



**YAYASAN JANTUNG MALAYSIA**  
(The Heart Foundation of Malaysia)

# **BERITA** *yayasan* **Jantung** *Malaysia*

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**DATUK DR J.S. SAMBHI**  
**P.J.N., M.B.B.S., F. R.C.O.G.,**  
**(London), F.A.M.M**  
**Chairman**

## **REDUCE STRESS**

Stress is on the rise!!! The punishment we pay for present day living. Stress cannot be eliminated but as humans, we can keep it at the minimum with careful planning. Chronic stress not only leads to medical complications but lowers the quality of life, not only for the stressed person but those around him e.g. family, friends and working colleagues.

Acute stress can alter the personality and lead to discomfort, abnormal behavior, even anger and hostilities.

Stress alters the mechanism of body function. Stress produces chemicals (hormones) in the body like adrenaline and endorphins which can over a period lead to medical complications e.g.

**HEADACHES** **MOOD CHANGES**  
**DEPRESSION**  
**HEART PROBLEMS** **HIGH BLOOD PRESSURE**  
**ULCERS** **OBESITY**  
**HYPER THYROIDISM** **FREQUENT COLDS**  
**TOOTH & GUM DISEASE** **PREMATURE AGEING**

Stress may start at an early age and progress into adulthood. Parents should reduce stress by example and also teach their children to speak kindly without much arguments but to discipline them when necessary.

Learn "Time Management" at Work and Home.

DO NOT handle more than you can! Say NO when necessary. Stress is usually brought on by your own motivation and by the actions of others.

### **Methods To Reduce Stress**

**SMILE, EXERCISE, RELAX, READ, HAVE MASSAGE**

**CORRECT LIFE-WORK BALANCE. GET HELP.**

**INCREASE AND BETTER INTER-PERSONAL RELATIONS**

**DO NOT RESORT TO EATING, DRINKING, SMOKING**

### **In acute stress, Do Deep Breathing**

Shut your eyes and pray and think of pleasant happenings.  
Get away from the source of stress.

**WISHING YOU A LESS STRESS-FULL LIFE**





# YAYASAN JANTUNG MALAYSIA

The Heart Foundation of Malaysia  
Member of World Heart Federation

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## Editor's Note

Are young Malaysians getting an early lead on heart disease? This seems to be highly likely, especially since most of the risk factors that precede heart disease like high blood pressure and blood cholesterol, being overweight and obese, diabetes, and being physically inactive are all on the rise. The latest results from the National Health and Morbidity Survey 2011 have highlighted the seriousness of the situation.



What can we do with this knowledge? Well, for one thing, it is up to us to start pushing for greater awareness. Much more importantly, we need to start getting Malaysians to make changes to their lifestyle.

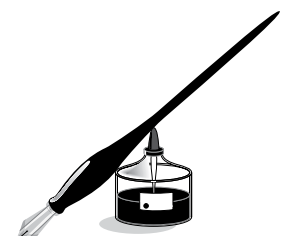
YJM continues in its efforts to bring forward the message of the importance of promoting heart health amongst Malaysians. To achieve this goal, we have enlisted the aid of a new Vice President, Ybhg Tan Sri Dato' Kamaruzzaman Bin Shariff.

He has joined the committee of YJM and started his commission with a bang when he officiated at the launch of the YJM-MNRB collaboration launch. We are greatly appreciative of his efforts in securing more funding for YJM. On top of this, we also look forward to your continued support of our ardent efforts to push the message regarding the importance of heart health to Malaysians.

We are hopeful of our success in driving home the message to the public that heart disease is not someone else's problem – taking personal responsibility for it is only the first step towards reducing its prevalence in future.

Thank you.

**DATO' DR KHOO KAH LIN**



## Better Awareness

It's alarming that so many Malaysians die because of heart disease, which is a largely preventable disease; YJM is constantly fighting on the forefront to heighten awareness of how Malaysians can greatly reduce their risk by leading a healthy lifestyle.

To achieve this aim, YJM has made significant contributions by investing a lot of time and effort in awareness campaigns which aims to help people better understand the risks they face.

### Community Programme



Lubok Merbau, Kedah • Jan 5, 2013



Naka, Kedah • Jan 6, 2013

### Go Red For Woman Programme



Perlis • Mar 7 & 8, 2013

### School Programme



SMK Agama Yan • Jan 7 – 8, 2013



SMK Berapit, Bkt Mertajam, Pg • Feb 5 – 6, 2013



Tmn Melati, Gombak, KL  
• Jan 19, 2013

### Workplace Programme



MNRB Holdings • Mar 19 – 21, 2013



Kolej Komuniti Hulu Langat • Feb 27, 2013



Statin

– Lots of side effects;  
a dangerous drug

Statin

– Excellent Drug



Statin marketed in 1985



## Updates on Statins – Benefits and Trade – offs

### Benefits of Statins

Ever since statin drugs were first marketed in 1985, the world has acclaimed it to be an excellent drug in that it is effective in both primary and secondary prevention of cardiovascular disease. There are many clinical trials but the meta – analysis of the Cholesterol Treatment Trialists' Collaborators Meta – analysis provide the largest, most extensive report published in 2005, 2008, 2010, 2012. A summary of the four meta – analysis of the CTT Collaboration is given in Table 1.

### The Cholesterol Treatment Trialists' Collaborators Meta – analysis

Meta – analysis	No. of Trials	Risk Reduction with lowering of 1 mmol/l LDL-C
Statin versus Control ( <i>Lancet</i> 2005)	21 trials: LDL-C difference 1.07 mmol/l	24% coronary events 21% major CV events
Statin in patients with diabetes ( <i>Lancet</i> 2008)	14 trials	21% coronary events 21% major CV events Whether or not they had diabetes
More Statin versus Less Statin and Statin versus Control ( <i>Lancet</i> 2010)	26 trials: Further LDL-C reduction of 0.51 mmol/l in the intensive arm	CV event rates were lower in the 5 trials comparing more vs less statin therapy. There was a further reduction of 0.51 mmol/l LDL-C in the intensive arm. This was associated with further reduction of first major CV event by 28% per 1.0 mmol/l LDL-C reduction
Lack of Effect of Lowering LDL-C on Cancer ( <i>PLoS ONE</i> 2012)	27 trials	No risk of cancer

“Standard Dose” Statin reduces LDL-C by 30 – 45%, (i.e. rosuvastatin 10 mg, atorvastatin 10 – 20 mg, simvastatin 20 – 40 mg, pravastatin 40 mg, lovastatin 40 mg, fluvastatin 40 – 80 mg). The LDL-C reduction is 1.07 mmol/l and relative risk reduction is 24% in coronary events and 21% major cardiovascular events. With “High Dose” statin, there is a further reduction of 0.51 mmol/l of LDL-C and a further reduction of major cardiovascular events by 14%.

As its initial dose, there is no difference between diabetic and non diabetic subjects. It should be noted that with the maximum dose of statin therapy the LDL-C reduction is only 1.5 mmol/l. If further reduction of LDL-C is required, then other medications such as Ezetimibe (LDL-C reduction 18%), Nicotinic acid (LDL-C reduction 15 – 18%), Choleselvac (LDL-C reduction 10 – 20%), Fenofibrate (LDL-C reduction 10 – 15%) to achieve the target value in high risk patients as recommended by international guidelines.

## Trade – off with Statins

### Side Effects

1. Elevation of Liver Enzymes ( $\geq 3$  times of upper limit of normal)  
Frequency 0.25% – 2.5% with  
10 mg – 80 mg statin

Progression to liver failure is exceeding rare.  
Reversal of transamine elevation is frequently noted with reduction of dosage. Should increase of  $\geq 3$  times of ULN persist, therapy should be discontinued.

2. **Muscle toxicity – Frequency**

- Myalgia (with CK elevation) 5 – 10%
- Myopathy – Creatinine phosphokinase  $\times 5$  ULN on two occasions.
- Frequency 0.01% usually in people with complex problems on standard statin dose
- Myalgia (with CK  $>10$  ULN) 0 – 1.2%
- Usually with higher statin dose
- Rhabdomyolysis  
0 – 10 per million subjects when CK  $>40$  ULN or end organ damage eg. acute renal failure or worsening of renal function

In the Cholesterol Treatment Trialists’ Collaborators Meta – analysis (2005), there were 9 in the statin group compared to 6 in control group in 13 trials with 90, 000 participants. Approximately about one third of that with myalgia (0.003%) in patients were on standard statin dose.

3. **Type 2 Diabetes Mellitus**

- *Sattar N et al (2010)* in a meta – analysis of 13 trials found a 9% increased risk of diabetes over a period of 4 years. The risk was highest in older participants. The BMI, change in LDL-C and type of statin were not related to the risk of diabetes. Treatment of 255 subjects with statin

for 4 years resulted in one extra case of diabetes as compared with reduction of major coronary event death and non – fatal MI of 5.4 events.

- *Preiss D et al (2011)* in another meta – analysis of 5 statin trials with 32, 752 participants without diabetes at baseline had new onset diabetes and major cardiovascular events in intensive dose versus moderate dose statin therapy. There was a higher incidence of onset diabetes (OR 1.2) in the intensive statin arm. This was associated with fewer major cardiovascular events (OR 0.84).
- The ESC/EAS Lipid Guidelines of 2011 recommend that the practice in patients with moderate or high CV risk or existing CV disease should not change.

4. **Statin and Cognition**

- 12 small randomized controlled trials have studied the relationship between statin use and cognitive function. Nine trials found no change in cognitive function. One trial found a detrimental effect measured with the 4 – word memory test. Two trials found a benefit in cognitive function.
- The Heart Protection Study in mean follow up of 5.3 years found no significant change between simvastatin and placebo treated patients
- The JUPITER Trial reported no difference in cognitive function between rosuvastatin and placebo users at the end of the trial.

5. **Statin and Cancer**

The Cholesterol Treatment Trialists’ Collaborators Meta – analysis (2012) of 27 randomised trials of statin therapy on 175, 000 people found the lack of effect of lowering LDL-C on cancer. Similar results were reported by *Emberson et al (2012)* and *Alberton et al (2012)* in their meta – analysis.

## Conclusion

- Current guidelines are simple to apply on patients with diabetes and classic cardiovascular risk factors.
- Much less is known about statin and microvascular complications, type 1 diabetes, women and the elderly.
- Long term adherence to statin therapy is suboptimal among diabetics, since only 65% of subjects continued therapy after 13 years.
- We still face residual risk in treated patients. Additional drugs may be required. LDL-C apheresis is required in homozygous familial hypercholesterolaemia.
- Statin therapy should be initiated in all adult subjects at the diagnosis of diabetes, at the onset of microvascular complications or according to current guidelines.
- The role of combination therapy of statins with other lipid lowering agents such as fenofibrate has been shown to be beneficial in the ACCORD – lipid arm.



Inviting Your Support  
to Partner The Heart  
Foundation & Institut  
Jantung Negara.



In possibly the largest heart-health event ever held in our nation, The Heart Exhibition was launched by Dato' Sri Liow Tiong Lai in September last year. This event successfully brought together Malaysians, from all walks of life, in making a concerted commitment to fight heart disease – the number one killer in Malaysia for over three decades now.

“THE HEART”, a joint-initiative by Yayasan Jantung Malaysia (YJM) & Institut Jantung Negara (IJN), marks the urgent and significant action by the nation's two leading heart-health entities to prevent an “epidemic” of cardiovascular disease (CVD) including heart attacks and stroke.





The two-day Exhibition was well-attended by over 30,000 people from all walks of life. THE HEART provided an invaluable opportunity for public to interact with some of the nation's top cardiovascular Experts without having to pay hefty bills. Most notably was the free health screening and counselling section, conducted by qualified professionals, which attracted over 4,000 pax throughout the two-days.

Also featuring the World's first 3-D Giant Heart structure – a heart-normous replica of the human heart that provides visitors with a close-up view of healthy and diseased tissue, artificial valves and a stent, as well as the damage caused by a heart attack. During the tour, they learn about cardiovascular functions, observe examples of various types of heart disease and read about the latest medical treatments for heart problems.

This year, THE HEART returns to Mid Valley Exhibition Centre in conjunction with World Heart Day 2013, with even more exciting and entertaining features for both members of the public and Sponsors alike. We are inviting

corporate companies to support The Heart Foundation and The National Heart Institute by doing their part to combat heart disease.

Heart disease kills 17.5 million people annually, and we, Malaysians, are not spared. Speaking at the official launch of "THE HEART", Dato' Sri Liow Tiong Lai, Minister of Health, says 1 in 4 Malaysians

have some form of heart disease, which if left untreated, could lead to crippling consequences. Take high cholesterol for instance – we now have a whopping 6 million Malaysians who are diagnosed with the illness, with 26.6% of them out there who are ignorant that they are suffering from it. These conditions lead to coronary heart disease, or stroke and the sad fact is that not only does Malaysia have the highest incidence of heart disease in the region, the average

age of heart disease patients are also amongst the youngest in the world!

"The purpose of The Heart event is not just to highlight the fact that more and more Malaysian hearts are at dire risks, our intention is to encourage Malaysians to be more proactive in taking action to remedy this situation."

THE HEART encourages Malaysians to start taking active steps to improve their overall health in order to avoid becoming part of the dire statistics of heart disease, and other non-communicable diseases like diabetes, high cholesterol, hypertension, coronary heart disease, and stroke.

**For more information on THE HEART 2013, interested parties can email our Secretariat at [enquiries@theheart.com.my](mailto:enquiries@theheart.com.my) or call either Mr. Lee Hsieng Loong (012-2161866) or Ms. Mei Chieng (012-2880866).**

# Aritmia – Apabila nadi tidak senada seirama

*Ditulis oleh Dr Abd Syukur Bin Abdullah, Pakar Perubatan dan Pakar Kardiologi Klinikal, Hospital Sultanah Bahiyah, Alor Star, Kedah*



Pernakah anda merasa kadar nadi anda menjadi laju, tersangat perlahan ataupun kadang-kala tidak seragam? Istilah perubatan bagi gejala ini disebut "Aritmia" dan ia diambil dari bahasa Greek *rhymos* dan pangkalan a yang jika dicantum bermaksud "loss of rhythm".

Aritmia berlaku apabila impuls elektrik yang mengkoordinasikan penghasilan nadi anda terdapat gangguan. Kebanyakan aritmia jantung dengan sendirinya jarang menyebabkan kematian. Kadangkala, pada manusia normal, kita mengalami nadi yang tidak seragam yang bersifat sementara seperti kontraksi ventrikel pramatang. (PVC's) dimana nadi berlaku lebih pantas dari kadar nadi biasa. Ada sesetengah aritmia pula berbahaya dan boleh mendatangkan masalah dan kematian jika tidak dirawat dengan segera.

Nadi yang terlalu pantas disebut "tachycardia" sementara nadi yang terlampau perlahan di panggil "bradycardia". Nadi yang tidak sekata dan seragam dipanggil "fibrillation".

### Gejala Dan Symptom

Sesetengah pesakit tidak mengalami apa-apa gejala dan cuma dikenalpasti melalui pemeriksaan rutin kesihatan. Antara symptom utama ialah

- Kesukaran bernafas
- Palpitasi (berdebar-debar)
- Pening kepala
- Angina (sakit dada)
- Symptom angin ahmar (stroke)
- Jatuh pingsan (syncope)

### Penyebab Aritmia

Tuhan telah menjadikan sistem impuls elektrik jantung kita berkoordinasi dengan teratur demi menghasilkan rentak jantung yang senada. Untuk seseorang yang normal, kadar nadi adalah dalam 60 ke 100 degupan seminit semasa rehat. Seseorang yang sangat aktif bersukan seperti atlet Olimpik dan pemain tennis mempunyai julat yang kurang dari 60 degupan seminit.

Pengambilan alcohol berlebihan, diabetes, gejala penagihan dadah, pengambilan kopi berlebihan, penyakit jantung, pesakit hipertensi, stress, fibrosis jantung, merokok, dan juga ubatan herba dan sesetengah ubat boleh menyebabkan aritmia.

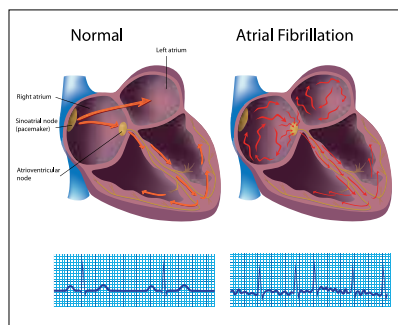
Gangguan unsur elektrolit dalam tubuh badan, penyakit sleep apnea dan gejala penagihan amphetamine dan kokain juga boleh membawa masalah aritmia.

Penyakit jantung yang sering membawa gejala aritmia adalah seperti penyakit jantung koronari, "cardiomyopathy", dan juga penyakit injap jantung,

### "Tachycardia" Rongga Atrium Dan Ventrikel

Aritmia boleh diklasifikasikan mengikut tempat asal bermulanya aritmia ini. Antara aritmia berkaitan yang bermula dari atrium:

- Atrial fibrillation
- Atrial flutter
- Supraventricular tachycardia (SVT)
- Sindrom Wolff-Parkinson White (WPW)



Antara aritmia yang boleh terhasil dari ventrikel jantung pula adalah seperti:

- Ventricular tachycardia
- Ventricular fibrillation
- Sindrom Long QT

### Diagnosis Aritmia

Pesakit selalunya dinasihatkan berjumpa doktor untuk pemeriksaan apabila mengalami symptom yang telah dibincangkan. Antara pemeriksaan lanjut yang boleh dijalankan adalah:

- Ujian darah dan air kencing
- Elektrokardiogram (ECG)
- Pemeriksaan Holter
- Echocardiography
- X-Ray dada
- Ujian "Tilt table"
- Ujian Elektrofisiologi (EP study)



### Rawatan Untuk Aritmia

Untuk kadar nadi yang terlalu lambat (bradycardia), penyakit yang menyebabkannya perlu dirawat terlebih dahulu kerana ia berpotensi untuk sembuh sepenuhnya. Implantasi perentak jantung/bateri (pacemaker) dapat membantu menyeragamkan rentak jantung yang normal,

Untuk kadar nadi yang terlampau laju pula (tachycardia), terdapat banyak opsyen untuk merawat pesakit.

Antaranya

- Kaedah "vagal maneuvers" seperti batuk, meneran, merendam muka dalam air sejuk dapat menolong menghentikan aritmia.
- Ubat
- "Cardioversion" dimana renjatan elektrik diberikan untuk menghentikan aritmia secara mekanikal.
- Ablasi (teknik dalam makmal yang menghentikan aritmia dengan ablasi pada system konduksi elektrik jantung).



# Taking over the reins

*Introducing the new Vice-President of YJM*



*Ybhg Tan Sri Dato' Kamaruzzaman Bin Shariff*

With the passing of the previous Vice-President, a vacuum was left in the upper reaches of YJM's committee. The acceptance of the post and its responsibilities by Ybhg Tan Sri Dato' Kamaruzzaman Bin Shariff was most timely and opportune.

He commenced his duties with great fanfare when he officiated the launch of a collaboration between MNRB Holding Bhd and YJM, where MNRB contributed RM20,000 to the Foundation for its effort in educating the public on heart and circulatory diseases.

Ybhg Tan Sri Dato' Kamaruzzaman was quick to point out that he has always been an avid supporter of YJM. "Prior to my acceptance of the post of Vice-President, I was involved as a director of another unrelated humanitarian association with a hospice programme," he disclosed.

"I am quite close with Datuk Sambhi, and when he invited me to join YJM, I was thrilled to accept," he confided.

"Prior to this, I have been the Datuk Bandar for KL for many years. My experience is rather extensive as I've worked with the Lion's Trust Foundation which sponsors dialysis patients. They have a dialysis centre in Ipoh Road," he remarked.

"This is where I first got involved in health-related activities. Further to that, I was also an Honorary Fellow of the Rotary Club and they have a number of health-related activities," he divulged.

"As for my current role with YJM, I plan to be highly involved. My main task is in getting corporate sponsors or benefactors. I intend to play a very active role in corporate sectors to get them involved in health programmes," he enthused.

We look forward to watching Ybhg Tan Sri Dato' Kamaruzzaman in action; with his wide net of contacts, he will assist YJM in reaching out to Malaysia to get the message across about the importance of keeping the heart healthy!

## Yayasan Jantung Malaysia (YJM) – Biogrow Oat BG22 Partnership

Press Release

One of the fundamental principles of Legosan (M) Sdn. Bhd., the healthcare company who owns Biogrow Oat BG22 in Malaysia, is the unwavering commitment to social responsibility through providing free-of-charge total cholesterol screenings to all Malaysians nationwide during roadshows and health events. To date, the company has screened over 20,000 people and has significantly raised public awareness towards hypercholesterolemia, which is one of the risk factors of heart disease.

Recently, Legosan, together with its premium oat bran powder – Biogrow Oat BG22, partnered with Yayasan Jantung Malaysia (YJM) to help promote awareness in the fight against heart disease through funding of YJM's quarterly published newsletter – Berita Yayasan Jantung Malaysia.

Legosan has also committed to make yearly donations to YJM to fund its awareness and support programs around the country in promoting heart health.

YJM encourages those with enquiries about heart disease prevention, treatment and support to go and get in contact. A range of contact methods are outlined on the YJM official website at [www.yjm.org.my](http://www.yjm.org.my).



**Cheque presentation ceremony:** CEO of Legosan, Mr. Ong Lam Huat (middle) presenting a cheque to Chairman of YJM Datuk Dr. J.S. Sambhi, with vice chairman of YJM, Dato' Gurbakhash (third from right), CEO of PrimaBumi Sdn Bhd, Tan Sri Ariffin (second from right) witnessing the occasion.

**Contract signing ceremony:** seated from right, Chairman of YJM Datuk Dr. J.S. Sambhi, Senior product & marketing executive of Legosan, Ms. Felicia Phuah, with vice chairman of YJM, Dato' Gurbakhash (second from right) and product consultant from Legosan, Mr. K.Y. Pang (third from left) witnessing the occasion.



# Oat BG22™ – A Safe & Natural Way to Help Reduce Your Cholesterol!

Do you have high cholesterol and wish for a natural solution? **Oat BG22™** provides an ideal drug-free and easy solution for cholesterol lowering.

Changes in lifestyle routines and unhealthy dietary habits have contributed to a rise in cardiovascular disease due to high cholesterol levels. It is estimated that in Malaysia alone, more than six million people are suffering from high cholesterol. Research has proven that eating 3g of beta-glucan from oat bran powder can help lower cholesterol levels and this health claim has been approved by the Ministry of Health in Malaysia and by the US FDA (Food & Drug Administration) and EFSA (European Food Safety Authority). So what is the magic ingredient in **Oat BG22™** that produces this powerful effect?

The answer lies within the beta-glucan. Oat beta-glucan is a type of soluble fiber that occurs naturally in oats. Studies have proven that a daily intake of at least 3g of oat beta-glucan can significantly help reduce total cholesterol and LDL (low density lipoprotein) cholesterol, otherwise known as the 'bad' cholesterol. The question is – Are you taking sufficient amount of beta-glucan daily to effectively lower your cholesterol? Currently, oat brands in Malaysia contain about three to five percent of beta-glucan which translates to roughly two bowls of oatmeal (70g) for consumption. If that is too many mouthfuls for you, why not try **Oat BG22™**?

## Production of high viscous gel that lines the gut is an important criterion for cholesterol-lowering effect

It is generally recognized today that the physiological value of soluble fiber such as to reduce cholesterol, is based on its ability to increase the viscosity of food digested in the intestine.<sup>1</sup> Oat beta-glucan is able to form highly viscous solution which contributes to the formation of a gel layer on the intestinal wall (Diagram A), which in turn serves as physical barrier to the absorption of bile acid and cholesterol in the gut (Diagram B).<sup>2,3</sup>

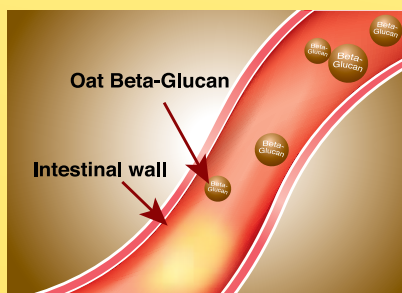


Diagram A

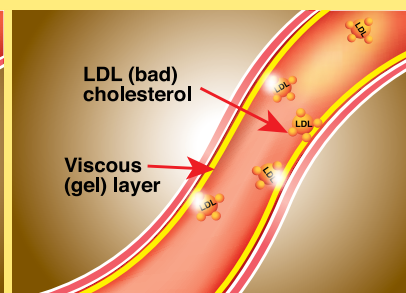


Diagram B

### References:

1. Jenkins DJA, Wolever TMS, Leeds AR, Gassull MA, Haisman P, Dilawari J, Goff DV, Metz GL & Alberti KG. (1978). Dietary fibers, fiber analogues, and glucose intolerance: importance of viscosity. *British Journal of Nutrition* 1: 1392 – 1394.
2. Anttila H, Sontag-Strohm T & Salovaara H. (2004). Viscosity of beta-glucan in oat products. *Agricultural & Food Sciences*. Vol. 13: 80-87.
3. Würsch P & Pi-Sunyer FX. (1997). The role of viscous soluble fiber in the metabolic control of diabetes. A review with special emphasis on cereals rich in beta-glucan. *Diabetes Care* 20: 1774 – 1780.

## 2 scoops of Oat BG22™ per day, keeps BAD cholesterol away!




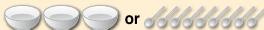
**Biogrow Oat BG22™** is made of 100% oat bran powder rich in viscous soluble fiber beta-glucan. By consuming at least 3g of beta-glucan every day is clinically proven to help in reducing cholesterol.

**Oat BG22™** is more effective and has far more advantages when compared to the common oatmeal. **Oat BG22™** contains 5 times higher soluble fiber beta-glucan than your conventional oatmeal. With **Oat BG22™**, all you need is just 2 scoops (18g) daily.

By taking 2 scoops (18g) of **Oat BG22™** a day, you consume more than 3g of oat beta-glucan which is higher than the amount recommended by the Ministry of Health for cholesterol-lowering effect which is 3g per day.

Made of 100% oat bran powder imported from Sweden, it contains no added sugar and artificial additives or preservatives.

**Oat BG22™** provides a simple & more convenient way of taking oats. Just mix one scoopful of Oat BG22 with 200 ml of cold or lukewarm water then drink it straight away, twice a day before meals. For optimal cholesterol-lowering, drink at least 2 scoops a day to help reduce cholesterol. **Remember, healthy cholesterol level is the key towards a healthy heart!**

Oat BG22™ OAT BRAN POWDER	VS	Oatmeal
 <b>Oat Bran</b>		 <b>Rolled Oats</b>
Take 2 scoops (18g) a day to provide more than 3g beta-glucan for cholesterol-lowering effect		Must take at least 70g (2 to 3 bowls / 10 tablespoons) daily to provide 3g beta-glucan
		

This article is a courtesy of Summit Company (M) Sdn. Bhd. For more product information, please call 03-7956 2220.



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# Event Diary

## AWARENESS PROGRAMME YEAR 2013

MONTH	DATE	PROGRAMME	VENUE
January	5	Community	Lubok Merbau, Kedah
	6	Community	Naka, Kedah
	7 – 8	School	SMK Agama Yan, Kedah
	19	Community	Taman Melati, Gombak, K.L.
February	5 – 6	School	SMK Berapit, Bukit Mertajam, Penang.
	27	School	Kolej Komuniti, H/Langat, Kajang
March	7 – 8	Go Red For Women	Kangar, Perlis
	1 – 21	Workplace	MNRB Holdings, Kuala Lumpur
	26	College	Consist College, Ampang, Selangor
April	11	College	Monash University, Sunway, Selangor
	14	Community	Kg. Baru, Masai, Johor.
	16 – 17	School	Maktab Sultan Abu Bakar, J/Bahru.
	21	Community	Cheras Perdana, Cheras, Selangor.
May	16 – 19	Heart Week	Star Parade, Alor Setar, Kedah
June	7 – 9	Heart Week	AEON Bukit Indah, Johor Bahru
	18 – 23	Heart Week	Suria, Kota Kinabalu

**F O R I N F O R M A T I O N**

### YAYASAN JANTUNG MALAYSIA

The Heart Foundation of Malaysia

Name: \_\_\_\_\_

Address: \_\_\_\_\_

Tel: (O) \_\_\_\_\_ (H) \_\_\_\_\_

☐ I am enclosing my comments.

☐ Please include my name in the mailing list of Yayasan Jantung Malaysia for future publications.

☐ I am enclosing herewith cheque/draft/money order for RM\_\_\_\_\_ being my donation.

(Tax-exempt receipt will be issued)

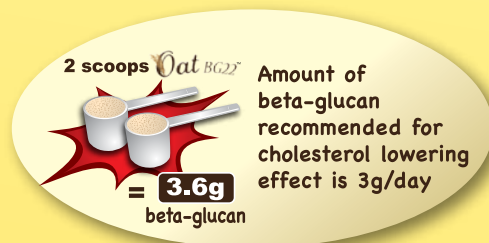
All contributions are to be account payable to Yayasan Jantung Malaysia and sent to:- The Secretariat, Yayasan Jantung Malaysia, 6, Lorong Lai Tek Loke 2, Off Lorong Gurney, 54100 Kuala Lumpur. Tel: 03-2693 4709 Fax: 03-2693 3267  
Email: jantungg1@streamyx.com Website: www.yjm.org.my



# 6.2 Million

Malaysians have

## High Blood Cholesterol\*



The Key Towards A  
**Healthy Heart**



MS 1500:2009  
1 076-07/2012

Take good care of your heart now by adopting  
a healthy lifestyle & diet high in soluble fiber and low in fat

**A Safe & Drug-Free Way** to Help Reduce your  
**Cholesterol** with daily intake of 3g Beta-Glucan from Oats

Message by Yayasan Jantung Malaysia  
(The Heart Foundation of Malaysia):



Take 3g of beta-glucan (soluble fiber)  
from oats daily, as part of your low fat  
and low cholesterol diet to help  
**Reduce Cholesterol.**

Available in all leading pharmacies nationwide.

\* Source: National Health & Morbidity Survey (NHMS), 2011




...from Nature to you!

**Oat BG22™**

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