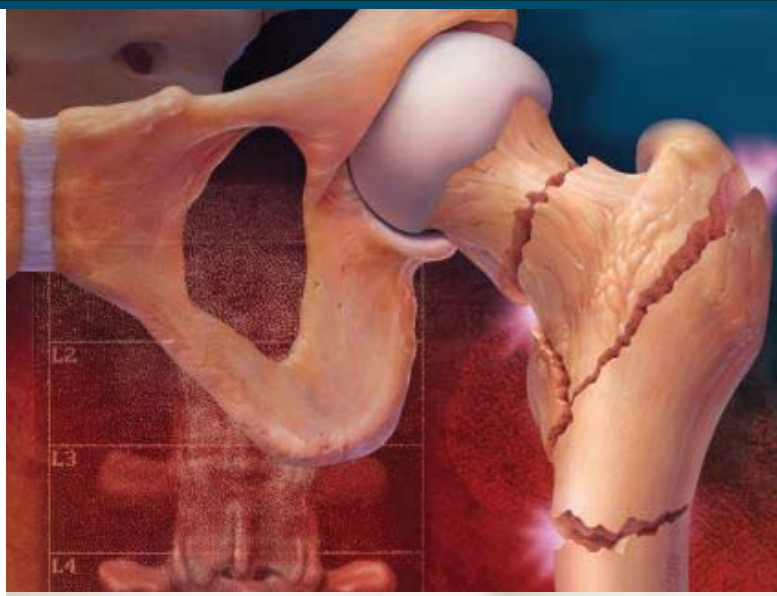
MEDICAL UPDATES

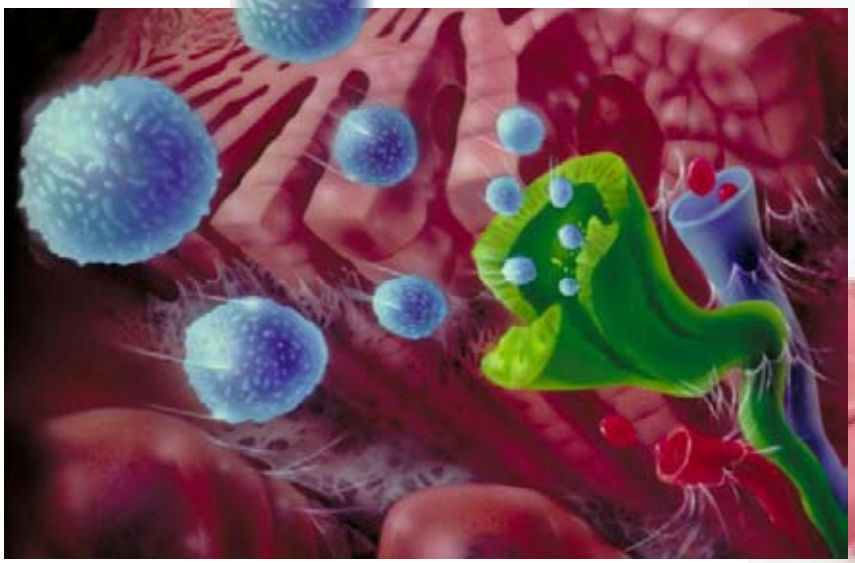
EGYPHAR

Issue No.:11 October 2012

Fragility Fractures Require Automatic Patient Follow-up



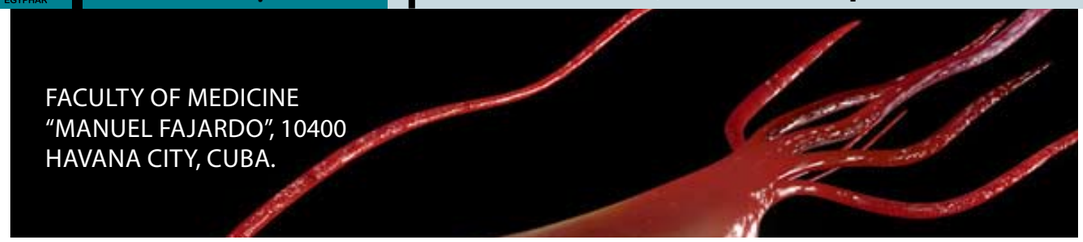
Chronic Hepatitis C Infection Increases All-Cause Mortality



Exercise Cuts Mortality in Diabetes

Egyphar Medical Updates

J Parasitol Res. 2011;2011:636857. **Epub 2011 Nov 20.**



FACULTY OF MEDICINE
"MANUEL FAJARDO", 10400
HAVANA CITY, CUBA.

Mebendazole compared with secnidazole in the treatment of adult giardiasis: a randomised, no-inferiority, open clinical trial.

Almirall P, Escobedo AA, Ayala I, Alfonso M, Salazar Y, Cañete R, Cimerman S, Galloso M, Olivero I, Robaina M, Tornés K.

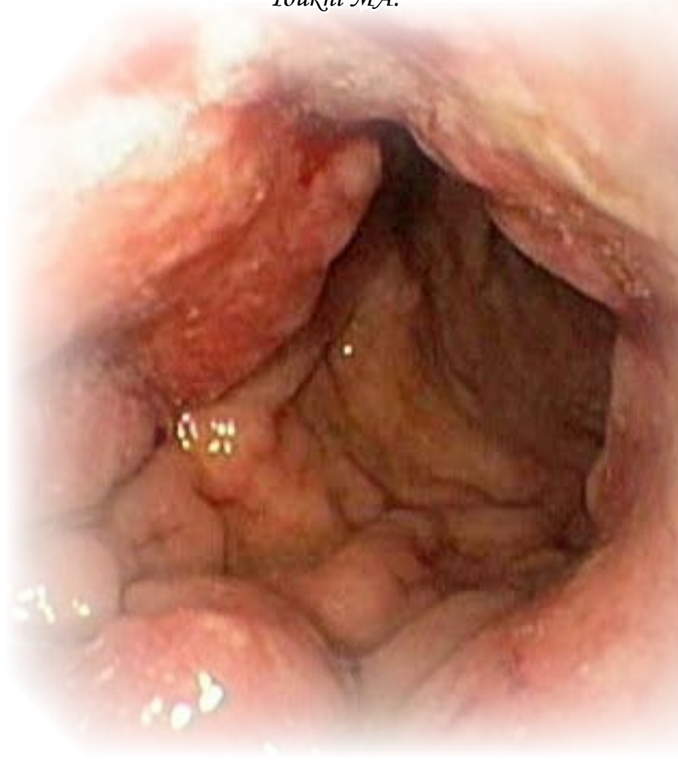
Abstract

To compare the efficacy and safety of mebendazole and secnidazole in the treatment of giardiasis in adult patients, a single-centre, parallel group, open-label, randomized non-inferiority trial was carried out. One-hundred and 26 participants who had symptomatic Giardia mono-infection took part in the study. Direct wet mount and/or Ritchie concentration techniques and physical examinations were conducted at the time of enrolment and at the follow-up visit. The primary outcome measure was parasitological cure, performed at 3, 5, 10 days post-treatment. Negative faecal specimens for Giardia were ensured by the same parasitological techniques. At follow up (day 10) the parasitological cure rate for the per protocol populations was 88.7% (55/62) for MBZ and 91.8% (56/61) for SNZ. For the intention to treat populations the cure rate at the end of treatment was 85.9% (55/64) for MBZ and 90.3% (56/62) for SNZ. Both analyzes showed there was not significant statistical difference between MBZ and SNZ treatment efficacy. Both drugs were well tolerated, only mild, transient and self-limited side effects were reported and did not require discontinuation of treatment. **A 3-day course of mebendazole seems** to be as efficacious and safe for treatment of **giardiasis** as **a single dose of secnidazole in adults.**

East Mediterr Health J. **2012 May;18(5):501-7.**

Evaluation of specific biochemical indicators of Helicobacter pylori-associated gastric cancer in Egypt.

Anwar MM, Youssef AI, Sheta MI, Zaki A, Bernaba NR, El-Toukhi MA.



We suggest that close follow-up together with periodic endoscopic examination for all patients with persistent H. pylori infection and serum soluble E-cadherin level above 5 microg/mL is essential.

The aim of the study was to assess the accuracy of some specific biochemical indicators in discriminating between Helicobacter pylori-associated gastritis and H. pylori-associated stomach cancer (serum gastrin level, serum soluble E-cadherin and tissue COX-2 activity, as well as serodiagnostic markers for H. pylori infection) in order to find a simple diagnostic test that can reasonably predict the development of gastric cancer. The study participants comprised 20 patients with gastric carcinoma, **20 patients with positive H. pylori-associated gastritis** and 20 individuals as the control group. Standard procedures and quality control measures were followed. Using cut-off values and ROC analysis to assess the diagnostic abilities of the biochemical indicators, E-cadherin showed the highest sensitivity (100%). We suggest that close follow-up together with periodic endoscopic examination for all patients with persistent H. pylori infection and serum soluble E-cadherin level above 5 microg/mL is essential.

Am J Med 2012.

Half of Heart Patients Don't Stick to Their Meds

By Kerry Grens

- NEW YORK (Reuters Health) Jul 25 - Just half of people who are given a prescription to prevent heart disease continue to get their medications refilled over time, according to a new review of several studies.
- The studies looked at seven medications, including aspirin, blood pressure drugs, and statins, typically intended for life-long use. Data from 20 studies suggested the rate at which people continue taking the drugs ranges from 30% to 80%.
- Among people who have already had a heart attack, one out of every three fails to continue getting their prescription refilled.
- "Even if these estimates were half as great, the cost of nonadherence is substantial," the group, led by Dr. David Wald at the University of London, writes.
- The researchers estimated in their report online June 27 in the American Journal of Medicine that 130,000 people die each year because they don't adhere to their prescriptions.
- Of the more than 376,000 people in the studies, about 275,000 were given a prescription to prevent heart disease while the other 101,000 were already diagnosed with heart disease.
- All of the patients were followed for at least 12 months. Overall, 57% of people continued to refill their prescriptions for the drugs.
- "This is something that's been going on for decades and we've been well aware," said Dr. David Blackburn, an associate professor of pharmacy and the research chair in patient adherence at the University of Saskatchewan in Canada, who was not involved in the research.
- Dr. Blackburn said there are few interventions known to consistently help patients stay on track with their medications, because it's not entirely clear why they're not compliant.
- In some cases, it could be related to the patient - difficulty reading the drug label or opening the container, fear of side effects, or challenges making it to the pharmacy for a refill.
- The health care system could play a role, too."It's difficult to have real a discourse with a physician because... everybody's busy," Dr. Blackburn told Reuters Health. "Because of the system and the constraints on cost and time, I think what you end up with are people who are really inadequately prepared" to follow through with their prescriptions.
- For the most part, patients complied with their prescriptions at about the same level for each of the different types of drugs.
- The only difference was among people without a diagnosis of heart disease, who were less likely to continue taking diuretics than they were to continue on angiotensin receptor blockers.
- "This suggests that specific drug properties (such as how often people have to take them or side effects) have a minor influence on whether patients remain on treatment long-term," the authors write.
- Dr. Blackburn said the findings support his ideas of what causes people to drop off of their medications. "It's probably system-related factors that are so important that they dwarf these little tolerability issues. They get drowned out by the way prescriptions are given and the time we have to engage with people," he said.
- He thinks frequent follow-ups with patients to make sure they're continuing their medication is important to help people stay on track.
- "It reflects buy-in from patients and prescribers that indeed this is an important thing," he said.

Lancet. 2012 Aug 11;380(9841):611-9.

Hypertension in developing countries.

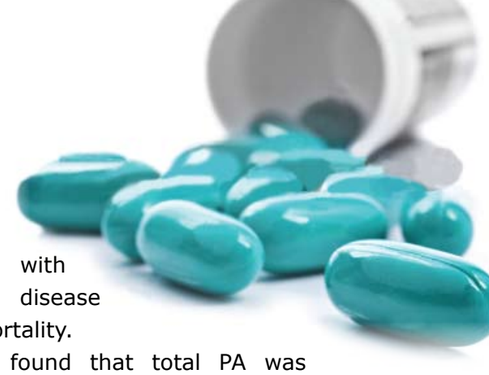
Ibrahim MM, Damasceno A

Data from different national and regional surveys show that hypertension is common in developing countries, particularly in urban areas, and that rates of awareness, treatment, and control are low. Several hypertension risk factors seem to be more common in developing countries than in developed regions. Findings from serial surveys show an increasing prevalence of hypertension in developing countries, possibly caused by urbanisation, ageing of population, changes to dietary habits, and social stress. High illiteracy rates, poor access to health facilities, bad dietary habits, poverty, and high costs of drugs contribute to poor blood pressure control. The health system in many developing countries is inadequate because of low funds, poor infrastructure, and inexperience. Priority is given to acute disorders, child and maternal health care, and control of communicable diseases. Governments, together with medical societies and non-governmental organisations, should support and promote preventive programmes aiming to increase public awareness, educate physicians, and reduce salt intake. Regulations for the food industry and the production and availability of generic drugs should be reinforced.

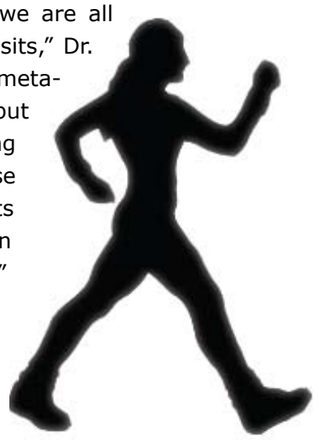
Exercise Cuts Mortality in Diabetes

Journalist, Steven Fox

Arch Intern Med. Published online August 6, 2012.



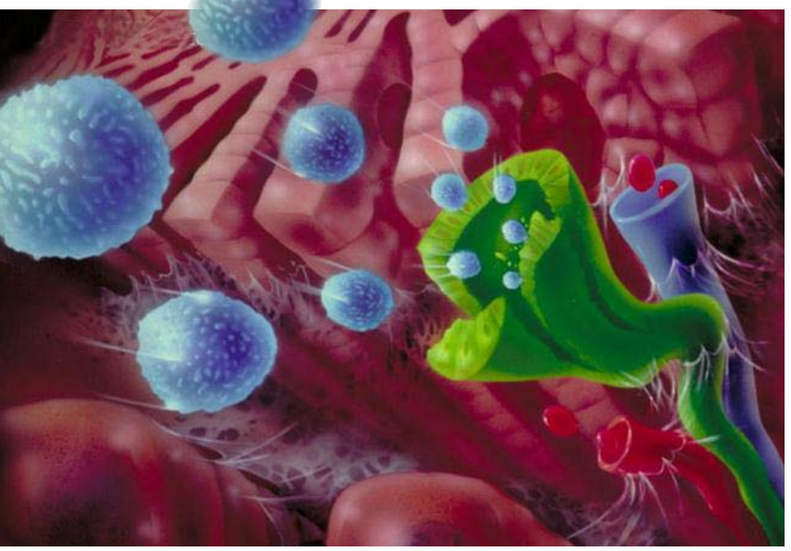
- August 6, 2012 — In patients with diabetes mellitus, even moderate levels of regular exercise can reduce risk for death by up to 38%, according to a newly published study that combines prospective cohort data with a meta-analysis of 12 previous studies.
- The new study was published online August 6 in the Archives of Internal Medicine.
- The authors, led by DiewertjeSluik, MSc, from the German Institute of Human Nutrition Potsdam-Rehbrücke, in Nuthetal, Germany, note that physical activity (PA) has long been considered a cornerstone of diabetes management. However, they write, "Several prospective cohort studies have found that higher PA levels were associated with reduced [cardiovascular disease (CVD)] and total mortality rates, but conclusive high-level evidence is lacking."
- Therefore, the researchers conducted a prospective cohort study of 5859 patients with diabetes who had been enrolled from 1992 to 2000 in the ongoing European Prospective Investigation Into Cancer and Nutrition (EPIC) study. Participants ranged in age from 35 to 70 years.
- "No information was available to distinguish type 1 and 2 diabetes mellitus," the authors write. "To be considered diabetic, a self-reported diagnosis at baseline had to be confirmed by at least 1 additional information source."
- The researchers used multivariable Cox proportional hazards regression models to assess how patients' reported leisure-time PA, total PA, and walking were associated with cardiovascular disease and total mortality.
- They found that total PA was associated with lower risk for CVD and total mortality. "Compared with physically inactive persons, the lowest mortality risk was observed in moderately active persons: hazard ratios were 0.62 (95% [confidence interval (CI)], 0.49-0.78) for total mortality and 0.51 (95% CI, 0.32-0.81) for CVD mortality," the authors write. Leisure-time PA was also associated with lower total mortality, and walking was linked to reduced risk for mortality from cardiovascular disease.
- To further assess the association between exercise and mortality, the researchers also conducted a meta-analysis of 12 previous prospective studies, which had been conducted through 2010. All studies focused on various aspects of how PA affects diabetes.
- "In the meta-analysis, the pooled random-effects hazard ratio from 5 studies for high vs low total PA and all-cause mortality was 0.60 (95% CI, 0.49-0.73)," the authors write.
- "These associations are in line with those found in the general population, where PA relates to a 33% lower risk of overall mortality and a 35% lower risk of CVD mortality compared with inactivity," the authors note.
- The investigators conclude that evidence from their present study, coupled with data from the meta-analysis, supports the widely held belief that PA cuts mortality risk in people with diabetes.
- However, they note that patients with diabetes often have trouble adhering to exercise programs. With that in mind, they note, "[F]uture research should elucidate the determinants of physical inactivity and design successful strategies to promote active lifestyles."
- In an editorial accompanying the study, Mitchell Katz, MD, from the Los Angeles County Department of Health Services in California, says it is important for physicians to be aware of the physiologic effects and benefits of various types of exercise, so they can appropriately counsel their patients.
- He notes that instructions on how to write exercise prescriptions are readily available on a Web site provided by the US Department of Veterans Affairs.
- "Some might question whether providing exercise prescriptions is really the job of the practicing physician, a fair question given that we are all trying to do more in our 15-minute visits," Dr. Katz writes. "But having read the meta-analysis by Sluik et al., I cannot help but note that none of the time I spend trying to decide whether to increase the dose or add a new medication for my patients with type 2 diabetes is likely to result in a 38% reduction in all-cause mortality."



Joanna Broder

July 18, 2012

Chronic Hepatitis C Infection Increases All-Cause Mortality



Individuals who have chronic hepatitis C (HCV) infections, with detectable serum HCV RNA, have a significantly higher risk of dying from liver and non–liver related diseases

compared with individuals who are seropositive for HCV but lack detectable serum HCV RNA, according to a study published online July 17 and in the August print issue of the Journal of Infectious Diseases.

"We found that anti-HCV seropositives with detectable serum HCV RNA had an increased risk of dying from all causes of death, whereas the risk for anti-HCV seropositives with negative HCV RNA was similar to the risk for anti-HCV seronegatives," lead author Mei-Hsuan Lee, PhD, from the Genomics Research Center, Academia Sinica, Taipei, Taiwan, and colleagues write.

"The results implied that chronic hepatitis C patients with active virus infection may benefit from antiviral treatment to reduce their overall mortality," the authors continue.

The results also suggest it is important to monitor HCV RNA levels in people who test anti-HCV seropositive to predict mortality related to HCV, according to Dr. Lee and colleagues.

"The findings implied that the serum HCV RNA level is an important marker for clinical decisions in the management of HCV-infected patients," the study's principle investigator Chien-Jen Chen, ScD, a professor at the Genomic Research Center, said in a journal news release.

Dr. Chen also suggested that HCV-infected patients might benefit from treatment with antiviral and immunomodulating agents to promote viral clearance.

To assess the long-term effect of HCV infection, the researchers enlisted a cohort of 23,820 adults aged from 30 to 65 years. The investigators recruited participants through community screening programs that took place in 7 townships in Taiwan between 1991 and 1992. Participants donated blood samples at study entry and at follow-up health examinations. The researchers used national death certification profiles from 1991 to 2008 to obtain mortality data. Participants with hepatitis B virus or HIV were excluded from the study.

During an average follow-up period of 16.2 years, 2394 participants died. The investigators found that participants seropostive for HCV were more likely to die from both hepatic and extrahepatic diseases compared with participants who were seronegative. The multivariate-adjusted hazard ratios were:

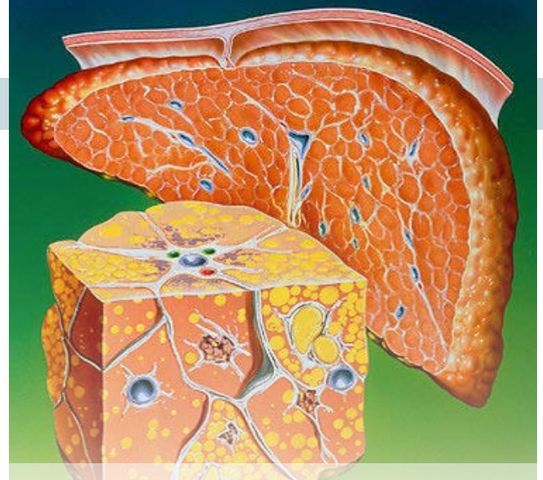
- 1.89 (95% confidence interval [CI], 1.66 - 2.15) for all causes of death;
- 12.48 (95% CI, 9.34 - 16.66) for hepatic diseases;
- 1.35 (95% CI, 1.15 - 1.57) for extrahepatic diseases;
- 1.50 (95% CI, 1.10 - 2.03) for circulatory diseases;
- 2.77 (95% CI, 1.49 - 5.15) for nephritis, nephrotic syndrome, and nephrosis;
- 4.08 (95% CI, 1.38 - 12.08) for esophageal cancer;
- 4.19 (95% CI, 1.18 - 14.94) for prostate cancer; and
- 8.22 (95% CI, 1.36 - 49.66) for thyroid cancer.

However, when the investigators divided the seropositive group into those with and without detectable serum HCV RNA, they found that the excess mortality risk concentrated in those patients with detectable serum HCV RNA. For example, the multivariate adjusted hazard ratios for HCV RNA–positive and HCV RNA–negative participants, relative to seronegative participants, were:

- 2.20 (95% CI, 1.90 - 2.55) and 0.97 (95% CI, .70 - 1.35) for all causes of death;
- 16.36 (95% CI, 12.09 - 22.13) and 2.19 (95% CI, .81 - 5.97) for hepatic diseases;
- 1.47 (95% CI, 1.23 - 1.77) and 0.90 (95% CI, .64 - 1.28) for extrahepatic diseases.

The investigators conclude that their findings have significant implications for clinical practice and public health, according to the press release. Specifically, they recommend that physicians should intensively follow-up individuals who are have detectable HCV RNA and consider offering them antiviral therapy. In addition, testing to determine serum HCV RNA level by a sensitive assay is of utmost importance for the clinical management of patients with HCV, the authors note.

HCV infects more than 170 million people worldwide. It is known to cause fatal liver disease, including cirrhosis and hepatocellular carcinoma, yet individuals who have HCV often do not have symptoms and are not aware of their illness until



they face severe liver disease, the authors write.

In an accompanying editorial , Kenrad Nelson, MD, a professor in the Department of Epidemiology at the Bloomberg School of Public Health, Johns Hopkins University, Baltimore, Maryland, notes that a possible strategy to help prevent mortality from HCV is to expand screening "beyond the high-risk groups currently recommended for screening."

"One-time screening of the birth cohort born between 1945 and 1965 would identify a substantial proportion of HCV-infected persons in the United States," he writes.

A recently published decision analysis of this strategy found it to be cost-effective, provided that referral and treatment resources are expanded to take care of the large number of patients found to be in need of evaluation and care, he adds.

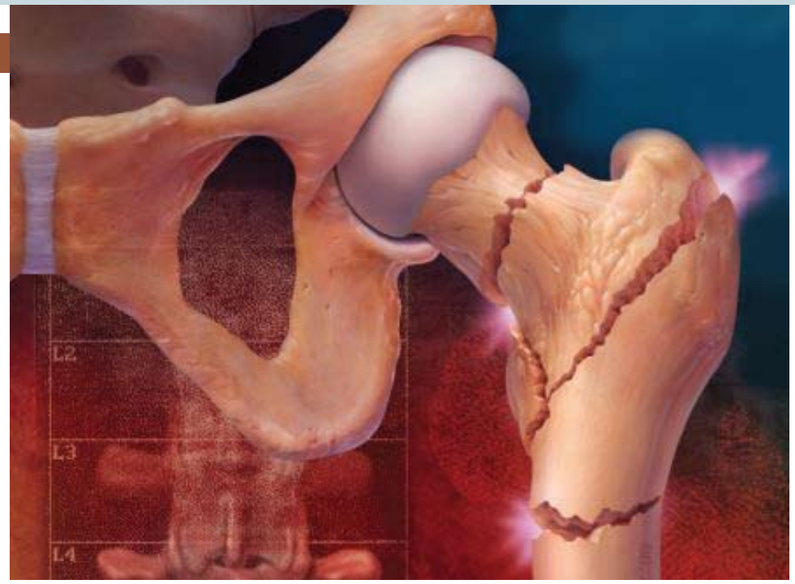
Mortality from HCV infection has surpassed that from HIV in the United States in the last few years, according to Dr. Nelson.

Patients with HCV infection are not always aware they have it and, even among those whose infection is found, "few are medically evaluated and effectively treated," he writes.

Treatment for HCV infection is dramatically improving, Dr. Nelson notes, but to reduce the death rate, screening measures need to be improved.

"[N]ow is the time for chronic HCV infections to be taken more seriously as an important public health problem," he concludes.

This study was supported by research grants from the Department of Health, Executive Yuan, Taipei, Taiwan; Bristol-Myers Squibb Co; the Academia Sinica; and the National Health Research Institutes, Chunan, Taiwan. The authors and Dr. Nelson have disclosed no relevant financial relationships.



gility fractures need to be linked automatically with provision of care that would assess patients for future risk for fracture and prevent new fractures, according to the conclusions of the American Society for Bone and Mineral Research (ASBMR) Task Force on Secondary Fracture Prevention.

Emma Hitt, PhD

Fragility Fractures Require Automatic Patient Follow-up

"Despite the major health care impact worldwide, currently there are few systems in place to identify and 'capture' individuals after a fragility fracture to ensure appropriate assessment and treatment (according to national guidelines) to reduce future fracture risk and adverse health outcomes," Dr. Eisman and colleagues write.

The task force, which included representatives from 36 countries, reviewed evidence regarding interventional approaches, including fracture liaison services (FLS), after fracture.

"The purpose of this report is to provide a logical background, medical and ethical rationale, and toolkit for reducing secondary fracture incidence, particularly hip fractures, and health care costs," the authors write.

"Fractures Beget Fractures"

"Fractures beget fractures and lead to untold suffering. Our task force looked at ways to break this vicious cycle," report cochair Ethel S. Siris, MD, from the Department of Medicine, Columbia University, New York City, noted in an ASBMR news release. "We learned what works and what doesn't. The research is clear: Fracture liaison services are saving suffering, and they are saving money," she stated.

The task force concluded that the most significant barrier to widespread use of an FLS is the lack of insurance coverage. A major goal is a 20% reduction in hip fractures by 2020; hip fractures represent the most serious and expensive type of fracture.

The task force's proposed standard, articulated in an online supplement to the article, is that "all patients 50 years and older with new clinical fractures or newly reported vertebral fractures should undergo investigation and evaluation for prevention of secondary fractures unless acute illness precludes or they decline investigation. Investigation should include [dual-energy X-ray absorptiometry], vertebral fracture investigation and locally agreed laboratory investigations."

According to the ASBMR, FLS programs such as the Kaiser Permanente "Healthy Bones" model of care have been shown to reduce hip fractures by almost 40%. If implemented nationally, this model of care could save nearly $3 billion per year, they suggest.

The task force report also examines various aspects of optimal follow-up preventive care for fracture patients, including ethical considerations, barriers to optimal fracture prevention, and the key elements of effective preventive approaches.

A detailed framework and toolkit for implementing an FLS and other details of the task force's approach are available online in an appendix accompanying the report on the journal's Web site.

Although several initiatives in the United States and internationally are pushing for coordinating the groups that treat and manage fractures, the task force suggests that a cooperative approach by these groups, aided by a central clearing house, could magnify the effort to get solutions in place.

"We know that once a first fracture occurs the risk of additional fractures is high," Dr. Siris stated. "Targeting these individuals for treatment to reduce the possibility of more fractures will save a lot of human suffering and tremendous expense to the health care budget."

Independent commentator Lorenz Hofbauer, MD, an endocrinologist and professor from the Dresden

Technical University Medical Center in Germany, noted that FLS programs are an interesting concept to tackle barriers. "From a patient's perspective, advances in this area with robust implementation may be significant," he told Medscape Medical News.

According to Dr. Hofbauer, however, there may be local differences in the implementation and efficacy of these programs. An important unanswered question is whether such an approach will work in different geographic areas. He added that collaboration and communication across sectors will be key. In addition, he pointed out that intervention may be more effective and cost-effective in high-risk subcohorts, such as survivors of myocardial infarction or pulmonary embolism.

According to the ASBMR, each year nearly 300,000 older adults in the United States suffer hip fractures, and more than 20% die within a year of their injury.

Dr. Eisman and coauthors report having multiple financial disclosures; these are listed in a separate appendix accompanying the article. The task force was not commercially funded. Dr. Hofbauer has disclosed no relevant financial relationships.

Preterm Birth Rates and Infant Death Rates Drop

Denise Mann

July 13, 2012 The U.S. preterm birth rate dropped for the fourth year in a row, according to a new federal report. In 2010, 12% of infants were born before 37 weeks, down from 12.8% in 2006.

Babies born too early are at higher risk for many long-term health and developmental problems. This decline was primarily seen among infants delivered late preterm or between 34 to 36 weeks of pregnancy.

The study also showed that fewer infants are dying within their first year of life. This rate decreased from 6.4 per 1,000 births in 2009 to 6.1 per 1,000 births in 2010.

While the report, "America's Children in Brief: Key National Indicators of Well-Being, 2012," does show some progress in key measures of health, significant challenges still exist.

According to the data, almost 10% of children ages 0 to 17 in the U.S. had asthma in 2010, and about 20% of children aged 6 to 17 were obese. The obesity rates have remained unchanged since 2001-2002.

"It's a mixed picture," says Alan E. Guttmacher, MD. He is the director of the Eunice Kennedy Shriver National Institute of Child Health and Human Development in Bethesda, Md. "Rates of preterm birth and infant mortality are going down and that is wonderful news, but these rates are still higher than we would like it to be," he tells WebMD. "Childhood obesity and childhood asthma continue to be major problems, and we would like to see more gains there for sure."

Report Shows Some Positive Trends

The report was compiled by the Federal Interagency Forum on Child and Family Statistics, a group of 22 federal agencies. Most of the data have been previously reported elsewhere.

According to the new report:

- The teen birth rate continues to decline, decreasing from almost 20 per 1,000 girls ages 15 to 17 in 2009 to 17 per 1,000 in 2010.
- Births to single women aged 15 to 44 fell from 2009 to 2010.
- 7.3 million children did not have health insurance at least once in 2010.
- In 2010, 5% of children aged 0 to 17 had no usual source of health care.

The report also looked at vaccination rates.

More teens got one or more dose of the meningococcal vaccine now than ever before. Rates of this vaccine shot up from 12% in 2006 to 63% in 2010.

The number of teen girls who got the HPV vaccine doubled in three years, reaching 49% in 2010. The HPV shots prevent infection from the strains of the virus most likely to cause cervical cancer.

"Certainly there continue to be challenges," says Edward Sondik, PhD. He directs the CDC's National Center for Health Statistics in Hyattsville, Md. "Obesity is a major issue and it is a very significant challenge in terms of how to turn it around and drive it down."

Curbing the rates of childhood obesity will take a multi-dimensional approach. "We don't solve the problem of obesity in the health, education, or housing realms alone," he says.

While infant mortality rates are down overall, they are still twice as high among African-Americans as whites. "This disparity has been an intractable problem that has persisted."

SOURCES:

Alan E. Guttmacher, MD, director, Eunice Kennedy Shriver National Institute of Child Health and Human Development, Bethesda, Md.

Edward Sondik, PhD, director, National Center for Health Statistics, Hyattsville, Md.

Federal Interagency Forum on Child and Family Statistics: "America's Children in Brief: Key National Indicators of Well-Being, 2012."