

# Heart Beats

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## Rising BMI Linked to Higher Mortality

### Risk Factors for

#### Coronary Heart Disease

1. Cigarette Smoking
2. Diabetes
3. Hypertension
4. High Cholesterol
5. Age (male >45, and female >55)
6. Family History
7. Women with Premature Menopause (with no estrogen replacement)
8. Sedentary lifestyle

### BMI (Body Mass Index) is a reflection for overweight.

Two new studies appearing in the *New England Journal of Medicine (NEJM)* suggest that even small increases in BMI can increase risk of mortality [1,2].

The studies studied BMI and death in more than half a million US men and women from the **National Institutes of Health AARP** cohort who were between the ages of 50 and 71 at study enrollment. Over a 10-year follow-up, more than 61 000 participants died. When stratified by BMI, death rates were highest in the highest and lowest categories of BMI, at all age groups, with risk of death substantially increased in people with BMI higher than 30.

"The main results of this study are that people who are overweight have a moderately increased risk of premature death and people who are obese have a greatly increased risk of death

1. Adams KF et al, *N Engl J Med* 2006; 355:763-778
2. Jee SH, et al. *N Engl J Med* 2006; 355:779-787

### Inside this issue:

Aspirin	2
Hormonal replacement	2
Eating fish	2
Exercise duration	3
Coffee consumption	3
Who should take statin	3

## CRP: C-Reactive Protein Predict Cardiovascular Events

Predicting cardiovascular event in middle-aged and older men and women, becoming crucial tool in reducing cardiac events, especially in patient who has average traditional risk factors.

C-Reactive protein is becoming a popular tool, and used more often lately based on the data supporting its importance in predicting cardiovascular events (MI and strokes).

C-Reactive protein and LDL-C (the bad cholesterol) were obtained in a 27,929 women participating in the Women's health study (WHS).

The patient with low LDL-c and low CRP had the lowest cardiac events, on the other hand

- High LDL-C and Low CRP or
- Low LDL-C and High CRP

Both had a 50% increase in cardiac events.

When CRP increased to more than 3 mg/L the relative risk increased tremendously.

**The CRP level is a stronger predictor of cardiovascular events than the LDL-C level. This data make CRP an important predicting factor for cardiac events especially in women and older men.**

Trial of statin treatment for high CRP is still pending. *N Engl J Med* 2002, 347

*“Women should benefit from Aspirin as much as men”*

*‘Aspirin is crucial in diabetic patient as coronary disease patients’*

### Who should take aspirin to prevent coronary events?

Aspirin’s antiplatelet effect is proven beyond any doubt how helpful in preventing cardiovascular events in high risk patients.

Patients older than 55 years, who have diabetes, hypertension or high cholesterol, have a higher chance of cardiac events and should be on aspirin.

The current recommended dose is 75-150 mg per day (this dose showed the same benefit as the higher dose of 325 mg).

Aspirin should be considered unless there is a major contra indication.

### Hormonal Replacement in Postmenopausal women.

The Women’s health Initiative (WHI) studied about 160,000 women 50-79 years old for more than 5 years, with a combined treatment of estrogen and Progestin (HT) and came with the following summary:

*“Overall health risks exceeded benefits from use of combined estrogen + progestin among healthy post menopausal women”*

- HT group had increased risk of breast cancer by 26%
- HT group had increased cardiac events by 29%
- HT group had increased chance of stroke by 41%
- No significant improvement in life quality post menopausal
- HT had a good effect to lower LDL-C (the bad cholesterol) and increase HDL-C (the good cholesterol)

The result indicate this regimen of combined therapy should not be initiated or continued for primary prevention.

*WHI. JAMA 2002;288*

### Why we should eat more fish?



#### **Fish consumption decreases the risk of sudden death in men.**

Fish consumption will decrease heart rate, reduce blood pressure, platelet reactivation, triglyceride, and inflammatory cytokines (which play a role in cardiovascular events).

It is suggested to eat fish minimum once a week.

*dallongeville. Circulation 2003;108*

#### **Fish, omega-3 intake has a protective effect In diabetic women.**

Long chain omega-3 fatty acid in different kind of fish was studied based on the kind and weight of fish meals.

Higher consumption of fish led to significant reduction in Coronary heart disease.

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***We should eat fish minimum once a week***

## Prediabetes is more common than what we think

According to the American Diabetes Association, 41 million people in the US aged 40-74 years have prediabetes. Many of them will develop diabetes within 10 years. Growing evidence supports that glucose elevations above normal, which are still below the threshold of diabetes, put the patient at risk for heart disease, retinopathy, and kidney dysfunction

Prediabetes is FBS (fasting blood sugar) 100-125 mg/dl. These numbers are below the threshold for diagnosis of diabetes. Prediabetes affects about 40 million American, and will lead mostly to real diabetes within 10 years.

Who should be screened for prediabetes:

1. High risk patients < 45 YO with 1<sup>st</sup> relative with dyslipidemia, smoking, CAD and diabetes.
2. Older than 45 years with body mass index (BMI) > 25
3. Gestational diabetes (Diabetes during pregnancy)
4. Vascular disease (cardiac and peripheral)

To prevent your self from becoming a diabetic and you meet the criteria for Prediabetes you should do the following:

- Life style changes
  - Weight loss to reduce BMI
  - Stop smoking
  - Control blood pressure
- Monitor blood sugar frequently
- Treat other risk factors aggressively like Statin for cholesterol managements.

## Should every one be on statin?

Three large studies (Heart protection study, Ascots study, and Prove it study, with different medicine used, all led to same conclusion that the lower LDL-C (the bad cholesterol) the better.

This raise the big question if every one with some risk factors should be on statin, even if the total cholesterol and LDL-C are close to normal. There is no guideline yet about that, but definitely the trend toward being more aggressive in using statin is becoming more evident.

*You should ask your doctor if you are not on statin if you are a candidate for it or not.*

*TCC Comments.*



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