** David, can you tell us a little about your group within The Heart Research Institute?

**DC:** The Clinical Research Group conducts studies on children and young adults with risk factors for blood vessel and heart problems, like obesity and exposure to passive smoking. Our group uses novel non-invasive tests to look at the structure and function of arteries and this allows us to determine which children and young adults have signs of early damage, at a time when reversibility is most likely to be possible. We then perform intervention studies to see what remedies (diet, exercise, medications, etc.) can prevent or retard the progress of blood vessel problems in these people.

**IAH:** Could you share one of your recent findings and discuss its specific impact on the fight against heart disease?

**DC:** We have found that the most important determinants of thick blood vessel walls in children are blood pressure (even at the age of 8 years!) and the blood level of a chemical that interferes with normal blood vessel relaxation (called ADMA). The best protective factor from early thickening is HDL (the "good" cholesterol). This highlights that population measures to control blood pressure need to involve children and might allow us to target those kids most at risk of later heart attack by measuring ADMA and HDL levels.

**IAH:** What is the next area your team will be addressing?

**DC:** We are focusing on how obesity and meals affect blood vessel structure, including studies of high and low GI meals and studies of high fat meals in obese and lean subjects. We will also be looking at why blood vessels in obese subjects might be abnormal – is it the inner lining layer of the vessel (the endothelium) or the muscle in the vessel wall that first shows abnormalities?

*Professor David S Celermajer PhD FRACP DSc FAA is a Scandrett Professor of Cardiology at the University of Sydney and a Cardiologist at the Royal Prince Alfred Hospital. He has achieved a plethora of major awards, prizes, scholarships and fellowships, obtained over 40 grants to continue his research and been invited to present his findings at medical conferences all over the world.*