NHI Dialogue

Quarterly Health Magazine of Cardio Diabetes Research Society

Vol. 1 No. 24 May - July 2012

CDRS

NATIONAL HEART INSTITUTE

Editor in Chief : V. K. Gujral

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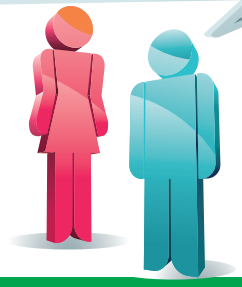

Quarterly Health Magazine of
Cardio Diabetes Research Society
and
National Heart Institute
For Private Circulation Only.

Editorial Voice

Dear friends !

May comes with the summer special issue of your favourite Dialogue. You will find a balanced mix of world news, kitchen talk, case study and 'Doctor's Room' with recent interesting articles in the medical press.

Thanks a lot for your 'liking' the new getup and content as also for your valuable suggestions.

Hope you enjoy reading and keep in top fitness !

Your's

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Are Diabetics Overmedicated ?

– CDRS counselling services

Of course, that means eating right, exercising and aiming for a healthy weight. But it also means learning how to work closely with your medical team regarding medication decisions. Over 80% of people with diabetes take medications for glucose control, including 100% of patients with type 1 diabetes (who require insulin medication for survival).

Our professional focus is lifestyle coaching for type 2 diabetics. we have consistently and passionately urged people with type 2 diabetes to do all they can to maximize the power of lifestyle change by learning how to adopt an ambitious eating and exercise strategy, aiming to achieve remission (normal glucose without medication) or get as close to remission as possible, on minimum medication .

When glucose levels cannot be adequately controlled (HbA1c greater than 7%) by eating right and exercise, then medications are crucially important for reducing the risk of diabetic complications such as visual loss, kidney failure, neuropathy, foot ulcers, limb amputation, stroke and heart attack. We know from clinical trials that using medication to lower the A1c down to 7% helps reduce the risk of such complications, and helps prolong survival in certain patients. We also know from clinical trials that using multiple medications to push the A1c much below 7% has NO FURTHER ADVANTAGE, although there may be advantages in certain patients.

It is a mistake to conclude that there is no point pushing the A1c below 7%. Observational studies suggest diabetics with A1c around 7% are still at about double the risk for complications as diabetics with an A1c below 6%. Unfortunately, using drugs to achieve that improvement is a limited strategy. lifestyle change, aiming to push the A1c below 6%, is almost certainly worth striving for whenever possible.

Most people with diabetes need cholesterol drugs to reach the optimal levels. We know from clinical trials that if the LDL (bad) cholesterol is over 100 mg/dL (or the C-reactive protein level, a marker of atherosclerosis, is over 2.0 mg/L), patients with diabetes live longer and/or have fewer heart attacks if they use statin drugs to push the LDL (bad) cholesterol well below 100 mg/dL, and the ideal may be around 70 mg/dL.

So we really have mixed feelings about whether diabetics are “overmedicated” because we have two simultaneous problems. On the one hand, we have a large proportion of people who are “undertreated” because they are not meeting A1c and cholesterol targets. On the other hand, we are concerned about the common scenario where drugs serve as an excuse to avoid eating right and exercising.

It is very easy for health care providers and patients to rely on medications to get the numbers in line, without paying due attention to lifestyle change. The drugs can easily mask the problems that could be and should be addressed by lifestyle change. It is important to recognize that this is a very different situation than when a patient is making concerted lifestyle efforts, and seeing good results, but the health goals are still not being met.

Lastly, we would just like to acknowledge that we often use drugs and other treatments that have little or no benefit as reported in trials . Pharmaceutical companies sometimes exaggerate the benefits and downplay the risks of their products, and may do so via the design and interpretation of clinical trials that doctors, patients and the Food &Drugs Authority rely on to assess the risks and benefits of drugs

So, in summary, mission is to help people avoid unnecessary medication, but often medication is truly necessary to live life to the fullest.

AN EGG TODAY IS BETTER THAN A HEN TOMORROW.

– NUTRITION SERVICE OF CDRS

A farmer family enjoyed a diet that would have greatly concerned nutrition scientists in the 1970's. They ate eggs with abandon - freshly laid that morning eggs. Yet, somehow, they remained mostly slim and coronary disease free. How could this be so? The body of research from the 1970's clearly showed that egg yolks are a source of significant dietary cholesterol and that we should dramatically reduce the number of eggs in our diet to lower our cholesterol scores. This made perfect sense at the time. However, later controlled studies of egg eating and non-egg eating populations did not back up that hypothesis.

Archived in the journal of the american college of nutrition are a large number of very well referenced articles detailing modern nutritional science about eggs. Eggs are not only delicious, but they are very good for you. The yolk contains nutrients that improve your good cholesterol number - minerals, folate, b vitamins, proteins, and mono unsaturated fatty acids - all good things for cardiovascular health.

- eat an egg and enjoy some eye health from the lutien and zeaxanthin.
- eggs are a complete protein source in that they contain all eight of the essential amino acids - and the price is often much lower per serving than meat.
- of course, as with all foods, one simply needs to not go overboard in quantity. Just because one or two are good for you doesn't mean you should eat a dozen in one sitting...no matter how tasty the recipe. To get all the good stuff in an egg, you do need to eat the yolk as that's where so much of the nutrition sits ready to be used.

Imagine a tomato grown in depleted soil and one grown in well fertilized soil; which do you think would be more nutritious? The same idea is easily applied to the egg. Check the freshness dates on the carton and, if you can, do get eggs from humanely raised chickens. Crack open two eggs for your own comparison test. Open one from a cheap brand and one from a humane brand and compare the yolk. You should find that the yolk in the egg from a naturally raised chicken is larger and deeper in color which indicates a quality high nutrition egg.

Poaching an egg is a great way for a calorie counter to cook an egg as it requires no fat at all. Everyone has their favorite method. You can even get little tools and gadgets to use on the stove top to hold the egg in a perfect shape – or get a little gizmo that will poach it in the microwave for you.

If you are still unsure about how eggs and cholesterol apply to you and are concerned about adding whole eggs to your diet, try making your egg scrambles with one whole egg supplemented with a serving or so of low calorie high protein egg whites. That way you get the best of both worlds.

Your thoughts....

- do you only eat egg white or do use the entire egg?
- what is your favorite way to fix an egg?
- do you buy whatever egg is on sale or do you buy free range eggs?
- do you keep chickens so you can collect fresh eggs?
- can you tell the difference?
- do you find that eating an egg at breakfast helps keep you fuller longer?

Chocolate for Diabetics?

Chocolate is one of the world's most prized flavor sensations, and most people who are interested in healthy eating have a vague notion that chocolate might have health benefits. For example, the published a few weeks ago reports on the combined results of 21 studies with 2,575 participants showing that cocoa consumption is associated with decreased blood pressure, improved blood vessel health, improvement in cholesterol levels, and improvements in diabetes risk factors such as insulin resistance.

Unfortunately, the role of chocolate in disease prevention has proven to be complicated and controversial from both medical and ethical standpoints.

From a medical standpoint, chocolate appears to be a "mixed bag". A bar of dark chocolate contains a complex mixture of sugar, fat, cocoa, and other flavor enhancers. The sugar content is lower in dark chocolate than in milk chocolate, however it's presence certainly offsets (either partially or fully) any potential health benefits of chocolate. We don't actually know whether eating more dark chocolate is favorable for heart disease or diabetes or longevity, compared to eating less of it. The fat in chocolate is highly saturated, which is concerning as a potential accelerator of heart disease and atherosclerosis. However, much of the saturated fat is comprised of stearic acid, which does not appear to adversely affect cholesterol levels compared to other more common types of saturated fat. Still, fat is high in calories and contributes substantially to chocolate's high caloric density. It is hard to maintain a healthy weight or battle obesity when eating enough chocolate to potentially achieve health benefits from it.

Any health benefits of chocolate certainly come from the cocoa component. Cocoa contains "polyphenolicflavanoids" which are antioxidants with the potential to improve multiple heart disease risk factors. Much work is underway to better understand how these compounds work on a cellular level. In any case, most of the studies that indicate improvements in heart disease risk factors are inconclusive because they are either short-term trials that just look at risk factors rather than actual disease rates, or because they are observational studies that cannot draw conclusions about cause and effect. The matter is further complicated by the fact that many of the studies use special chocolate products that are uncharacteristically high in cocoa content and/or low in sugar, and/or sponsored by companies that sell chocolate.

The guess is that cocoa is actually beneficial, but the sugar and fat present in dark chocolate bars entirely offsets those benefits such that dark chocolate bars are "health neutral" rather than beneficial. The logical way to leverage the potential health benefits of cocoa would be to find ways to incorporate significant amounts of unsweetened cocoa powder into foods and/or beverages that do not contain excess sugar or fat. For example, make home-made shakes containing banana, cocoa powder, a few almonds (or almond milk) and a little stevia.

Unfortunately, much of the chocolate and cocoa available is produced by African children working under conditions that would be considered unethical and illegal in most Western countries. Some of the chocolate is likely produced by slave labor and efforts are underway to address this serious political problem. Fortunately, it is possible to buy cocoa and chocolate that is certified as conforming to our usual ethical standards

In the final analysis, our love affair with chocolate gets mixed reviews on multiple levels. Like many of life's potential treasures, "the devil is in the details". If we're smart about it, we can probably do a much better job learning (on multiple levels) how to properly harvest and harness the healthy aspects of this wonderful gift from "mother nature"

If You've Got Diabetes You're At Higher Risk For A Wide Range Of Skin Complications. You Can Do A Lot To Reduce Those Risks ; These Simple Diabetic Skin Care Tips Can Help.

Common Diabetic Skin Complications

+ Bacterial and fungal skin infections are a very common complication for people with diabetes, and often result when a bacteria or fungus invades a cut; scratch; dry, cracked skin; or other wounds.
+ Acanthosisnigricans is a frequent diabetes skin problem . Characterized by tan or brown, velvety skin developing at the neck, groin, and underarms, acanthosisnigricans is often a sign of insulin resistance.
+ The brown, scaly patches of diabetic dermopathy are often mistaken for age spots. Small oval or circular, and harmless, these spots tend to occur on the front of both legs.
+ In Legs, changes like ulcers, erosions, or discoloration are another common skin complication associated with diabetes and are often the result of poor circulation.

6 Diabetic Skin Care Tips

+ Get educated. One key to preventing diabetic skin problems is to understand what causes them. Talk to your doctor. Learn about diabetic skin complications, what your particular risks are, and how you can lower them.

  Control your diabetes. Getting -- and keeping -- your blood glucose within normal range can go far toward preventing common diabetic skin complications. If you're already experiencing skin issues, managing your diabetes can help prevent problems from getting worse.

  To get a handle on your diabetes, strive for a healthy weight, eat right, cut back on salt, maintain a healthy blood pressure, and exercise. That's a tall order, but talk to your health care team for support.
+ Be aware. If you suffer from diabetic nerve damage (neuropathy), you could have an infected cut, scratch, or skin puncture and not know it. Don't let a small problem turn into a big one -- be aware of your body. Check your feet, ankles, in between your toes and legs regularly for wounds that aren't healing.
+ Do something about wounds and sores. Don't neglect wound care. If you find a nick, a scratch, a small cut, anything that isn't healing or that worries you, talk to your doctor immediately.
+ Cover up. This simple first line of defense can help you avoid the cuts and scratches that can lead to infection. Whether you're gardening or walking the dog, cover your legs with long pants and your feet with flat, good-fitting shoes.
+ Practice good skin care. Keeping skin clean and dry, but not too dry, is key to good diabetic skin care.

To take care of your skin :

- Keep skin comfortably dry, especially at armpits, toes, and groin. Talcum powder can help.
- But avoid drying skin out. Skin that's too dry can crack, itch, and get infected, so prevent that by taking short, lukewarm showers or baths and using mild soaps and shampoos when you wash. Avoid deodorant or scented cleansers, which can be harsh on sensitive skin.
- Moisturize if your skin is dry. The best time to moisturize is right after a shower or bath, when skin is still moist.
- Dry well by patting gently -- don't rub -- focusing on underarms, between legs, under breasts, and between toes.

Basic skin care can go far toward helping you prevent diabetic skin complications, but if you have questions, or if a cut, scrape, or bruise worries you, don't wait, talk to your doctor or dermatologist right away.

The Doctor's Room (Recent Journal Review)

Does Reducing SBP Cut CV Risk in Patients With Diabetes?

Safety and Efficacy of Low Blood Pressures Among Patients With Diabetes :

Subgroup Analyses From the ONTARGET

(ONgoingTelmisartan Alone and in combination With Ramipril Global Endpoint Trial)

Redon J, Mancia G, Sleight P, et al, on behalf of the ONTARGET Investigators

J Am CollCardiol. 2012;59:74-83

Study Summary

This post hoc analysis of ONTARGET data was designed to determine whether blood pressure at which cardiovascular (CV) protection is achieved differs between patients with and without diabetes. The study population comprised 25,584 persons older than 55 years of age (9603 with diabetes) who had 1 or more previous CV events or had diabetes with end-organ damage. Although patients in the main trial were randomly assigned to receive telmisartan, ramipril, or both, data for the current analysis were pooled because there were no significant differences between outcome and treatment allocation. The primary outcome was a composite of CV death, myocardial infarction, stroke, or hospitalization for congestive heart failure. Secondary outcomes were each of the primary outcome components. Using Cox regression models, investigators explored the relation between baseline systolic blood pressure (SBP) divided into quartiles (95-130, 131-142, 143-154, and 155-200 mm Hg) and risk for CV, as well as the relation between outcome and the magnitude of SBP changes during follow-up, divided into tertiles, for each SBP quartile.

The primary outcome occurred in 1938 (20.2%) of diabetes patients and in 2276 (14.2%) patients without diabetes. Diabetes conferred a significantly higher CV risk (hazard ratio, 1.48; 95% confidence interval, 1.38-1.57) overall and regardless of SBP changes during treatment. In both patients with and without diabetes, progressively greater SBP reductions were accompanied by reduced risk for the primary outcome only if baseline SBP levels ranged from 143 to 155 mm Hg. There was no benefit observed for reducing SBP below 130 mm Hg except in decreasing the risk for stroke, where the relationship to SBP was progressive down to 115 mm Hg. For other outcomes, a "J-curve" was observed for the relationship between in-treatment SBP and CV events. The nadir of the J-curve for the primary outcome was approximately 130 and 129 mm Hg for patients with and without diabetes, respectively.

Viewpoint

Current guidelines of the American Diabetes Association (ADA) recommend a SBP target of < 130 mm Hg.[1] However, a post hoc analysis of the INVEST data found that reducing SBP to < 130 mm Hg did not improve CV outcomes,[2] whereas results from the ACCORD study indicated that targeting < 120 mm Hg did not reduce CV events compared with patients in whom the target was < 140 mm Hg.[3] Thus, the optimal SBP level for patients with diabetes is becoming less (rather than more) clear, at least with respect to cardiovascular disease. Intensive control of blood pressure does seem to provide protection from microvascular disease,[4,5] which in some sense only adds to the confusion. The uniquely fascinating contribution of the current study is that SBP reduction seemed to reduce CV risk only if baseline SBP levels were relatively high (143-155 mm Hg). In other words, aggressive reduction from levels in the 130-140mm Hg range may not be necessary. One important caveat is that all patients in ONTARGET had a history of CV events history or were otherwise at high risk for CV. For patients newly diagnosed with diabetes, these findings may not apply. In any case, because the apparent optimum level of SBP seemed to be about 130 mm Hg, the current ADA guideline target SBP of < 130 mm Hg remains reasonable.

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Mediterranean diet- fact or fad ?

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Mediterranean diet is a term applied to a modern nutritional pattern based on the traditional dietary pattern of the region encompassing southern Italy, Greece (notably the Greek island of Crete) and parts of the Middle East.

The most commonly understood version of the Mediterranean diet was presented, amongst others, by Dr Walter Willett of Harvard University in the mid-1990s. Based on "food patterns typical of Crete, much of the rest of Greece, and southern Italy in the early 1960s", this diet, in addition to "regular physical activity," emphasizes "abundant plant foods, fresh fruit as the typical daily dessert, olive oil as the principal source of fat, dairy products (principally cheese and yogurt), and fish and poultry consumed in low to moderate amounts, zero to four eggs consumed weekly, red meat consumed in low amounts, and wine consumed in low to moderate amounts". Total fat in this diet is 25% to 35% of calories, with saturated fat at 8% or less of calories. The principal aspects of this diet include high olive oil consumption, high consumption of legumes, unrefined cereals, fruits, vegetables, moderate consumption of dairy products (mostly as cheese and yogurt), moderate to high consumption of fish, low consumption of meat and meat products, and moderate wine consumption. Olive oil is particularly characteristic of the Mediterranean diet. It contains a very high level of monounsaturated fats, most notably oleic acid, which epidemiological studies suggest may be linked to a reduction in coronary heart disease risk. There is also evidence that the antioxidants in olive oil improve cholesterol regulation and LDL cholesterol reduction, and that it has other anti-inflammatory and anti-hypertensive effects.

The Mediterranean diet throws up an interesting paradox: that populations consuming it have a lower incidence of Coronary Artery Disease (CAD) in spite of consuming relatively higher amounts of fat than places like the US where similar amounts of fat consumption are seen. The beneficial effects accrue from the low levels of saturated fat and high levels of monounsaturated fat and dietary fiber. One main reason for this fat distribution pattern is the significant presence of olive oil. The inclusion of red wine is considered a factor contributing to health as it contains flavonoids with powerful antioxidant properties. A number of international studies have attempted to validate the positive health effects of the Mediterranean diet.

The Seven Countries Study found that men from Crete island had exceptionally low death rates from heart disease, despite moderate to high intake of fat. The Cretan diet is similar to other traditional Mediterranean diets, consisting mostly of olive oil, bread, abundant fruit and vegetables, fish, and a moderate amount of dairy foods and wine. According to a 2008 study published in the British Medical Journal, the traditional Mediterranean diet provides substantial protection against type 2 diabetes. A 2008 study published in The New England Journal of Medicine examined the effects of three diets: low-carbohydrate, low-fat, and Mediterranean. The study involved 322 participants and lasted for two years. The low-carb and Mediterranean diet resulted in the greatest weight loss, 12 lbs and 10 lbs, respectively. The low-fat diet resulted in a loss of 7 lbs. One caveat of the study is that 86% of the study participants were men. The low-carb and Mediterranean diets produced similar amounts of weight loss in the overall study results and in the men. In the remaining participants who were women, the Mediterranean diet produced 3.8 kg (8.4 lbs) more weight loss on average than the low-carb diet. A study published in the British Medical Journal in 2009 showed some components of the Mediterranean diet, such as high vegetable consumption and low meat and meat product consumption, are more significantly associated with low risk of mortality than other components, such as cereal consumption and fish consumption. A 2011 meta-analysis published in the Journal of the American College of Cardiology analyzed the results of 50 studies covering about 535,000 people to examine the effect of a Mediterranean diet on metabolic syndrome. The researchers reported that a Mediterranean diet is associated with lower blood pressure, blood sugar, and triglycerides.

Such a diet may be difficult to adopt in our Indian milieu, but the broad composition and distribution of various components could serve as a template for a more healthy, heart-friendly diet, given the soaring incidence of CAD and diabetes in our country.

RECENT : Circulating Levels of Phthalate Metabolites Are Associated With Prevalent Diabetes in the Elderly

● P. MONICA LIND, PHD ● BJÖRN ZETHELIUS, MD, PHD ● LARS LIND, MD, PHD

OBJECTIVE : Phthalates are ubiquitous industrial high-volume chemicals known as ligands to peroxisome proliferator–activated receptors (PPARs). Because PPAR-g agonists modulate insulin sensitivity and are used to treat type 2 diabetes, we investigated whether circulating levels of phthalate metabolites are related to prevalent type 2 diabetes.

RESEARCH DESIGN AND METHODS : A total of 1,016 subjects, aged 70 years, were investigated in the Prospective Investigation of the Vasculature in Uppsala Seniors Study. Four phthalate metabolites were detected in almost all participant sera by an API 4000 liquid chromatograph/tandem mass spectrometer. Type 2 diabetes was defined as the use of pharmacologicalhypoglycemic agents or a fasting plasma glucose .7.0 mmol/L.

RESULTS : A total of 114 subjects were shown to have diabetes. Following adjustment for sex, BMI, serum cholesterol and triglycerides, educational level, and smoking and exercise habits, high levels of the phthalate metabolites monomethyl phthalate (MMP) (P, 0.01), monoisobutyl phthalate (MiBP) (P, 0.05), and monoethyl phthalate (MEP) (P, 0.05), but not mono(2-ethylhexyl) phthalate, were associated with an increased prevalence of diabetes. Using the fasting proinsulin–to–insulin ratio as a marker of insulin secretion and the homeostasis model assessment-insulin resistance index as a marker of insulin resistance, MiBP was mainly related to poor insulin secretion, whereas MEP and MMP mainly were related to insulin resistance.

CONCLUSIONS : Findings In This Cross-sectional Study Showed That Several Phthalatemetabolites Are Related To Diabetes Prevalence, As Well As To Markers Of Insulin Secretion Andresistance. These Findings Support The View That These Commonly Used Chemicalsmight Influencemajor Factors That Are Regulating Glucose Metabolism In Humans At The Level Of Exposure

मेडिटेरिनियन आहार - सच्चाई या सनक?

ओ.पी. यादव, ''ए. कुंडु
सी ई ओ एण्ड चीफ कार्डिएक सर्जन
''कन्सल्टैंट कार्डिएक सर्जन
नेशनल हार्ट इंस्टीट्यूट, नई दिल्ली

मेडिटेरिनियन आहार से यहां हमारा तात्पर्य **मेडिटेरिनियन आहार** शब्दावली से है जो इटली, ग्रीस –खासतौर पर क्रेटे के ग्रीस द्वीप–क्षेत्रों और मध्यपूर्व के कुछ क्षेत्रों में प्रचलित आधुनिक पोषण की परंपरागत आहार प्रणाली के रूप में जानी जाती है।

90 के दशक के मध्य में मेडिटेरिनियन आहार की सामान्य समझ को कुछ अन्य के साथ हारवर्ड विश्वविद्यालय के डॉ. वाल्टर विलैट ने भी परिभाषित किया। 60 के दशक के पूर्वार्ध में क्रेटे के इस विशेष आहार को आधार बनाया गया। ग्रीस के अधिकांश हिस्सों और दक्षिणी इटली में भी प्रतिदिन आहार में नियमित शारीरिक व्यायाम के साथ पौधों, ताजे फलों को काफी मात्रा में आहार में शामिल करने पर जोर दिया गया। वसा के लिए ओलिव ऑयल–जैतून का तेल–दुग्ध निर्मित पदार्थों–खास तौर पर पनीर और दही–का इस्तेमाल किया गया। इसके अतिरिक्त संतुलित मछली और मुर्गा, सप्ताह में एक से चार अंडों के सेवन को शामिल किया गया। लेकिन मांस–रेड मीट–और वाइन का प्रयोग बहुत कम मात्रा में किया गया। इस आहार में कुल वसा कैलोरी 25 से 30 प्रतिशत तथा संतृप्त वसा 8 प्रतिशत या उससे कम थी।

इस आहार का मुख्य आकर्षण है ओलिव ऑयल, लेगुमास, अप्रसंस्कृत अनाज, फल, सब्जियों का अधिक सेवन, दुग्ध पदार्थों–अधिकांशतः पनीर और दही–का सामान्य सेवन, मछली का सामान्य व सामान्य से अधिक सेवन, तथा मांस और मांस से बने पदार्थों का निम्न तथा वाइन का सामान्य सेवन। मेडिटेरियन आहार की विशेषता ओलिव ऑयल का प्रयोग है। ओलिव ऑयल में काफी मात्रा में मोनो–असंतृप्त वसा, विशेषतः ओलिइक ऐसिड पाया जाता है, जिसके बारे में कहा जाता है कि इससे हृदय धमनी रोगों में धमनी के संकुचन का खतरा कम होता है। यहां इस बात के भी प्रमाण मिले हैं कि जिससे यह प्रमाणित होता है ओलिव ऑयल में पाये जाने वाले एंटीऑक्सीडेंट तत्व शरीर में अच्छे कोलोस्ट्रोल में को पैदा करतें है और इससे बुरे कोलोस्ट्रोल में कमी आती है। इतना ही नहीं यह तत्व शरीर में एंटी इन्फलेमेटरी और एंटी हाइपरटेंशन के प्रभाव को भी कम करने में सहायक होता है।

मेडिटेरिनियन आहार में एक अजीब सा विरोधाभास है। मेडिटेरिनियन आहार खाने वाले हालांकि अमरीकियों की तुलना में अधिक वसा का प्रयोग करते हैं लेकिन इसके बावजूद उनमें हृदय धमनी रोगों की दर अन्य की तुलना में काफी कम पाई जाती है। इस तरह के लाभ की वजह है इस आहार में संतृप्त वसा का कम होना तथा मोनो–असंतृप्त वसा व रेशों की मात्रा का अधिक होना। इसका सबसे बड़ा कारण है आहार में ओलिव ऑयल की उपस्थिति। रेड वाइन भी अपने फ्लेवॉनॉयड और एंटी ऑक्सीडेंटों के चलते स्वास्थ्य के लिए बहुत लाभकारी होती है। अनेक अंतर्राष्ट्रीय अध्ययनों में मेडिटेरिनियन आहार की इन विशेशताओं को रेखांकित व पुष्ट करने के प्रयास किये गये हैं।

सात देशों में हुए अध्ययन में पाया गया कि क्रेटे द्वीप के लोगों मे सामान्य या समान्य से अधिक वसा के इस्तेमाल के बावजूद हृदय रोगो से होने वाली मृत्यु दर आश्चर्यजनक रूप से कम पाई गई। क्रेटे द्वीप के लोगों का आहार भी पारंपरिक मेडिटेरिनियन आहार के ही समान है, जहां प्रतिदिन के आहार में ओलिव ऑयल, रोटी, खूब सारे फलों, सब्जियों, मछली, संतुलित मात्रा में दुग्ध पदार्थ और वाइन का समावेश होता है। सन् 2008 में ब्रिटिश मेडिकल जर्नल में प्रकाशित एक अध्ययन के अनुसार मेडिटेरिनियन आहार टाइप 2 मधुमेह के विरुद्ध सुरक्षा प्रदान करता है। इसी वर्ष दि न्यू इंग्लैंड जर्नल ऑफ मेडिसिन में

प्रकाशित एक अध्ययन में तीन आहारों –कम कार्बोहाइड्रेट, कम वसा और मेडिटेरियन के प्रभावों का परीक्षण किया। इस अध्ययन में 322 लोगों को शामिल किया गया और यह अध्ययन करीब 2 साल चला। कम कार्बोहाइड्रेट और मेडिटेरियन आहार खाने वालों का वजन काफी कम – क्रमशः 10 से 12 पाउंड तक कम हुआ। केवल कम वसायुक्त आहार खाने वालों के वजन में 7 पाउंड की कमी दर्ज की गई। लेकिन इस अध्ययन में एक कमी थी और वह यह कि इसमें 86 प्रतिशत पुरुष थे। कम कार्बोहाइड्रेटयुक्त आहार अध्ययन में शामिल सभी लोगों और पुरुषों सहभागियों में भी वजन की समान कमी दर्ज की गई। बाकी सहभागी जो महिलाएं थीं के अध्ययन में मेडिटेरिनियन आहार खाने वालों में तुलनात्मक रूप से कम कार्बोहाइड्रेट आहार खाने वालों से अधिक लगभग 8.4 पाउंड की कमी दर्ज की गई। सन 2009 में दि ब्रिटिश मेडिकल जर्नल में प्रकाशित एक अध्ययन के अनुसार मेडिटेरिनियन आहार के कुछ तत्वों जैसे सब्जियों का अधिक सेवन, कम वसायुक्त मांस और मांस से निर्मित पदार्थों का प्रयोग, अनाज और मछली का सेवन मृत्युदर में कमी लाने का अधिक जिम्मेदार है। सन 2011 में जर्नल ऑफ दि अमेरिकन कॉलिज ऑफ कार्डियोलॉजी में प्रकाशित एक मेटा–विश्लेशण के अंतर्गत 50 छात्रों द्वारा 535,000 लोगों पर किये गये परीक्षण में मेडिटेरिनियन आहार के मेटाबोलिट सिंड्रोम पर हुए प्रभावों का विश्लेषण किया गया। इस अध्ययन में शोधार्थियों ने पाया कि मेडिटेरिनियन आहार, रक्तचाप, ब्लड शुगर, और ट्रिग्लीसेराइड को संतुलित स्तर पर रखता है।

भारतीय आहार तालिका में संभवतः इस प्रकार के आहार को शामिल करना कठिन हो सकता है लेकिन इस आहार में निहित विभिन्न अत्यधिक स्वास्थदायक समश्रिणों ने इसे हृदय–मित्र आहार बना दिया है। इसे देखते हुए हमारे देश में बढ़ते हृदय–धमनी रोगों तथा मधुमेह रोगों के लिए यह काफी लाभदायक होगा इसमें किसी प्रकार का कोई संदेह नहीं।

Planning Exercise ? Learn the Heart Rate Training Facts

Heart rate training zones are calculated by taking into consideration your Maximum Heart Rate (MHR) and your Resting Heart Rate (RHR). Within each training zone, subtle physiological effects take place to enhance your fitness.

The Energy Efficient or Recovery Zone - 60% to 70%

Training within this zone develops basic endurance and aerobic capacity. All easy recovery running should be completed at a maximum of 70%. Another advantage to running in this zone is that while you are happily fat burning you may lose weight and you will be allowing your muscles to re-energise with glycogen, which has been expended during those faster paced workouts.

The Aerobic Zone - 70% to 80%

Training in this zone will develop your cardiovascular system. The body's ability to transport oxygen to, and carbon dioxide away from, the working muscles can be developed and improved. As you become fitter and stronger from training in this zone it will be possible to run some of your long weekend runs at up to 75%, so getting the benefits of some fat burning and improved aerobic capacity.

The Anaerobic Zone - 80% to 90%

Training in this zone will develop your lactic acid system. In this zone, your individual anaerobic threshold (AT) is found - sometimes referred to the point of deflection (POD). During these heart rates, the amount of fat being utilised as the main source of energy is greatly reduced and glycogen stored in the muscle is predominantly used. One of the by-products of burning this glycogen is lactic acid. There is a point at which the body can no longer remove the lactic acid from the working muscles quickly enough. This is your anaerobic threshold (AT). Through the correct training, it is possible to delay the AT by being able to increase your ability to deal with the lactic acid for a longer period of time or by pushing the AT higher.

The Red Line Zone 90% to 100%

Training in this zone will only be possible for short periods. It effectively trains your fast twitch muscle fibres and helps to develop speed. This zone is reserved for interval running and only the very fit are able to train effectively within this zone.

Heart rate variations for a given intensity

A reduction in heart rate for a given intensity is usually due to an improvement in fitness but a number of other factors might explain why heart rates can vary for a given intensity:

Dehydration can increase the heart rate by up to 7.5%

Heat and humidity can increase the heart rate by 10 beats/minute

Altitude can increase the heart rate by 10 to 20%, even when acclimatised

Biological variation can mean the heart rate varies from day to day by 2 to 4 beats/minute

Resting Heart Rate

To determine your resting heart rate (RHR) is very easy. Find somewhere nice and quiet, lie down and relax. Position a watch or clock where you can clearly see it whilst lying down. After 20 minutes determine your resting pulse rate (beats/min). Use this value as your RHR.

If you have a heart rate monitor then put it on before you lie down. After the 20 minutes check the recordings and identify the lowest value achieved. Use this value as your RHR.

The heart is a muscle so with regular exercise it will become larger and become more efficient as a pump. As a result you will find your resting heart rate gets lower so you will need to check your RHR on a regular basis (e.g. Monthly).

Calculation of a zone value

The calculation of a zone value, X%, is performed in the following way:

Subtract your RHR from your MHR giving us your working heart rate (WHR)

Calculate the required X% on the WHR giving us "Z"

Add "Z" and your RHR together to give us the final value

Example: The athlete's MHR is 180 and their RHR is 60 - determine the 70% value

MHR - RHR = 180 - 60 = 120

70% of 120 = 84

84 + RHR = 84 + 60 = 144 bpm

Training Zone Heart Rate Calculator

Please remember that any equation used to determine your maximum heart rate (MHR) is only a best guess and not a guarantee of your true MHR value. The use of an equation implies that everyone of the same age has the same MHR! To determine your true MHR you should consider conducting a Stress Test.

Heart Rate Training

Heart Rate Training is no longer a tool used only by athletes at the very pinnacle of their sport. Many athletes now use a portable heart rate monitor (HRM) yet few of us fully understand the concept of heart rate training and how to make best use of it to optimise our year round training and competition.

आज खाया एक अंडा कल मिलने वाली मुर्गी से बेहतर है

प्रेषक : सीडीआरएस पोष्टिक सेवा

70 के दशक में किसानों द्वारा खाया जाना वालो पौष्टिक आहार आज पोषण वैज्ञानिकों के लिए बड़ी चिंता का विशय हो सकता है। तब किसान नियमित रूप से हर रोज घर की मुर्गियों के ताज़े अंडों का सेवन करते थे। काफी संख्या में और पूरे अंडें खाने के बावजूद वे लोग अधिकांशतः पतले, स्वस्थ और हृदय धमनी रोगों से मुक्त रहते थे। ऐसा कैसे होता था? 70 के दशक में ही शरीर विज्ञान की खोजों में पाया गया कि अंडें में मिलने वाली जर्दी काफी मात्रा में कोलोस्टोल पैदा करती है। इस नजरिये से कहा गया कि हमें अपने आहार में अंडों की संख्या सीमित करनी चाहिए। लेकिन बाद में अंडें खाने और न खाने वालों पर हुए अध्ययनों में इस तथ्य की पुष्टि नहीं हुई।

इधर हाल में अमेरिकन कॉलेज ऑफ न्यूट्रीशन में अंडों के आधुनिक पोषण विज्ञान से संबंधित अनेक सारगर्भित अध्ययन प्रकाशित हुए हैं। उसके अनुसार अंडें न केवल खाने में स्वादिष्ट होते हैं बल्कि इनसे शरीर को आवश्यक पोषण मिलता है। इसी कारण ये हमारे लिए उचित आहार हैं। अंडों की जर्दी/योक शरीर के लिए अच्छे कोलोस्ट्रोल, खनिज, फोलेट, विटामिन बी और प्रोटीन और मोनोअसंतृप्त वसा ऐसिडों की आपूर्ति करता है। ये सभी तत्व हमारे हृदय स्वास्थ्य के लिए अच्छे हैं।

- एक अंडा खायें और उसमें उपलब्ध लुटिन और ज़ियाक्सैथिंन तत्वों के कारण अपनी आंखों को स्वस्थ बनायें
- अंडे प्रोटीन का बहुत अच्छा स्रोत होते हैं। इनमें सभी आठ आवश्यक अमीनो ऐसिड होते हैं। सबसे अच्छी बात कि ये मांस से काफी सस्ते होते हैं।
- जैसा कि सभी आहार में होता है अंडों को भी आप उचित मात्रा में खा सकते हैं। यदि एक या दो अंडे आपके स्वास्थ्य के लिए अच्छे हैं तो इसका यह मतलब नहीं कि आप उनके अच्छेपन से प्रभावित होकर एक ही बार में दर्जन अंडे खाने लगें। अंडों से पोषण चाहिए तो आप अंडे की जर्दी भी खाइए जो पोषण तत्वों से भरपूर होती है।

कल्पना कीजिए एक टमाटर सड़ी–गली जमीन में और दूसरा अच्छे उर्वरकों से युक्त जमीन में पैदा किया जाए तो आपके अनुसार कौन सा टमाटर स्वादिष्ट और पोषक होगा? यही बात अंडों पर भी लागू होती है। अंडों को खरीदने से पहले उसकी ताजगी जानने के लिए उसके डिब्बे पर अंकित तारीख पढ़ें और प्राकृतिक रूप से विकसित अंडों का ही सेवन करें। अपने संतोष के लिए दो अंडों को तोड़कर उनका परीक्षण करें। इनमें से एक अंडा सस्ते और सामान्य ब्रांड का हो और दूसरा प्राकृतिक रूप से विकसित अच्छे ब्रांड का। इन दोनों की जर्दी की तुलना करें। आप पायेंगे कि प्राकृतिक ब्रांड वाले अंडे की जर्दी अधिक बड़ी, और गहरे रंग की है जो उसकी गुणवता और अच्छे पोषण तत्वों की घोशणा करती है।

पोषकता बनाये रखने के लिए लिए अंडे को उबालना संभवतः सबसे अच्छी विधि है। इसमें किसी प्रकार की वसा का प्रयोग नहीं होता। हर व्यक्ति की खाने और पकाने की अपनी पसंद होती है। आप भी अपना मन पसंद तरीका ढूंढ और अपना सकते हैं? चाहें तो कुछ छोटे उपकरणों की मदद से अंडे को स्टोव पर सीधे रख सकते हैं या फिर उसे माइक्रोओवन में भी उबाल सकते हैं।

यदि इस पर भी आपके मन में अंडे की जर्दी को लेकर अभी तक कोई शंका रह गई हो तब भी आप अंडे का सेवन कर पोषण प्राप्त कर सकते हैं। बस? अंडे की भुजिया बनाते समय उसकी जर्दी को अलग कर सफैदी को पकायें और अंडे के पोषक गुणों का लाभ उठायें। इस तरह से आपके दोनों हाथों में लड्डू होंगे। यानी आपको कम कैलोरी के साथ उतम पोषक तत्व भी प्राप्त होंगे।

आप क्या करते हैं

- क्या आप केवल अंडे की सफैदी खाते हैं या पूरा अंडा खाते हैं?
- अंडा पकाने का आपका कौन सा प्रिय तरीका है
- क्या खरीदते वक्त आप कोई भी अंडा खरीद लेते हैं या खरीदते समय आप उसकी गुणवता का भी ध्यान रखते हैं
- क्या आप अंडे पाने के लिए स्वयं मुर्गी पालते हैं
- क्या आप दो अंडो के बीच का अंतर जानते हैं
- क्या आप जानते हैं नाश्ते में अंडा खाने से आप लंबे समय तक सेहतमंद और चुस्त रहते हैं?

मधुमेह–आहट : एक राष्ट्रीय आपदा!

–डॉ. वी. के. गुजराल

हर तीसरा भारतीय वयस्क मधुमेह–आहट से पीड़ित है लेकिन विडम्बना है कि उनमें से केवल कुछ ही लोगों को इसकी जानकारी है।

अपने तौर पर मैं, इसे एक राष्ट्रीय आपदा मानता हूं। यदि समय रहते हैं हम इस स्थिति को रेखांकित करने और इसकी रोकथाम में विफल हुए तो टाइप 2 मधुमेह के रूप में यह एक महामारी का रूप धारण कर सकता है। उस स्थिति में हम क्या कर पायेंगे?

मैं, उन सभी लोगों को जो 50 वर्ष से अधिक और मोटे हैं कहना चाहता हूं जब तक उनको परीक्षण के बाद इससे पीड़ित न होने का प्रमाणपत्र न दे दिया जाए उन्हें यह मान कर चलना चाहिए कि वे मधुमेह–आहट से पीड़ित हैं।

मधुमेह–आहट की स्थिति में ब्लड शुगर का स्तर थोड़ा बढ़ जाता है। ऐसा खासतौर पर खाना खाने के बाद होता है, पर कई मामलों में खाने से पहले भी हो सकता है। ऐसा इसलिए कि इस स्थिति में पैनक्रियास ब्लड शुगर को नियंत्रित रखने के लिए पर्याप्त मात्रा में इंस्युलिन हारमोन बनाने में अक्षम हो जाता है–आमतौर पर मधुमेह–आहट के दौरान इसमें 50 प्रतिशत की कमी आ जाती है– सामान्यतः डॉक्टर मधुमेह–आहट की जांच सामान्य फास्टिंग ब्लड शुगर स्तर –110 एमजी/डीएल–या हीमियोग्लोबिनए1सी स्तर –कम से कम 5.7 प्रतिशत– पर करते हैं। जो वयस्क 50 की आयु पार चुके हैं और मोटे हैं उनका परीक्षण विशेषतः मधुमेह–आहट/मधुमेह दोनों के लिए किया जाना चाहिए।

जो लोग मधुमेह–आहट से ग्रस्त है उनके मधुमेह टाइप 2 से ग्रस्त होने की संभावनाएं अधिक होती है। विशेषतः उस स्थिति में जब वे अपनी जीवन–शैली में परिवर्तन न करके रोग की रोकथाम के उपाय करने में असमर्थ होते हैं। सामान्य चिकित्सक यदि चाहें तो अपने रोगियों में मधुमेह–आहट के रोगियों को चिन्हित कर सकते हैं। मेरा अनुमान हैं कि यदि वे ऐसा करें तो पायेंगे कि उनके सामान्य रोगियों में 40 से 50 प्रतिशत में मधुमेह–आहट या टाइप 2 मधुमेह के लक्षण हैं। लेकिन यह विडम्बना ही है कि ऐसे बहुत कम रोगियों को उनके पीड़ित होने का पता लग पाता है। रोगियों और संभावित रोगियों यह बताया जाना बहुत जरूरी है कि वे अपनी जीवन–शैली में परिवर्तन कर, मोटोपे पर अंकुश लगा इस रोग पर नियंत्रण कर सकते हैं।

प्रयोगशालाओं की जांच–डायेबेटिस प्रिवेंशन प्रोग्राम, फिनिशि डायेबेटिस प्रिवेंशन ट्रायल– से हमें पता चलता है कि यदि समय रहते वजन कम किया जाए तो मधुमेह–आहट से लेकर मधुमेह टाइप 2 के खतरे को 4 वर्षों के लिए पीछे धकेला जा सकता है। जितना वजन कम होगा उतना ही मधुमेह का खतरा टलता रहेगा। मेरे अपने अनुभव के अनुसार जो लोग लंबे समय तक 10 प्रतिशत वजन कम करते रहते हैं वे मधुमेह–आहट को 10 वर्ष के लिए और 20 प्रतिशत वजन कम करने वाले 20 वर्ष पीछे धकेल देते हैं। इसी तरह से आप जितना अधिक वजन कम करेंगे आपको उतना ही अधिक लाभ पहुंचेगा। मैं इसका प्रमाण नहीं दे सकता लेकिन मेरे विचार से यह एक सही कल्पना है। कुल मिलाकर मधुमेह–आहट और मधुमेह टाइप 2 का संबंध वजन कम करने से है। इस पर विचार और अमल न करना हाथ आये अवसर का गंवाने के समान ही होगा।

यहां यह जान लेना भी जरूरी है कि लंबे समय तक 4 प्रतिशत वजन कम करना कोई आसान बात नहीं है। यदि रोगी पक्का निश्चय कर लें तो वे लंबी अवधि के कार्यक्रम अपना कर वांछित परिणाम प्राप्त कर सकते हैं। आज हम अपने अनुभवों के बल पर इस तरह के कार्यक्रमों को बनाने में बहुत सक्षम हैं जो किफायती दर पर वजन कम करने में सहायक होते हैं।

चिकित्सा से जुड़े हुए हम लोग यदि प्राथमिकता के तौर पर वजन कम करने में सहायक बनें तो एक ऐसे बड़े समुदाय को जिसे अपने अंदर मधुमेह–आहट होने की जानकारी नहीं एक अच्छा और लंबा जीवन जीने में मददगार हो सकते हैं। इस राष्ट्रीय आपदा से निपटने के लिए चिकित्सकों को एक बड़ी भूमिका निभानी होगी। मैं वर्तमान और भविष्य के चिकित्सकों का आवह्नान करता हूं कि वे अपनी इस जिम्मेदारी को पहचाने और उन लोगों को जो अपने अंदर उभर रहे खतरे से अनजान हैं समय रहते सचेत कर उचित कदम उठाने के लिए प्रेरित करें।

अच्छी नींद कितनी जरूरी है

किशोरों को कितनी नींद चाहिए?

हम चाहते हैं कि इस प्रश्न का उतर चिकित्सक, नींद विशेषज्ञ, और अन्य स्वास्थ्य परामर्शदाता दें। हमारा मानना है कि किशोर कम नींद लेते हैं। नींद की इस कमी के चलते उन्हें कई तरह की परेशानियों, जैसे फैसले करने में दुविधा और पढ़ाई में अच्छा स्कोर न करना आदि झेलनी पड़ती हैं। सभी मानते हैं कि किशोरों को हर रात कम से कम 9 घंटे की अच्छी नींद करनी चाहिए।

पढ़ाई में स्कोर करने और नींद को लेकर अनेक अध्ययन हुए हैं। उन अध्ययनों के परिणामों में आपस मे मतभेद है। ब्रिघम यंग यूनीवर्सिटी के अर्थशास्त्र विभाग के शोधार्थियों का मानना है कि किशोरों को मानक परीक्षाओं में बेहतर परिणाम प्राप्त करने के लिए प्रति रात्रि 7 घंटे की नींद करनी आवश्यक है। यह वर्तमान की मानक अवधि 9 घंटे है, से दो घंटे कम है।

शोधार्थियों ने इसका विश्लेषण नींद के मानक घंटों और शैक्षणिक प्रदर्शन के आधार पर किया। उन्होंने इस बात का भी पता किया कि किस प्रकार किशोरों की आयु बढ़ने का उनकी नींद और शैक्षणिक प्रदर्शन पर प्रभाव पड़ता है। उन्होंने 9 से 10 वर्ष आयु के 1,724 बच्चों की नींद आदतों और शैक्षणिक प्रदर्शन की जांच की। शोधार्थयों ने अपने आंकड़े 2002–2003 के बीच हुए राष्ट्रीय सर्वेक्षण से लिए जिसमें बच्चों उनके परिवार के अतिरिक्त उनकी नींद, स्वास्थ्य और शिक्षा संबंधी जानकारियां उपलब्ध थी।

उन्हें क्या प्राप्त हुआ? उन्होंने पाया कि उन बच्चों ने मानक परीक्षाओं के अच्छे परिणाम प्राप्त किये जिन्होंने मानक नींद की अवधि से कम नींद ली थी। उन्होंने यह भी पाया की बढ़ती उम्र के साथ बच्चों को पढ़ाई में अच्छे स्कोर प्राप्त करने के लिए कम नींद की आवश्यकता होती है। किशोरों के लिए नींद के आदर्श स्तर थेः

– 10 वर्ष के किशोरों के लिए 9 से 9.5 घंटे नींद

– 12 वर्ष के किशोरों के लिए 8 से 8.5 घंटे नींद

– 16 वर्ष के किशोरों के लिए 7 घंटे नींद

यह पाया गया कि 10 से 19 वर्ष के बीच के जिन किशोरों ने आदर्श घंटों से अधिक नींद ली उनका शैक्षणिक स्तर निम्न रहा।

लेकिन

1. सबसे पहले तो यह कि इन आकलनों के आधार पर हम यह नहीं जान सकते कि नींद किशोरों के परीक्षा परिणामों को प्रभावित करती है। हां इनके आधार पर यह अवश्य कहा जा सकता है कि नींद और परीक्षा परिणामों में कोई न कोई संबंध है पर वह इसके कारण या प्रभाव नहीं है।
2. इसके अतिरिक्त नीद के बारे शोधार्थियों ने किशोरों और उनके अभिभावकों द्वारा दिए गए विचारों और आंकड़ों पर भी ध्यान दिया। और पाया गया कि किशोरों की नींद आदतों के बारे में उनसे व उनके अभिभावकों से जानकारी से वास्तिवकता भिन्न पाई गई।
3. कुल मिलाकर शोधार्थियों ने इस अध्ययन को संकुचित कर इसे केवल किशोरों की नींद और उनके शैक्षणिक परिणामों पर आधारित किया। इस अध्ययन में किशोरों की नींद तय करते समय उनके किशोरों के अन्य पहलुओं जैसे उनके मानसिक स्वास्थ्य और शारीरिक स्वास्थ्य को ध्यान में नहीं रखा गया।

इन विषयों पर हाल के वर्षो में अनेकानेक अध्ययन हुए हैं। इन अध्ययनों में किशोरों की नींद और उनकी नींद की कमी से जनित समस्याओं पर ध्यान दिया गया है। इन सभी में एक बात निर्विवाद रूप से पाई गई है कि नींद से उपजी समस्याओं का किशोरों के मानसिक और शारीरिक स्वास्थ्य पर बुरा प्रभाव तो पड़ता ही है और साथ में वे निम्नलिखित के शिकार भी होते हैं :

– नशे की दवाओं तथा अवसाद

– उच्च रक्तचाप

– मोटापा

किशोरों की नींद और उनके शैक्षणिक परिणामों पर हुए अध्ययन के परिणाम बहुत ही दिलचस्प और आंखें खोलने वाले हैं। इस वैज्ञानिक समझ से पारंपरिक रूप से प्राप्त जानकारियों को नई रोशनी मिली है। यह ताजा अध्ययन उसका एक बहुत बड़ा उदाहरण है। इस पर अभी और आगे काम करने की आवश्यकता है क्योंकि इस पर हमारे किशोरों का मानसिक, शारीरिक स्वास्थ व बेहतर भविष्य जुड़ा हुआ है।

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With every beat of your heart, blood surges through the winding passageways that make up your circulatory system. As blood pushes against vessel walls, the walls push back—a shoving match called blood pressure. Even if you feel fine, your blood pressure may still be high. The only way to find out is to get it checked regularly.

Numbers to Know

Blood pressure is recorded as two numbers, the systolic and diastolic pressures. You'll hear your blood pressure is, say, “120 over 70” or see it written as “120/70 mm Hg.” The top line is the systolic pressure; the bottom, the diastolic The systolic pressure is higher because it is measured during a heartbeat, when the heart contracts and the pressure is at its greatest. When the heart relaxes between beats, the pressure drops and the diastolic pressure is recorded.

The American Diabetes Association (ADA) defines hypertension for people with diabetes as either a systolic blood pressure of 130 mm Hg or higher or a diastolic blood pressure of 80 mm Hg or more, on two consecutive doctor visits. A second reading is necessary because one's blood pressure tends to fluctuate depending on exercise, sleep, time of day, and emotional state. Sometimes, home monitoring may be recommended if a doctor suspects that the “white coat effect,” a measurable increase in blood pressure in the presence of a physician, is causing high readings.

Your Target

For people with diabetes, it is recommended that blood pressure be below :

130 mm Hg
80 mm Hg

Mercury Rising

Circulation is complex, and so are the causes of high blood pressure. One contributing factor is blood volume. Blood pressure rises as blood volume increases, as if your blood vessels were a water balloon being filled. This is why a salty diet may result in high blood pressure: Sodium doesn't travel in blood alone; it needs to be hydrated. As water floods into the blood to join the sodium, blood volume increases, causing pressure to rise.

Another way blood pressure rises is through the narrowing of blood vessels. Just as it's easier to drink through a big straw than a little one, blood flows more easily through larger arteries. Atherosclerosis (fat buildup on blood vessel walls), a risk factor for heart attacks and strokes, can narrow, harden, and clog blood vessels, increasing blood pressure.

Doing Damage

High blood pressure takes a toll in part because it forces the heart to struggle to keep blood flowing through your arteries. This stress can enlarge and weaken the heart. Also, as blood is forced through your blood vessels, it can damage their inner walls and lead toatheromas. These clumps of cell debris and fat can narrow the blood vessels; their accumulation is a part of atherosclerosis, which in turn causes higher blood pressure, in what can become a vicious cycle.

The eyes and kidneys are also vulnerable to high blood pressure. These sensitive organs are laced with intricate networks of blood vessels. High blood pressure can damage the delicate vessels, causing hypertensive retinopathy (eye disease) or hypertensive nephropathy (kidney disease). Kidney damage can start its own vicious cycle; as the kidneys become less adept at removing sodium and waste from the blood, the volume of blood grows, heightening pressure. In a person with diabetes, all of this adds to the extra risk that the disease already poses for the eyes and kidneys. Even if your blood glucose control is good, an eye exam or a urine test may reveal signs that high blood pressure is damaging your eyes or kidneys, respectively.

The lowdown on high blood pressure

In people with mild hypertension (systolic pressure of 130 to 139 mm Hg, diastolic of 80 to 89), ADA recommends starting with diet, exercise, and other changes to bring the pressure down. Studies have shown that cutting down on salt, losing excess weight, reducing alcohol consumption, getting more exercise, and eating more fruits, vegetables, and low-fat dairy products may help get blood pressure in line. Some research suggests that having low potassium may increase blood pressure, but talk with your doctor before taking a supplement : Too much potassium may be harmful for seniors and those with kidney disease. A healthy, well-balanced diet should provide all the potassium you need. In people with more severe hypertension or when blood pressure remains high after three months of lifestyle changes, your doctor may decide that medication is necessary.

There are numerous blood pressure medications, many of which are also used for other conditions, such as heart failure, angina, and arrhythmia. Many people, especially those with diabetes, require multiple medications to reach their blood pressure targets.

Because these medications lower blood pressure, their side effects may include drowsiness, light-headedness, and erectile dysfunction. Special care must be taken during pregnancy, so be sure to let your doctor know if you are or plan to become pregnant. Here is a rundown of common blood pressure–lowering medications; many of them are also available as combinations, with two types of medication in a single pill.

Taking multiple meds can be a headache, and cutting salt out of your diet may seem like tough going. But figuring out a way to keep your blood pressure down—for the sake of your eyes, kidneys, and heart—is just too important to ignore. A healthy blood pressure is something you and your doctor can achieve. So maybe it's time to put a little gentle pressure on yourself and get started.

Pre–diabetes : A National Emergency!

– Dr. V.K. Gujral

One in three Indian adults hasprediabetes, and to make matters worse, only a small fraction of these people know it!

I consider this to be a national emergency. If we fail to detect and reverse prediabetes, then how are we going to stand any chance at reducing the growing epidemic of type 2 diabetes?

I caution nondiabetics who are overweight and over age 50 to assume they have prediabetes until proven otherwise.

Prediabetesinvolves mildly increased blood sugar levels, most commonly after meals but sometimes also in the fasting state. This occurs because the pancreas organ can no longer produce enough insulin hormone to sustain normal blood sugar levels (usually about 50% loss of function in prediabetes). Doctors usually diagnose prediabetes with a simple fasting blood sugar level (at least 110 mg/dL) or a hemoglobinA1c level (at least 5.7%). Adults who are overweight or over age 45 should typically be screened for prediabetes/diabetes.

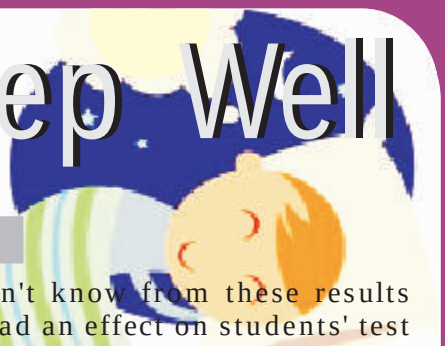
Individuals with prediabetes typically go on to develop type 2 diabetes, especially if they do not take steps to delay or prevent this disease via lifestyle changes. General physicians have a great opportunity to uncover the huge number of prediabetics out there. I'll estimate that 40%-50% of a typical Screening Drive results showprediabetes or type 2 diabetes, but that the minority of these patients are diagnosed. It is crucially important to find and warn these patients because lifestyle change, especially weight loss, can really make a tremendous difference in delaying or preventing progression to type 2 diabetes.

We know from clinical trials (Diabetes Prevention Program, Finnish Diabetes Prevention Trial) that long-term weight loss in the 4% range delays the progression of from prediabetes to type 2 diabetes by about 4 years longer than when no weight loss occurs. The greater the weight loss the longer one can expect to delay diabetes. In fact, my working assumption is that prediabetics who achieve long-term weight losses of 10% will delay diabetes by about 10 years, and those who maintain weight losses of 20% will delay diabetes by about 20 years,and so on. I can't prove it, but I think this is a reasonable guess. The crucial point is that the rate of progression from prediabetes to type 2 diabetes is exquisitely sensitive to weight loss, and failure to recognize and capitalize on this fact amounts to a shamefully wasted opportunity in my view.

Now, we all recognize that sustaining weight losses on a long-term basis, even in the 4% range, is no easy feat. However, patients stand a much better chance if they participate in a formal program designed for long-term results. We now have much greater experience in designing programs that can cost-effectively achieve this degree of weight loss.

If we in the medical profession make it a priority, we can offer good weight loss support and a better chance at living a fuller life, to the enormous number of undiagnosed prediabetics out there who would like the chance to be found and helped. The medical profession has a pivotal role in addressing this national emergency. I challenge current and future leaders to recognize and act on the alarm I and others are sounding now, in the early stages of catastrophe.

Sleep Well



How Much Sleep for Teens ?

It's a mantra we've come to expect from physicians, sleep experts, and other health professionals: teenagers areshort on sleep. This lack of sleep contributes to a range of problems, including poor decision making and reduced academic performance. As a result, widely accepted guidelines for teens include getting in nine hours of sleepper night.

A new study challenges these standard guidelines for how much sleep is optimal for teenagers, at least when it comes to academic performance. Researchers in the economics department at Brigham Young University found that teens perform better on standardized tests when they received seven hours of sleep per night. That's two hours less than the current guidelines, which recommend approximately nine hours of nightly sleep for adolescents.

Researchers analyzed the amount that teens slept on a nightly basis in relation to how the teens scored on standardized tests. They also examined how the relationship between sleep and test scores changed as teenagers grew older. They examined sleep habits and test scores of 1,724 students ages 10 to 19. Researchers took their data from a national survey conducted in 2002-2003, which collected information from children and families on a wide range of topics, including sleep, health, and education.

What did they find? Teens scored highest on standardized tests when they had less sleep than federal guidelines recommend. They also found that teens needed less sleep with age to achieve their highest test scores. Optimal levels of sleep for teens were:

- 9 to 9.5 hours for 10 year olds.
- 8 to 8.5 hours for 12 year olds.
- 7 hours for 16 year olds.

For teens across the 10-19 age spectrum, sleeping less than or more than these optimal amounts was associated with lower test scores.

BUT

1) First, we can't know from these results that sleep had an effect on students' test scores. The results of this study illustrate a relationship between sleep amounts and test achievement and not a cause and effect.

2) In addition, the data that the researchers relied upon came from self-reported accounts of sleep habits from children and their parents. This leaves open the likely possibility that in some—if not many—instances, teenagers' actual sleep habits were different than what they or their parents reported.

3) Most important, and acknowledged by the researchers themselves, this study kept a narrow focus: to evaluate the amount that teens slept in relation to their performances on standardized tests. This research did not take into account any other aspects of teens' mental and physical health when determining "optimal" sleep.

In recent years there have been numerous studies that show the risks of sleep problems and low sleep among teens. There's evidence that indicates that sleep difficulties put teenagers at elevated risk for a range of mental and physical health problems, including:

- Drug abuse and depression.
- High blood pressure.
- Obesity.

The results of the study on teen sleep and test results are interesting and thought provoking. Among the things scientific inquiry does best is to challenge accepted truths and conventional wisdoms. This latest research is a great example of this, and raises questions worth further pursuit. At the same time, the stakes for our teens are high, in terms of their health and well being.

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