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This document is divided into two parts

1) The **HIGHLIGHTS AND *EDITORIAL COMMENTS***

HIGHLIGHTS condenses the contents of studies, and allows a quick review of pertinent points of each article.

EDITORIAL COMMENTS *are the editor's assessments of the clinical practicality of articles based on his long-term review of the current literature and his 20-year publication of Practical Pointers.*

2) The main **ABSTRACTS** section is designed as a reference. It presents structured summaries of the contents of articles in much more detail.

I hope you will find *Practical Pointers* interesting and helpful. The complete content of all issues for the past 5 years can be accessed at www.practicalpointers.org

Richard T. James Jr. M.D.
Editor/Publisher.

HIGHLIGHTS AND *EDITORIAL COMMENTS* MAY 2006

Identified More Problems; Increased Patient Satisfaction

5-1 EFFECT OF PATIENT COMPLETED AGENDA FORMS AND DOCTORS' EDUCATION ABOUT THE AGENDA ON THE OUTCOME OF CONSULTATIONS

"Although identification of why the patient has attended is a key objective of the consultation, doctors commonly fail to achieve this."

Enhancing patients' ability to participate in the consultation improves communication between patient and doctor.

This study used an agenda form in which patients write down the reason for the consultation, and what they expect from it. The form is completed just before the consultation, and then presented to the doctor.

Randomized, controlled trial entered and followed 45 general practitioners and 857 patients. Half of the patients were randomized to the agenda form; half to no agenda forms (controls).

Results:

	No agenda form	Agenda form
Duration of consultation (min)	7.1	8.0
No. of problems identified	1.7	1.9
Time per problem (sec)	306	295

When patients made their own agenda explicit in the consultation:

A. Doctors identified more problems.

B. Consultations lasted longer. (Due to more problems identified.)

C. Patients were more satisfied with the depth of the consultation.

Neither intervention decreased the number of "By the way, doctor" presentations.

For each consultation session of 18 patients (*I presume an estimated day's work*), the combined interventions identified an additional 9 problems, and sessions were 34 minutes longer.

Although this increased doctor's workload, it represents a pool of unrecognized need among patients.

The agenda form printed on a single page:

To help your doctor:

1. Please make a list of the points you want to raise.

2, Do you have any thoughts about these points? (For example, the cause of your problem)

3. Do you have any questions?

4. What would you like the doctor to do? (please circle yes or no)

A. Prescribe	*Yes*	*No*
B. Explain	*Yes*	*No*
C. Investigate	*Yes*	*No*
D. Write note	*Yes*	*No*

5. Other (please say what it is).

I believe some primary care clinicians and patients will find this approach helpful If the list of problems is long, the doctor may create an agenda and sort the problems in order of importance, and consider some of them at return visits.

I was surprised that the number of "By the way, doctor" presentations by patients was not decreased.

Far additional commentary on "By the way, doctor" see Practical Pointers November 2005

An Expression Of Care And Caring

5-2 EFFECT OF TELEPHONE CONTACT ON FURTHER SUICIDE ATTEMPTS IN PATIENTS DISCHARGED FROM AN EMERGENCY DEPARTMENT

Psychiatrists contacted patients by telephone one month after an attempted suicide. This reduced the proportion of patients who re-attempted suicide. Read the full abstract.

This, of course, does not apply to primary care. I abstracted the article to comment on an application which is basic to an expression of care and caring in primary care.

Patients, especially those who have had some serious illness or have been referred to specialists by the primary care clinician (PCC), are most grateful when they receive a follow-up phone call from the PCC inquiring about their progress and status. Such contact will enhance the patient-doctor relationship. Patients will remember it. I believe it is well worth the time spent. Similar expression of care and caring can be expressed if, after the death of a patient, the PCC makes a personal visit to the family.

"One Billion Deaths from Tobacco in the 21st Century"

5-3 TOBACCO: Deadly in Any Form or Disguise

In 1950, Doll and Hill, in their study of British doctors, were the first to determine that tobacco is harmful. The follow-up of the study closed in 2004, when all the participating smokers were dead, and some 6000 non-smokers remained alive. The data suggest that between one half and two-thirds of the persistent smokers died because of their habit.

"No form of tobacco use has yet been shown to be safe, and the world would be a healthier place without such products." Cigarettes and other forms of burnt tobacco, including pipes and cigars, are carcinogenic. Exposure to environmental tobacco smoke is carcinogenic. Exposure to smokeless tobacco is carcinogenic.

In the USA, there are still about 1 million new smokers a year. Of these, about half will be killed by tobacco if they do not stop, and half of these deaths will be in ages 35-69. Around the world, it can be expected that the number of tobacco deaths will exceed 10 million every year unless 20 million current smokers stop. The effect of stopping is clearly beneficial in terms of limiting the increases in death from cardiovascular disease and chronic lung disease.

This commentary is signed by 34 international experts from 24 different countries. Does this report exaggerate the problem? If it does, I believe the exaggeration is minimal.

This commentary is timely. The Surgeon General of the U.S. just issued a very strong warning about passive (involuntary; secondhand) smoking. More than 120 million Americans are regularly exposed to this hazard. "Secondhand smoke is a serious health hazard." (The Charlotte Observer, June 28, 2006)

Would it be helpful if primary care clinicians posted this article in their waiting rooms and distributed it to select patients? It is never too late to stop!

"Current Smoking And Exposure To Passive Smoke Were Positively Associated With Increased Risk"

5-4 ACTIVE AND PASSIVE SMOKING AND DEVELOPMENT OF GLUCOSE INTOLERANCE AMONG YOUNG ADULTS: The CARDIA Study

This prospective cohort study, begun in 1985-86 and continued for 15 years, assessed whether active and passive smokers (over 4500 men and women age 18-30 at baseline; median age = 25) are more likely to develop clinically relevant glucose intolerance or diabetes.

No subjects had glucose intolerance at baseline (defined as fasting glucose > 100 mg/dL, or taking antidiabetes drugs).

Seventeen % of participants developed glucose intolerance at fifteen years. Three % developed diabetes.

After adjustment for possible baseline confounders, there was a graded association between smoking exposure and development to glucose intolerance:

	% glucose intolerance	Hazard ratio
Current smokers	22%	1.65
Previous smokers	14%	1.17
Never smokers; passive smoke	17%	1.35
Never smokers; no passive smoke	12%	1.00

Pack-years of smoking was associated with risk of developing glucose intolerance—increasing by 18% for every increase of 10 pack-years.

Tobacco exposure was associated with development of glucose intolerance over a 15-year period with a dose-response effect. Passive smoke is a risk factor in never-smokers.

This is my first encounter with this association. This report is timely. The Surgeon General of the United States just issued a strong statement describing the dangers of passive smoke, and warning against it.

Tobacco smoke has been associated with increased risk of macular degeneration in the elderly. I do not know if there is an association with passive smoke.

"When Added To Oral Agents, It May Obviate The Need For Insulin Injections Entirely".

5-5 INHALED INSULIN

In January 2006. the FDA approved the first inhaled insulin for treatment of both type 1 and type 2 diabetes (**DM-1** and **DM-2**).

For DM-1, inhaled insulin is likely to be accepted by both the public and the medical community. "It is perhaps surprising how frequently individuals with longstanding type 1 diabetes, who have adapted to multiple

daily injections, are excited by the potential of needing only a single, long-acting insulin injection daily, with inhaled insulin replacing pre-meal injections.

For DM-2, the market for inhaled insulin is more complex. Newer, oral agents are under development. Insulin, regardless of route of administration, is the most potent glucose-lowering therapy. It has been used for 80 years. Its side effects are well known. Inhaled insulin has the potential to be beneficial in the long run.

Expense may be a problem for many.

This editorial lists 12 clinical points Read the full abstract

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The editorialist seems to be enthusiastic. Among patients for whom cost is no problem, I believe many will welcome and use inhaled insulin. Worldwide, for the great majority of patients with diabetes, cost will prohibit use.

Large Prospective Study: Moderate Alcohol Consumption Reduces Risk of CHD in Middle-Age

5-6 PROSPECTIVE STUDY OF ALCOHOL DRINKING PATTERNS AND CORONARY HEART DISEASE IN WOMEN AND MEN

Prospective epidemiological studies have reported a lower risk of coronary heart disease **(CHD)** among consumers of *moderate* amounts of alcohol as compared with abstainers. Results consistently imply that the pattern of drinking is important, and that steady (eg, daily; several times a week) drinking is beneficial.

This study determined the association between drinking patterns and CHD among middle-aged men and women.

The amount of alcohol intake was inversely associated with CHD among *both* men and women. Adjusted hazard ratio of CHD *decreased* progressively in a graded manner as number of drinks per week *increased* from 0 to 7, to 14, and to >28 in women and to > 35 in men.

Among men, drinking frequency (days per week), not amount of alcohol intake, seems more important in reducing risk of CHD. Among women, alcohol intake (total amount per week) may be the primary determinant of the inverse association.

It may be that heavy drinkers and abusers of alcohol have less risk of CHD than abstainers and moderate drinkers. The risks of heavy drinking far outweigh any benefit.

Some commentators recently have doubted the association between frequent and moderate alcohol consumption and reduction in risk of CHD. I believe the important message of this study is a confirmation of previous studies reporting benefit of reducing risk of CHD (for both men and women) who drink frequently but moderately. Women (and men) who binge drink are obviously at great risk of adverse effects of alcohol. Whether this reduces risk of CHD is irrelevant.

I do not believe the observation that amount of drinking in women confers less risk of CHD is clinically important. Frequency of moderate drinking in women (as in men) is associated with lower risk of CHD, and may be clinically important. I believe the same advice pertains to women and men (and physicians as role models): If you wish to drink, and enjoy drinking, have one drink before dinner, or one glass of wine with dinner.

Screening The Very Elderly Results In Only 15% Of The Expected Gain In Life Achieved In Younger Persons.

5-7 SCREENING COLONOSCOPY IN VERY ELDERLY PATIENTS

Although the prevalence of colonic neoplasia increases with age, the benefits of screening (and removal of adenomas and cancers) in the elderly may be limited in part because very elderly patients have short life expectancies.

This study compared estimated life-years saved with screening colonoscopy in elderly patients vs younger patients.

A statistical analysis calculated life expectancy based on several conditions:

A. If no neoplasm found

B. If a neoplasm was found and removed

C. If a neoplasm was present but not removed

D. Expected years lived during polyp lag time (time for adenoma to change into cancer).

E. Life expectancy after cancer diagnosis.

Compared life expectancy of each screened patient with the life expectancy of that same patient if he or she had not been screened.

Age	50-54	75-79	80 and over
Remaining life expectancy (mean y)	29	10	8

In the over 80 age group, gain in mean life expectancy was much lower than in the 50-54 age group. (0.13 years vs 0.85 years). This was despite the greater frequency of neoplasia in the older group.

The main target of colonoscopy screening is detection and removal of adenomas. There is a long lag time before adenomas can develop into cancer and cause death. In very elderly persons, the potential benefit of removal of an adenoma may be smaller than in younger patients because the elderly die of other causes before the adenoma can develop into cancer.

Although the prevalence of colonic neoplasia increases with age, colonoscopy screening in the very elderly results in only 15% of the expected gain in life achieved in younger persons.

"Screening colonoscopy in very elderly patients should be performed only after careful consideration of potential benefits, risks and patient preferences."

By definition, screening, pertains to asymptomatic patients. Outcomes will differ in those with symptoms.

Obviously, we have to stop screening sometime. When depends on the individual. Some elders are more vigorous than others and have a longer life expectancy. Some fear cancer and welcome the reassurance of a negative colonoscopy. Some have prior adenomas and a family of colorectal cancer.

The article outlines some additional problems with colonoscopy in the very elderly. I would be wary of adverse effects of anesthesia (including "conscious" anesthesia) on cognition of older patients.

There should be restraint in screening the elderly.

Should We Treat With Drugs Alone, and Ignore Other Risk Factors?

5-8 ASPIRIN PLUS DIPYRIDAMOLE VERSUS ASPIRIN ALONE AFTER CEREBRAL ISCHEAMIA OF ARTERIAL ORIGIN

This remarkable multicountry, secondary prevention trial randomized over 2700 patients for 3.5 years to aspirin alone (median 75 mg daily), or aspirin + dipyridamole (200 mg twice daily, mainly as extended release). All had experienced a TIA or a non-disabling (*minor)* ischemic stroke.

At randomization, 18% had diabetes; 60% had hypertension; 47% had hyperlipidemia; and 36% smoked.[1]

More patients on the combination discontinued trial medication (470 vs 184) mainly due to headache, a common adverse effect of dipyridamole.

Primary outcome = a composite of non-fatal stroke, non-fatal myocardial infarction, or death from vascular causes.

Results (3.5-y)	Combined A + D (n = 1316)	Aspirin alone (n = 1376)	Absolute diff	NNT 3 y
Primary outcome	13%	16%	3%	33

The authors conclude: "Our findings show that the combination of aspirin and dipyridamole is more effective than aspirin alone in the prevention of new serious vascular events in patients after non-disabling cerebral ischaemia of presumed arterial origin."

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1 *There was no mention about efforts to treat these major risk factors. I presume the investigators intervened at least in some patients. Trials such as this, which randomize subjects to drug vs drug, or drug vs no-drug,, consider only the effect of the drug. This is not the way primary care works. In the real world of practice, every effort is made (or should be made) to reduce all risk factors in addition to prescribing a presumably helpful drug. I believe there would have been a considerable difference in outcomes in this study (with less benefit from the combined group vs aspirin alone) if all risk factors were treated. And, a much larger cohort of subjects would have been needed to determine any difference in outcome.*

Should primary care clinicians advise the combination to this subset of patients? I believe that many primary care patients would not adhere to the regimen for 3 years. A large number would withdraw.(Primary care patients are much less adherent than subjects in studies.) In addition, others would withdraw because of headache and bleeding. Informing patients that, over 3 years, there is only one chance in 33 of benefit at a cost of over $2300 would discourage some.

Clinically Significant Increase In Walking Distance

5-9 RAMIPRIL (An ACE Inhibitor) MARKEDLY IMPROVES WALKING ABILITY IN PATIENTS WITH PERIPHERAL ARTERIAL DISEASE

Randomized, double-blind placebo-controlled trial followed 40 patients (mean age 66; almost all male) with symptomatic peripheral artery disease (**PAD**). None had a history of diabetes or hypertension.

Forty two % were smokers. Many had hypertension. In some, LDL-cholesterol levels exceeded 100 mg/dL. Only 27% were on lipid-lowering therapy.

Asked participants to refrain from exercise, smoking, and caffeine for 24 hours before testing.

Randomized to: 1) ramipril 10 mg daily, or 2) placebo for 24 weeks.

Measured pain-free and maximum walking time during a standard treadmill test.

Completed a Walking Impairment Questionnaire. (**WIQ**)

Treadmill test

At baseline:	Placebo	Ramipril
Median pain-free walking time (s)	168	160
Maximum walking time (s)	244	234
At 24 weeks		
Median pain-free walking time (s)		387
Maximum walking time (s)	234	685

The WIQ in the ramipril group indicated improvement in scores of walking distance, speed, and stair climbing. The increase in walking distance (calculated as a mean of 400 meters in the ramipril group) is clinically significant and would appreciably affect daily functional capacity. The improvements in the WIQ scores were consistent with the measured improvements, demonstrating that ACE improves the ability to perform daily activities.

I do not know why the trial excluded patients with diabetes and hypertension.

Note that the trial was drug vs no-drug. It did not address risk factors which primary care clinicians would treat in addition to drug therapy. Smoking cessation was not stressed. (Subjects were asked to stop smoking for 24 hours before testing). Dyslipidemia was not aggressively treated. Outcomes may have differed if these risks had been treated, and ACE therapy may not have resulted in as great an improvement.

I would be willing to add an ACE as a therapeutic trial in these patients.

"Later Adolescence Is A Life Stage With Unique Associations Between Poverty And Overweight."

5-10 TRENDS IN THE ASSOCIATION OF POVERTY WITH OVERWEIGHT AMONG ADOLESCENTS 1971-2004

Does socioeconomic status (eg, poverty) affect prevalence of overweight?

The US National Health and Nutritional Examination Surveys (NHANES) conducted four surveys between 1971-2004, and examined trends in prevalence of overweight among adolescents ages 12 to 14 and 15-17.

For a family of 4, the US Census Bureau's poverty threshold in 2004 was $19,157. In the 4 surveys, the percentage of adolescents living in poverty ranged from 16% to 22%.

Prevalence of overweight in NHANES 1999-2004 age 15 to 17:

	Not poor	Poor
Overall	14%	23%
Non-Hispanic white	12%	21%
Non-Hispanic black	22%	25%

Later adolescence is a life stage with unique associations between poverty and overweight. Food choices and physical activity in adolescence differ considerably from those in early childhood and adulthood.

Among 15 to 17 year-olds, trends in overweight showed a greater impact among families living below the poverty line. Increased consumption of sweetened beverages, physical inactivity, and breakfast-skipping may contribute to the difference.

What to do about it? I doubt much can be done about the obesity problem in the near future. It is an extremely complex, multifaceted socio-economic problem, not merely a heath problem. It will take a sea change.

I abstracted this article mainly to express my belief that primary care clinicians should have, and express, compassion and understanding of the problems of those living in poverty. They do indeed live in more dangerous and unattractive neighborhoods. This reduces opportunities for physical activity. They cannot afford the SPA. They may have less understanding about nutrition. They do not have the funds to purchase healthy foods. They may accept the perceived instantaneous pleasure of high fat, high calorie foods. It is not fair to tell a poor overweight person that "It is all your fault. You should do better"

As one article I previously abstracted commented—advising the poor to eat healthy and get more exercise does not lead them to eat mangos and play tennis.

"Are They Effective? Are They Safe?"

5-11 ALTERNATIVES TO ESTROGEN FOR TREATMENT OF HOT FLASHES

Hormone replacement therapy (**HRT**) is the most effective treatment. Given the efficacy of estrogen, are other treatments needed?

Caution about HRT has been raised because the large Women's Health Initiative **(WHI)** reported that, among generally healthy women, estrogen-alone increases risk of venous thromboembolism, and stroke; and combined estrogen + progestin increases risk of thromboembolism, stroke, coronary events, and breast cancer. The absolute increase in risk is small—less than 1 in 1000 women per year. Nevertheless, some women would prefer safe alternative treatment even if it is not as effective as estrogen.

A rigorous systematic review in this issue of JAMA compared non-hormonal therapies with placebo for effect on frequency of hot flashes. The review included antidepressants and other drugs; isoflavones and other plant extracts. There was considerable heterogeneity between trials. Duration of treatment in studies of these drugs was for only a few months. Long-term large trials (as the WHI) are lacking.

The review concluded that Paroxitine (*Paxil*—a SSRI; a selective serotonin reuptake inhibitor), gabapentin (*Neurontin*—an anticonvulsant and analgesic for neuropathic pain), and clonidine (*Catapres*—an antihypertension drug which stimulates CNS alpha-adrenergic receptors) may be modestly effective for relief of hot flashes.

Adverse effects include dry mouth, drowsiness, somnolence, dizziness, headache, nausea, insomnia, anxiety, and sexual adverse effects.

There is a large placebo effect from various therapies for menopausal symptoms. If a woman observes a benefit from a non-hormonal therapy, and if she experiences no adverse effects, I would not dissuade her from taking it. I would caution that long-term adverse effects are not known. They may be greater than long-term adverse effects of HRT.

I believe most "highly symptomatic" women would be willing to accept HRT if they understood that the risks of taking it are very small. And that risks of adverse effects are smaller still in younger women and in those who have few other risk factors for cardiovascular disease.

If women wish to try alternatives, they should use them for only a short term and in low dose, as with HRT.

Danger, Especially From Repeated CTs

5-12 HEALTH EFFECTS OF IONIZING RADIATION FROM DIAGNOSTIC CT

An estimated 60 million computerized tomographies (CTs) were done in the USA in 2002. This represents 70% of all medical X-ray exposure.

The National Academy of Science report on the Biological Effects of Ionizing Radiation indicated that a single population dose of 10 mSv is associated with a lifetime attributable risk of developing a solid cancer or leukemia is 1 in 1000. The typical abdominal examination dose is between 10 and 20 mSv. The breast glandular dose during a pulmonary artery CT angiogram is 20 mSv.

"The ionizing radiation exposure from a single abdominal or chest CT may be associated with elevated risk for DNA damage and cancer formation." The radiosensitive tissues are predominantly within the field of view of common chest, abdominal, and pelvic CT scans.

Many patients are exposed to multiple examinations that increase cumulative dosing. One subset of patients with renal colic had total exposure rates between 19 and 154 mSv.

Referring physicians are largely unaware of the potential harmful effects from CT radiation exposure. Radiologists doing CT examinations consider the radiation exposure of limited concern. "Many are unaware of the dose of radiation delivered to the patient." The risk may not be explained clearly to patients before obtaining consent.

Radiation effects may not manifest until 5-20 years after exposure. Causal relations are not apparent on an individual basis.

The editorialists suggest some means by which exposure can be limited, including greater use of MRI.

I do not know enough about radiation physics to comment. I hope some radiologists will respond.

I believe the caution is appropriate. I abstracted the editorial because primary care clinicians often refer patients for CT. They bear some responsibility for the cumulative doses of radiation.

Commercial entrepreneurs continue to offer unselected CT screening, including whole body screening, to the general public. Some clinicians are enthusiastic about CT screening for coronary artery calcification. I believe there is little concern about radiation exposure.

I believe the scanning procedure used depends on the equipment available in the community and the expertise of the radiologist.

ABSTRACTS MAY 2006

Identified More Problems; Increased Patient Satisfaction

5-1 EFFECT OF PATIENT COMPLETED AGENDA FORMS AND DOCTORS' EDUCATION ABOUT THE AGENDA ON THE OUTCOME OF CONSULTATIONS

"Although identification of why the patient has attended is a key objective of the consultation, doctors commonly fail to achieve this."

Enhancing patients' ability to participate in the consultation improves communication between patient and doctor.

Doctors' communication skills can be enhanced by education.

One of the authors of this article previously developed an agenda form in which patients write down the reason for the consultation, and what they expect from it. The form is completed just before the consultation, and then presented to the doctor.

This study examined the effect of the agenda form on the outcome of the consultation. The investigators hypothesized that the number of problems identified would increase, and that patient satisfaction would be enhanced. They believed that patients' completion of their agenda immediately before the consultation would reduce the number of "By the way, doctor" presentations (in which the patient raises an extra problem after the doctor considers the consultation completed).

Conclusion: The patient completed agenda enabled identification of more problems in the consultation. It resulted in longer consultations.

STUDY

1. Randomized, controlled trial entered and followed 45 general practitioners and 857 patients.
2. Two thirds of the doctors attended a one day educational workshop to increase their awareness of the agenda model, and to guide their accurate reporting of aspects of the consultation. One third were controls. The doctors explicitly reflected on their own agenda (care of presented and continuing problems, risk factors, and negotiation of action with the patient). At the end of the consultation, doctors completed an encounter form recording the number of problems identified, and the duration of the consultation. Compared outcomes between the two groups.
3. Half of the patients were randomized to the agenda form; half to no agenda forms (controls).
4. The patient's agenda form listed their ideas, concerns, expectations, and reasoning about the consultation.
5. Main outcome measures: the number of problems identified; time required to manage each problem; duration of the consultation; number of problems raised after the consultation finished; and patient satisfaction.

RESULTS

1. Variable (Means)	No agenda	Agenda
Duration of consultation (min)	7.1	9.0
No. of problems identified	1.7	2.2

Time per problem (sec)	306	291

DISCUSSION

1. When patients made their own agenda explicit in the consultation:
   A. Doctors identified more problems.
   B. Consultations lasted longer. (Due to more problems identified.)
   C. Patients were more satisfied with the depth of the consultation
2. Neither intervention decreased the number of "By the way, doctor" presentations.
3. The effect these interventions will have on health outcomes is uncertain.
4. The effect on future consultations is not known.
5. For each consultation session of 18 patients (*I presume an estimated day's work*), the combined interventions identified an additional 9 problems, and sessions were 34 minutes longer.
6. Although this increased doctor's workload, it represents a pool of unrecognized need among patients.

BMJ May 27, 2006; 332: 1238-41 Original investigation, first author J F Middleton, University of Leicester, UK.
The agenda form printed on a single page:

To help your doctor:

1. Please make a list of the points you want to raise.
2, Do you have any thoughts about these points? (For example, the cause of your problem)
3. Do you have any questions?
4. What would you like the doctor to do? (please circle yes or no)

A. Prescribe	Yes	No
B. Explain	Yes	No
C. Investigate	Yes	No
D. Write note	Yes	No

5. Other (please say what it is).

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An Expression Of Care And Caring

5-2 EFFECT OF TELEPHONE CONTACT ON FURTHER SUICIDE ATTEMPTS IN PATIENTS DISCHARGED FROM AN EMERGENCY DEPARTMENT

People who attempt suicide are at high risk for further attempts at suicide, and for completing suicide within the next year. When these patients are discharged from the ED to community services, they are not usually assessed for compliance with treatment or treatment success.

This study systematically contacted patients by telephone 1 to 3 months after an attempted suicide.

Would this intervention affect re-attempted suicide?

Conclusion: Contact at one month may help reduce the number of re-attempted suicides.

STUDY

1. Randomized controlled trial in 13 emergency departments in France included over 600 people discharged from EDs after a suicide attempt by deliberate self poisoning.
2. Patients were randomized to: 1) telephone contact at one month, 2) telephone contact at 3 months, and 3) usual treatment (controls: no telephone contact).
3. Psychiatrists contacted patients by telephone to attempt to enhance compliance with treatment, to provide brief crisis intervention when needed, and to detect persons at high risk for another attempted suicide. The psychotherapeutic approach used was psychological support, based mainly on empathy, reassurance, explanation, and suggestion.

3. Controls: treatment as usual, in most cases referral back to their general practitioner.
4. Main outcomes: proportion of patients who re-attempted suicide, and number of deaths by suicide.
5. Follow-up = 1 year.

RESULTS

1. Participants who were contacted at one month were less likely to report having re-attempted suicide (12% vs 22% of controls). No deaths from suicide occurred in this group.
2. For those contacted at 3 months—no difference.

DISCUSSION

1. Contacting people by telephone one month after attempted suicide by deliberate self poisoning may help reduce the proportion of people who re-attempt suicide.

3. Three quarters of the eligible patients agreed to participate. These patients may be more open to telephone contact than to an appointment in the psychiatric clinic.

3. The study limited telephone attempts to three, after which attempts were discontinued. The investigators now recommend that the number of telephone attempts should be unlimited.

CONCLUSION

Contacting people by telephone one month after being discharged from an ED for deliberate self poisoning may help reduce the number of re-attempted suicides over one year.

BMJ May 27, 2006; 332: 1241-44 Original investigation, first author Guillaume Vaiva, University Hospital of Lille, School of Medicine, France

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"One Billion Deaths from Tobacco in the 21st Century"

5-3 TOBACCO: Deadly in Any Form or Disguise

In 1950, Doll and Hill, in their study of British doctors, were the first to determine that tobacco is harmful. The follow-up of the study closed in 2004, when all the participating smokers were dead, and some 6000 non-

smokers remained alive. The data suggest that between one half and two-thirds of the persistent smokers died because of their habit.

Since the 1950s, the global epidemic of tobacco-associated disease has progressively broadened. Experience promises a progressively increasing disaster. This is a tribute to the marketing abilities of the global tobacco industry and to the failure of public-heath authorities worldwide to find out how to prevent initiation of the tobacco habit in the young.

Despite encouraging progress in a few countries, where the average smoking rate has declined, the tobacco industry is gaining markets in developing countries. “We are a long way from eradicating the cigarette.”

Cigarette smoking is the most deleterious of the tobacco habits. Mortality patterns include other strange but damaging products. The range of risk between tobacco products is large and of a descending order, according to dose and usage—downward from the cigarette and the bidi, through smokeless tobacco as used in India (where it is often combined with betel nut lime and other additives), to smokeless tobacco as used in the USA and snus in Sweden.

“No form of tobacco use has yet been shown to be safe, and the world would be a healthier place without such products.” Smoking cigarettes or other forms of burnt tobacco, including pipes and cigars, is carcinogenic. Exposure to environmental tobacco smoke is carcinogenic. Exposure to smokeless tobacco is carcinogenic.

The diversity of many bizarre forms of tobacco use in many countries makes it difficult to predict the exact nature of the coming epidemics.

In the USA, there are still about 1 million new smokers a year. Of these, about half will be killed by tobacco if they do not stop, and half of these deaths will be in ages 35-69. Around the world, it can be expected that the number of tobacco deaths will exceed 10 million every year unless 20 million current smokers stop. The effect of stopping is clearly beneficial in terms of limiting the increases in death from cardiovascular disease and chronic lung disease.

“Unless tobacco control activity is undertaken effectively worldwide, there will be one billion deaths from tobacco smoking in the current century (compared to 100 million during the 20th century).”

LANCET May 27, 2006; 367: Commentary from the International Agency for Research on Cancer, Lyon, France.

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“Current Smoking And Exposure To Passive Smoke Were Positively Associated With Increased Risk”

5-4 ACTIVE AND PASSIVE SMOKING AND DEVELOPMENT OF GLUCOSE INTOLERANCE AMONG YOUNG ADULTS: The CARDIA Study

Studies connecting diabetes to smoking have been conflicting.

This study used a population based longitudinal study of young adults to evaluate the association of smoking and passive tobacco smoke exposure with risk of incident glucose intolerance.

Conclusion: The findings support the role of smoking (both active and passive) in the development of glucose intolerance in young adulthood.

STUDY

1. This prospective cohort study, begun in 1985-86 and continued for 15 years, assessed whether active and passive smokers (over 4500 men and women age 18-30 at baseline; median age = 25) are more likely to develop clinically relevant glucose intolerance or diabetes.
2. No subjects had glucose intolerance at baseline (defined as fasting glucose > 100 mg/dL, or taking antidiabetes drugs).
3. Half of the participants were women; half African American.
4. Participants included:

   Current active smokers. (n = 1386)

   Previous smokers. (n= 621)

   Never smokers who reported exposure to secondhand smoke. (n = 1452)

   Never smokers who reported no exposure to secondhand smoke. (n = 1113)
5. Examined participants periodically for up to 15 years.
6. Main outcome: development of glucose intolerance.

RESULTS

1. Seventeen % of participants developed glucose intolerance at fifteen years. Three % developed diabetes.
2. After adjustment for possible baseline confounders, there was a graded association between smoking exposure and development to glucose intolerance:

	% glucose intolerance	Hazard ratio
Current smokers	22%	1.65
Previous smokers	14%	1.17
Never smokers; passive smoke	17%	1.35
Never smokers; no passive smoke	12%	1.00

3. Risk of developing glucose intolerance increased by 18% for every increase of 10 pack-years.
4. Waist-hip ratio, serum insulin levels, and C reactive protein levels were also associated with increased risk of glucose intolerance. Adding these factors to the model, did not substantially attenuate the main association between smoking a glucose intolerance.

DISCUSSION

1. “In this 15-year prospective study, both current smoking and exposure to passive smoke were positively associated with increased risk of developing glucose intolerance.”
2. Risk increased in a graded manner as pack-years increased.
3. Some toxic substances are more concentrated in passive smoke than in directly inhaled smoke.

CONCLUSION

Tobacco exposure was associated with development of glucose intolerance over a 15-year period with a dose-response effect. Passive smoke is a risk factor in never-smokers.

BMJ May 6, 2006; 332: 1064-67 Original investigation by the Coronary Artery Risk Development In Young Adults (CARDIA) study, first author Thomas K Houston, Birmingham Veterans Affairs Medical Center, Birmingham, AL

"When Added To Oral Agents, It May Obviate The Need For Insulin Injections Entirely".

5-5 INHALED INSULIN

In January 2006. the FDA approved the first inhaled insulin for treatment of both type 1 and type 2 diabetes (**DM-1** and **DM-2**).

- On a weight basis, the activity of inhaled insulin is only about 10% that of subcutaneous insulin.
- Inhaled insulin is rapidly acting, peaking between 30 and 90 minutes (similar to rapidly acting insulin analogues). When taken before meals, it has more marked effects on fasting glycemia than pre-meal subcutaneous insulin. This suggests a more prolonged action.
- Phase 3 trials of inhaled insulin are reasonably convincing that overall glycemic control, as assessed by HbA1c, is similar to control by pre-meal subcutaneous regular insulin.
- For DM-1, inhaled insulin is likely to be accepted by both the public and the medical community. "It is perhaps surprising how frequently individuals with longstanding type 1 diabetes, who have adapted to multiple daily injections, are excited by the potential of needing only a single, long-acting insulin injection daily, with inhaled insulin replacing pre-meal injections."
- For DM-2, the market for inhaled insulin is more complex. Insulin, regardless of route of administration, is the most potent glucose-lowering therapy. It has been used for 80 years. Its side effects are well known. Inhaled insulin has the potential to be beneficial in the long run. Newer, oral agents are under development. Adverse effects of newer oral agents, which may soon be introduced, are not known.
- Patients with DM-1 and insulin-dependent DM-2 who are distressed by frequent injections may be able to improve their glucose control substantially and avoid complications of their diabetes if switched to inhaled insulin.
- For patients with DM-2, in whom oral agents are failing, and who resist taking injections, inhaled insulin offers the same efficacy as subcutaneous insulin, and avoids multiple daily injections.
- In some clinical trials, the overall incidence of hypoglycemia with inhaled insulin seems comparable with subcutaneous insulin when comparable levels of glucose control are obtained. In some trials the incidence of severe hypoglycemia was greater with inhaled insulin. This will bear watching in longer term follow-up.
- Pulmonary factors affect absorption (increased in smokers, and decreased in asthma). Current and previous smokers are not considered appropriate candidates for inhaled insulin.

- We still do not know all the risks of inhaled insulin. Current evidence indicates that clinical importance of anti-insulin antibodies and small decreases in lung function seen during phase 3 trials are not clinically worrisome.
- Other potential barriers to acceptance include cost and patient satisfaction. Cost will substantially exceed that of injectable insulin. Perception of tolerability of the regimen and ease of use were greater in patients randomized to inhaled insulin. A large proportion of patients randomized to inhaled insulin chose to continue it. Patient acceptance may prove to be the primary determinant of marketplace success.
- When added to oral agents, it may obviate the need for insulin injections entirely.

BMJ May 6, 2006; 332: 1043-44 Editorial by Emma Morton-Eggleston, University of Virginia, Charlottesville.

Large Prospective Study: Moderate Alcohol Consumption Reduces Risk of CHD in Middle-Age

5-6 PROSPECTIVE STUDY OF ALCOHOL DRINKING PATTERNS AND CORONARY HEART DISEASE IN WOMEN AND MEN

Prospective epidemiological studies have reported a lower risk of coronary heart disease **(CHD)** among consumers of *moderate* amounts of alcohol as compared with abstainers. Results consistently imply that the pattern of drinking is important, and that steady (daily; several times a week) drinking is beneficial.

This study determined the association between drinking patterns and CHD among middle-aged men and women.

Conclusion; Among men, drinking frequency (days per week), not amount of alcohol intake, seems more important in reducing risk of CHD. Among women, alcohol intake (total amount per week) may be the primary determinant of the inverse association.

STUDY

1. Population-based cohort study from 1993-2002 enrolled over 53 000 subjects (age 50-65) in Denmark. All were free of cardiovascular disease at baseline. All completed a questionnaire which included information on lifestyle.
2. Determined alcohol intake reported as the average amount over the past year. Converted intake into the number of standard drinks (12 g of ethanol).
3. Recorded drinking frequency
4. Recorded number of drinks per week. (Women consumed a median of 6 drinks per week; men 11)
5. Follow-up, for a median of 6 years, determined incidence of CHD.

RESULTS

1. CHD events: men—1283; women—749.
2. The amount of alcohol intake was inversely associated with CHD among *both* men and women. Adjusted

hazard ratio of CHD *decreased* progressively in a graded manner as number of drinks per week *increased* from 0 to 7, to 14, and to 28 in women and to 35 in men.

3. Women:

A. Hazard ratios of CHD for women according to drinking frequency:

Days per week	Never	<1	1	2-4	5-6	7
HR	0.92	1.00	0.64	0.63	0.79	0.65

B. Women who drank alcohol one or more times a week had a lower risk of CHD than abstainers and those who drank less than once a week.

C. No difference in HR of CHD between those drinking one day a week; 2-4 days a week; 5-6 days a week; and 7 days a week; no reduction in risk as days of drinking increased.

D. Hazard ratios (adjusted) of CHD for women when amount of alcohol consumption was correlated with frequency:

Frequency of drinking (days / wk)	Never	≤ 1	2-4	5-7
Drinks/wk				
0	1.03			
1-6		1.00	0.78	1.32
7-13		0.67	0.74	0.82
14 and over		0.65	0.27	0.72

Women drinking the largest amounts generally had the lowest risk. Number of drinks per week seemed more important in reducing risk of CHD than frequency of drinking.

4. Men:

A. Hazard ratios (adjusted) of CHD for men according to drinking frequency:

Days per week	Never	<1	1	2-4	5-6	7
HR	1.44	1.00	0.93	0.78	0.71	0.59

(Note the hazard of not drinking for men)

B. Among men, there was an inverse association between frequency of drinking and CHD across the entire range of drinking frequencies. The lowest risk was among those who drank daily .

C. Hazard ratios of CHD for men according to frequency and amount of alcohol intake:

Frequency of drinking (days / wk)	Never	≤1	2-4	5-7
Drinks/wk				
0	1.47			
1-6		1.00	0.80	0.70
7-13		0.89	0.81	0.66
14-20		1.10	0.91	0.66
≥21		1.00	0.67	0.63

D. For men, the frequency of drinking (5 to 7 days per week) not the total amount of consumption, was more important in reducing risk.

DISCUSSION

1. "Among men, the frequency of drinking alcohol was inversely associated with risk of CHD independent of total alcohol intake." There was an inverse association between CHD and drinking frequency over the entire range of drinking frequencies. (Frequency of intake more important than total amount.)
2. Among women, total intake, not frequency, was inversely associated with CHD. (Total intake more important than frequency.)
3. The investigators comment on plausible reasons for the sex difference. (*See the BMJ article.)*
4. "The beneficial effect of alcohol is probably confined to middle aged and older people."
5. Heavy drinking is associated with many problems.

CONCLUSION

There was an inverse association between amount of alcohol intake and risk of CHD among *both* men and women.

Among women, the amount of alcohol intake per week may be the primary determinant of the inverse association.

Among men, frequency of drinking, not amount of alcohol consumed each week, seems more important.

BMJ May 27, 2006; 332: 1244-47 Original investigation, first author Janne Tolstrup, National Institute of Public Health, Copenhagen, Denmark.

Screening the Very Elderly Results in Only 15% of the Expected Gain in Life Achieved in Younger Persons

5-7 SCREENING COLONOSCOPY IN VERY ELDERLY PATIENTS

Since Medicare has approved payment, the number of screening colonoscopies in elderly patients has increased dramatically. Current guidelines for screening colonoscopy do not specify an age limit.

Although the prevalence of colonic neoplasia increases with age, the benefits of screening (and removal of adenomas and cancers) in the elderly may be limited in part because very elderly patients have short life expectancies.

This study compared estimated life-years saved with screening colonoscopy in elderly patients vs younger patients.

Conclusion: As compared with younger patients, screening patients 80 years of age and over results in much lower gains in life expectancy.

STUDY

1. This study created a cross sectional simulation model from a study of over 1200 consecutive *asymptomatic* individuals who underwent screening colonoscopy. Divided into 3 age groups: 50-54; 75-79; and 80 and over (mean age = 82).
2. None had previous bowel disease. None had colonoscopy within 5 years.
3. The procedure was conducted in the outpatient clinic with patients under conscious sedation with

intravenous fentanyl and midazolam (a short acting benzodiazepine).

4. Defined advanced neoplasia as an adenoma with more than 25% villous features, or at least 1 cm in size.
5. A statistical analysis calculated life expectancy based on several conditions:
    A. If no neoplasm found.
    B. If a neoplasm was found and removed.
    C. If a neoplasm was present but not removed.
    D. Expected years lived during polyp lag time (time for adenoma to change into cancer).
    E. Life expectancy after cancer diagnosis.
6. Compared life expectancy of each screened patient with the life expectancy of that same patient if he or she had not been screened.

RESULTS

1. Outcomes according to age:	50-54 (n = 1034)	75-79 (n = 147)	80 and over (n = 63)
Remaining Life expectancy (mean y)	29	10	8
Neoplasia	14%	27%	29%
Advanced neoplasia	3%	5%	14%

(In the 80+ group, 2 subjects had high grade dysplasia and one had cancer.)

2. In the over 80 age group, gain in mean life expectancy was much lower than in the 50-54 age group. (0.13 years vs 0.85 years). This was despite the greater frequency of neoplasia in the older group.

DISCUSSION

1. The main target of colonoscopy screening is detection and removal of adenomas. There is a long lag time before adenomas can develop into cancer and cause death, In very elderly persons, the potential benefit of removal of an adenoma may be smaller than in younger patients because the elderly die of other causes before the adenoma can develop into cancer.
2. Although the prevalence of colonic neoplasia increases with age, colonoscopy screening in the very elderly results in only15% of the expected gain in life achieved in younger persons.
3. Studies of screening colonoscopy in the elderly have reported that cecal intubation rates are lower, procedure times are longer, perforation risks are higher, and completion rates are lower. In addition, there are more problems with preparation, logistics, and informed consent.
4. Elderly patients and their physicians should consider whether the morbidity, risk, and cost of screening colonoscopy can be justified in view of the declining potential benefits.

CONCLUSION

Screening colonoscopy in very elderly patients results in much smaller gains in life expectancy compared with younger patients.

“This should help individual patients and clinicians decide whether screening colonoscopy should be performed.”

"Screening colonoscopy in very elderly patients should be performed only after careful consideration of potential benefits, risks and patient preferences."

"It is not the purpose of this study to establish any firm cutoff age beyond which screening should not be recommended."

JAMA May 24/31, 2006; 295: 2357-65 Original investigation, first author Otto S Lin, Virginia Mason Medical Center, Seattle, Washington.

Should We Treat With Drugs Alone, and Ignore Reduction Of Risk Factors ?

5-8 ASPIRIN PLUS DIPYRIDAMOLE VERSUS ASPIRIN ALONE AFTER CEREBRAL ISCHEAMIA OF ARTERIAL ORIGIN (ESPIRIT)

Patients with a TIA or a non-disabling stroke of presumed arterial origin have about a 10% yearly risk of a major vascular event. Aspirin prevents only about 20% of these vascular complications. Studies indicate no additional benefit of the combinations of clopidogrel (*Plavix*) + aspirin compared with either drug alone. Results of studies comparing aspirin alone with aspirin + dipyridamole have been inconsistent.

This randomized trial followed over 2700 patients who had a history of TIA or non-disabling stroke for 3.5 years.

Conclusion: There is sufficient evidence to prefer the combination.

STUDY

1. Randomized over 2700 patients (mean age 63) with a history of TIA or non-disabling stroke. to:
   1) aspirin alone (median dose 75 mg), or 2) aspirin + dipyridamole (200 mg twice daily, mainly as extended release).
2. At randomization, 18% had diabetes; 60% had hypertension; 47% had hyperlipidemia; and 36% smoked.
3. Primary outcome = a composite of non-fatal stroke, non-fatal myocardial infarction, or death from vascular causes. Also determined the incidence of major bleeding complications.
4. Follow-up for 3.5 years.

RESULTS

1. Results (3.5-y)	Combined A + D (n = 1316)	Aspirin alone (n = 1376)	Absolute diff	NNT 3 y
Primary outcome	13%	16%	3%	33
Death vascular	44	60		
Major bleed*	35	53		
Ischemic stroke occurred first	96	111		
Cardiac event occurred first	43	60		

*(*The investigators have no explanation for the lower risk of major bleeding in the combined group. They say it may be due to chance.)*

2. More patients on the combination discontinued trial medication (470 [36%] vs 184 [13%]) mainly due to headache, a common adverse effect of dipyridamole.

DISCUSSION

1. The authors added a review of a meta-analysis of six trials (over 7700 subjects) allocated to the same drugs. The results indicated a statistically significant benefit from the combination compared with aspirin alone.
2. "Our findings show that the combination therapy of aspirin and dipyridamole is more effective than aspirin alone in the prevention of new serious vascular events in patients after non-disabling cerebral ischemia of presumed arterial origin."

CONCLUSION

The study provides sufficient evidence to prefer the combination regimen of aspirin plus dipyridamole over aspirin alone as antithrombotic therapy after cerebral ischemia of arterial origin.

Lancet May 20, 2006; 367: 1665-73 Original investigation by the European/Australian Stroke Prevention in Reversible Ischaemia Trial (ESPIRIT) study group, correspondence to A Algra, University Medical Center, Utrecht, Netherlands

COST: Dipyridamole is available in the form of *Aggenox* (25 mg aspirin + 200 mg extended release dipyridamole) It costs about $2300 for a 3-year supply. Generic dipyridamole (*Persantine*) is just about as expensive.

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A Clinically Significant Increase In Walking Distance

5-9 RAMIPRIL (An ACE Inhibitor) MARKEDLY IMPROVES WALKING ABILITY IN PATIENTS WITH PERIPHERAL ARTERIAL DISEASE

Angiotensin converting enzyme inhibitors **(ACE)** reduce cardiovascular morbidity and mortality in patients with atherosclerotic disease. The study hypothesized that the ACE ramipril (*Altace*) would improve symptoms of intermittent claudication

Conclusion: Ramipril improved symptoms

STUDY

1. Randomized, double-blind placebo-controlled trial followed 40 patients (mean age 66; almost all male) with symptomatic peripheral artery disease (**PAD**). None had a history of diabetes or hypertension.
2. Forty two % were smokers. In some, LDL-cholesterol levels exceeded 100 mg/dL. Only 27% were on lipid-lowering therapy.
3. Asked participants to refrain from exercise, smoking, and caffeine for 24 hours before testing.

4. Randomized to: 1) ramipril 10 mg daily, or 2) placebo for 24 weeks.
5. Measured pain-free and maximum walking time during a standard treadmill test.
6. Completed a Walking Impairment Questionnaire. (**WIQ**)

RESULTS

1. The ankle-brachial index (systolic BP in ankle artery / systolic BP in brachial artery) increased (improved) after exercise in the ramipril group. Mean ankle BP increased in the ramipril group by 7.1 mm Hg; in the placebo group fell by 5.4 mm Hg.
2. Volume flow by ultrasound was not altered by ramipril. It was increased in the common femoral artery proximal to the stenosis.
3. Treadmill test

At baseline:	Placebo	Ramipril
Median pain-free walking time (s)	168	160
Maximum walking time (s)	244	234
At 24 weeks:		
Median pain-free walking time (s)		387
Maximum walking time (s)	234	685

4. The WIQ in the ramipril group indicated improvement in scores of walking distance, speed, and stair climbing.

DISCUSSION

1. "Our study shows that treatment with ramipril, and ACE inhibitor, improves walking ability in some patients with PAD."
2. The increase in walking distance (calculated as a mean of 400 meters in the ramipril group) is clinically significant and would appreciably affect daily functional capacity.
3. The improvements in the WIQ scores were consistent with the measured improvements, demonstrating that ACE improves the ability to perform daily activities.
4. The authors suggest that improvement may not occur quickly. A full 6 months of treatment may be necessary..
5. Other studies have shown that ACE inhibitors improve blood flow in the lower extremities of patients with PAD. Mechanisms may include: vasodilatation due to reduction in angiotensin II, sympathetic inhibition, and improvement in endothelial function. In addition, collateral arterial formation may be enhanced.
6. The authors admit the trial was small, and eliminated patients with diabetes (a major cause of PAD).

CONCLUSION

ACE inhibitor therapy (ramipril) for 24 weeks increased pain-free walking and maximum walking times in some patients by a clinically significant degree. ACE therapy may have benefits beyond reduction in vascular events.

Annals Int Med May 2, 2006; 144: 660-64 Original investigation, first author Anna A Ahimastos, Monash University, Melbourne, Australia.

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"Later Adolescence Is A Life Stage With Unique Associations Between Poverty And Overweight."

5-10 TRENDS IN THE ASSOCIATION OF POVERTY WITH OVERWEIGHT AMONG ADOLESCENTS 1971-2004

In the past 3 decades, the prevalence of overweight among adolescents in the US has doubled.

Does socioeconomic status (eg, poverty) affect prevalence of overweight?

Individuals in the lower social strata are generally less able to protect themselves from diseases and conditions that are highly preventable. They may be less able to resist the factors responsible for the current obesity epidemic. Poverty is linked to both poor diet and physical inactivity.

This study examined trends in adolescent overweight over 3 decades by family poverty status.

Conclusion: Overweight occurs with increasing frequency in adolescents age 15 to 17 who live below the poverty line.

STUDY

1. The US National Health and Nutritional Examination Surveys (NHANES) conducted four surveys between 1971-2004 to examine trends in prevalence of overweight among adolescents ages 12 to 14 and 15 to 17.
2. Defined overweight as a body mass index at or above the 95th percentile for age.
3. Asked a parent or caretaker to sum the income of all family members. For a family of 4, the US Census Bureau's poverty threshold in 2004 was $19,157. In the 4 surveys, the percentage of adolescents living in poverty ranged from 16% to 22%.
4. Determined the prevalence of breakfast skipping, and the degree of physical inactivity (no moderate or vigorous physical activity in the prior 30 days), and the proportion of caloric intake from sweetened beverages.

RESULTS

1. Trends in association of adolescent overweight differed by age:
   A. In the 12-14 year olds, prevalence of overweight did not vary significantly between those in family-poverty and those not in family-poverty.
   B. In the 15-17 year olds, there was a significant difference in overweight between those living in poverty and those not living in poverty.
2. Prevalence of overweight in NHANES 1999-2004 age 15 to 17:

	Not poor	Poor
Overall	14%	23%
Non-Hispanic white	12%	21%

Non-Hispanic black 22% 25%

3. Additional analyses of the 15 to 17 age group suggest that physical inactivity, sweetened beverage consumption, and skipping breakfast contribute to these disparities.

DISCUSSION

1. Fifteen to 17 year-olds living in family poverty are much more likely to be overweight compared with adolescents of the same age living in families above the poverty line. No difference was noted in the 12 to 14 age groups.
2. This difference occurred across demographic subgroups: male, female, non-Hispanic white, and non-Hispanic black.
3. In the 15 to 17 age non-Hispanic black group (both poor and not-poor), the overall rate of overweight increased during the course of the survey. This is consistent with trends among adult blacks.
4. Later adolescence is a life stage with unique associations between poverty and overweight. Both food choices and physical activity in adolescence differ considerably from those in early childhood and adulthood.
5. What factors might explain the overweight difference by poverty status in older adolescence?

Greater autonomy comes with increasing age. Later teen-agers have more opportunities to purchase their own food. They have more discretionary income. They can determine their own leisure time pursuits.

In recent years, consumption of sweetened beverages, eating out, and snacking between meals has become more common, as has physical inactivity and skipping breakfast. Consumption of sweetened beverages was more common in the poverty group. Breakfast skipping may also be more common. (Another study reported that breakfast skipping was more likely to be associated with increases in BMI over time.)

Availability of energy-dense foods, perceived dangerousness of neighborhoods, and limited access to supermarkets that sell nutritious low-calorie foods, may also be linked to overweight in the poverty group.

CONCLUSION

Among 15 to 17 year-olds, trends in overweight showed a greater impact among families living below the poverty line. Increased consumption of sweetened beverages, physical inactivity, and breakfast-skipping may contribute to the difference.

JAMA May 24/31 2006; 295: 2385-93 Original investigation by the US National Health and Nutritional Examination Surveys (NHANES), first author Richard A Miech, Johns University, Baltimore, MD.

"Are They Effective? Are They Safe?"

5-11 ALTERNATIVES TO ESTROGEN FOR TREATMENT OF HOT FLASHES

Hot flashes occur in about 50% of women during the menopause transition. About 20% of these women request treatment. At the most severe end of the spectrum of symptoms, women experience frequent episodes of

intense heat and drenching sweats which disrupt daily activities and sleep. In up to 15% of women, hot flashes persist for decades, and even life-long.

Cigarette smoking may increase the likelihood of hot flashes. Other possible risk factors have not been established.

A hot flash is similar to a heat-dissipation response. Both result in vasodilation, sweating, and reduction in core body temperature. The core body temperature at which women with hot flashes vasodilate and sweat is lower than in women without hot flashes. Normal fluctuations in core body temperature may trigger hot flashes. Mild stressors, such as heat or anxiety, may stimulate central receptors and lower the thermoregulatory set point.

The cause of the altered thermoregulation is not known. It may be that the changes in estrogen levels associated with the menopause alter central nervous system adrenergic or serotoninergic neurotransmission.

Hormone replacement therapy (**HRT**) is the most effective treatment. Given the efficacy of estrogen, are other treatments needed?

Caution about HRT has been raised because the large Women's Health Initiative **(WHI)** reported that, among generally healthy women, estrogen-alone increases risk of venous thromboembolism, and stroke; and combined estrogen + progestin increases risk of thromboembolism, stroke, coronary events, and breast cancer. The absolute increase in risk is small—less than 1 in 1000 women per year. Nevertheless, some women would prefer safe alternative treatment even if it is not as effective as estrogen.

A rigorous systematic review in this issue of JAMA[1] compared non-hormonal therapies with placebo for effect on frequency of hot flashes:

A. Antidepressants:

Venlafaxine (*Effexor*—a SNRI; a selective nor-epinephrine reuptake inhibitor)

Paroxetine (*Paxil*—a SSRI; a selective serotonin reuptake inhibitor)

Fluoxetine (*Prozac*—a SSRI; a selective serotonin reuptake inhibitor)

B. Other drugs:

Gabapentin (*Neurontin*—an anticonvulsant and analgesic for neuropathic pain)

Clonidine (*Catapres*—an antihypertension drug which stimulates CNS alpha-adrenergic receptors)

C. Isoflavones:

Chemicals found in some plants (eg, soy and red clover) are hypothesized to act like weak estrogens. The preponderance of the evidence indicates little clinical evidence of effectiveness. Safety of isoflavone extracts is a particular concern because they contain estrogen, and may be subject to some of the same long-term adverse effects as hormone therapy

D. Other plant extracts: primrose oil, ginseng and wild yam. No support for use.

There was considerable heterogeneity between trials. Duration of treatment in studies of these drugs was for only a few months. Long-term large trials (as the WHI) are lacking.

The review concluded that paroxitine, gabapentin, and clonidine may be modestly effective for relief of hot flashes. Adverse effects include dry mouth, drowsiness, somnolence, dizziness, headache, nausea, insomnia,, anxiety, and sexual adverse effects.

Non-hormonal alternatives are less effective than estrogen. They generally have more symptomatic adverse effects. Long-term adverse effects are not documented.

JAMA May 3, 2006; 295: 2057-71 Editorial, first author Jeffry A Tice, University of California, San Francisco

1 Nonhormonal Therapies for Menopausal Hot Flashes—Systematic Review and Meta-analysis, first author Heidi D Nelson, Oregon Evidence-based Practice Center, Portland, OR

The review concludes: The SSRIs, clonidine, and gabapentin trials provide evidence for efficacy. Effects are less than for estrogen. Few trials have been published, and most have methodological deficiencies. Generalizability is limited, and adverse effects and cost may restrict use for many women. These therapies may be most useful for highly symptomatic women who cannot take estrogen,. They are not optimal choices for most women.

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Danger, Especially From Repeated CTs

5-12 HEALTH EFFECTS OF IONIZING RADIATION FROM DIAGNOSTIC CT

"Since the development of the first commercial CT scanners in 1972, CT has become the major source of medical radiation." An estimated 60 million CTs were done in the USA in 2002. This represents 70% of all medical X-ray exposure.

"The ionizing radiation exposure from a single abdominal or chest CT may be associated with elevated risk for DNA damage and cancer formation." The radiosensitive tissues are predominantly within the field of view of common chest, abdominal, and pelvic CT scans.

The National Academy of Science report on the Biological Effects of Ionizing Radiation indicated that a single population dose of 10 mSv is associated with a lifetime attributable risk of developing a solid cancer or leukemia is 1 in 1000. The typical abdominal examination dose is between 10 and 20 mSv. The breast glandular dose during a pulmonary artery CT angiogram is 20 mSv.

Many patients are exposed to multiple examinations which increase cumulative dosing. One subset of patients with renal colic had total exposure rates between 19 and 154 mSv.

Referring physicians are largely unaware that there are potential harmful effects from CT radiation exposure. Radiologists doing CT examinations consider the radiation exposure of limited concern. "Many are unaware of the dose of radiation delivered to the patient." The risk may not be explained clearly to patients before obtaining consent.

Radiation effects may not manifest until 5-20 years after the scan, and causal relations are not apparent on an individual basis.

The editorialists suggest some means of limiting radiation exposure:

A. Ultrasound and MRI are safer for abdominal and pelvic imaging. For most clinical problems in which CT is used, MRI would provide an acceptable or favorable alternative. "In many diseases, MRI is highly underused."

B. CT dose may be significantly underused by attention to details such as restricting the field of view to

the area of concern, adjusting dose according to the patient's size and age, and using single-pass abdominal CT instead of multiple passes.

C. Encouraging manufacturers to create more automated systems with dose-reduction mechanisms in the scanner. Advances in CT technology may lead to quicker high-resolution images with increasing diagnostic value.

D. Continue to improve and simplify MRI technology.

E. It may be necessary for governments to place guidelines on acceptable maximum doses and indications for CT. Questionable practices such as whole-body CT screening examinations that expose normal individuals to known risks with unknown benefits might need to be restricted.

Lancet May 27, 2006; 367: 1712-13 Editorial, first author Diego R Martin, Emory University School of Medicine, Atlanta. GA