SLEEP APNEA AND CORONARY ARTERY DISEASE

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THE METABOLIC SYNDROME (ref 1,2,3 & 4)

It is a suspected prodrome of arteriosclerotic vascular disease
It consist of : Insulin resistance, reduced levels of high-density lipoprotein (HDL) cholesterol, a high triglyceride levels and central obesity.
It has also been called syndrome X or the insulin resistance syndrome
Its cause is not known, but a genetic component is suspected

SLEEP APNEA AND THE METABOLIC SYNDROME (ref 5 & 6)

Patients with Sleep Apnea have the parameters of the METABOLIC SYNDROME which varies directly with the severity of sleep apnea
Treatment with Nasal CPAP improves or reverses the findings of the METABOLIC SYNDROME

C REACTIVE PROTEIN AND SLEEP APNEA (ref 7 & 8)

Elevations of C-reactive protein is a recognized risk factor for CAD
C-reactive protein is elevated in newly diagnosed Sleep Apnea
C-reactive protein improves with CPAP treatment of Sleep Apnea

SLEEP AND THE METABOLIC SYNDROME (ref 9))

Effect of limiting normal sleep
- The effect of normal sleep on metabolic parameters is not established
- The biologic sleep requirement for health is not known
  - Suspected to be 8 hours (Mother's report - not a double blinded study) Studies compared eight hours sleep verses six and four hours under controlled conditions
- Measurement of C-reactive protein and metabolic syndrome parameters at baseline and after sleep restriction.

Result
- Normal individuals developed the parameters of the METABOLIC SYNDROME with sleep restriction
- Return to eight hours of sleep reverses the findings.

CONCLUSIONS

SLEEP APNEA IS ASSOCIATED WITH THE METABOLIC SYNDROME AND ELEVATED C-REACTIVE PROTEIN
TREATMENT WITH CPAP IMPROVES OR REVERSES THE FINDINGS
REDUCE SLEEP PRODUCES THE METABOLIC SYNDROME

(Sept 2003)

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THE METABOLIC SYNDROME

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