Numerous advertisements remind us of the importance of adequate calcium intake “for strong bones.” However, calcium, the most abundant mineral in the human body, has many additional important functions. While almost all the total body calcium (99%) supports the development and maintenance of teeth and bones and is stored there, the remaining amount (1%) is found in blood, muscle and the fluid between cells; that calcium is needed for muscle contraction, blood vessel contraction and expansion, secretion of certain hormones, and the relaying of messages throughout the nervous system.

Dairy products are the main source of calcium in the diets for those able to consume dairy. Other foods containing calcium include broccoli, kale and Chinese cabbage, as well as calcium-enriched foods like breads, pastas and fortified juices. But adequate calcium intake is related not only to the amount of calcium consumed, but also to the amount absorbed from the digestive tract into the body’s circulation.

Choosing a calcium supplement
While dietary guidelines recommend that we consume a variety of foods to meet the recommended intake of calcium, meeting those needs for some individuals requires calcium supplementation. Vitamin D is essential for calcium absorption. Many other factors also influence how well supplemental calcium is absorbed from the digestive tract into the areas of the body where it is needed.

The two main forms of calcium found in supplements are carbonate and citrate. Calcium carbonate is the most commonly purchased form because it is easy to obtain and relatively inexpensive. Calcium carbonate is also used as an antacid to relieve heartburn, acid indigestion and stomach upset. Some brand names are Caltrate®, Os-Cal 500®, Tums® and Rolaids-Calcium®. It is also available in many store brands so check labels for active ingredients.

Calcium carbonate requires extra stomach acid for better absorption and is best taken after a meal. Calcium citrate is not dependent on stomach acid for

Adequate calcium intake is an essential part of good nutrition. YHP nutritionist Linda Bell, MS, RD, CD-N and Martha Asarisi, RPh of the YHP Pharmacy provide an overview of this important mineral and tips about using calcium supplements. The companion piece on vitamin D discusses the latest information on this nutrient, which is both necessary for calcium absorption and important for overall health.
Calcium
continued from page 1

absorption, so it is often recommended for those who may have less stomach acid, such as the elderly, those taking medications to reduce stomach acid (such as Prilosec® or Zantac®), or those who have had bariatric surgery. One brand name for calcium citrate is Citracal® and many store brands are available. Calcium citrate is also less likely to cause common side effects such as gas, bloating, and constipation.

Other lesser-known forms of calcium in supplements are dolomite, bone meal, calcium gluconate and coral calcium. Dolomite and bone meal are naturally occurring minerals with elemental calcium levels fluctuating significantly from tablet to tablet. All these types of calcium generally contain very low amounts of elemental calcium and are therefore not recommended. You are best off using calcium supplements with either calcium carbonate or calcium citrate.

Some tips for taking calcium supplements:

• For best absorption and to reduce the chances of gas, bloating or constipation, take your calcium supplements with meals.

• Calcium absorption is less efficient when large amounts are consumed at once; divide your intake into smaller amounts throughout the day. The best way to take a calcium supplement is not to exceed 500–600 mg at a time.

• If an iron supplement has been recommended, don't take the iron at the same time as your calcium, since calcium can interfere with the body's ability to absorb iron.

Calcium supplements have the potential to interact with several prescription and over-the-counter medications. Calcium supplements may decrease levels of the drug digoxin (Lanoxin®), a medication given to heart patients. They may also interact with the antibiotics tetracycline and ciprofloxacin (Cipro®); the thyroid medication levothyroxine (Synthroid®, Levothroid®) and the anti-convulsant phenytoin (Dilantin®). In all these cases the calcium binds with the medication causing a decrease in the absorption of the drug when the two are consumed at the same time.

• Your best course is to take calcium one hour before or two hours after any medication to minimize drug interactions.

• Antacids containing aluminum and magnesium (Maalox®, Mylanta®) taken at the same time as calcium supplements can cause an increase in the urinary excretion of calcium, resulting in less retention of calcium we absorb. Mineral oil and stimulant laxatives can also decrease calcium absorption.

• Calcium supplementation may cause problems in those with impairment of the kidneys or other organs—so if you have such a condition, be certain to check with your clinician before taking supplemental calcium.

Make sure to let your clinician know about any prescription or over-the-counter medications you are taking; you can also ask a pharmacist about potential interactions.

HOW MUCH CALCIUM DO I NEED?

<table>
<thead>
<tr>
<th>age range</th>
<th>recommended calcium intake (mg)</th>
</tr>
</thead>
<tbody>
<tr>
<td>children 1 to 3</td>
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</tr>
<tr>
<td>children 4 to 8</td>
<td>800</td>
</tr>
<tr>
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<td>1300</td>
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<td>adults 19–50</td>
<td>1000</td>
</tr>
<tr>
<td>adults 51 and older</td>
<td>1200</td>
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</table>
We always remember that YUHS is first and foremost a human organization, not a building.

If you are nearby, walk over to 55 Lock Street and check out the progress on the construction of our new building. The foundation walls and floors have been poured, steel beams are going up, and you can get a good idea of the size and shape. A webcam has been installed so you can view the construction progress. See our web site: www.yale.edu/yhp.

Of course, there is still a lot of work to be done in preparation for future stages. We have partnered with the entire university to make this project happen; our steering committee for the building includes our design team (architects from Mack Scogin Merrill Elam) and internal project team as well as representation from offices across the university such as security, campus police, sustainability, the provost, and planning. The group meets quarterly to review high-level issues such as budget and timeline.

Meanwhile, YHP staff members continue to make decisions about various aspects of the project: clinical spaces; public areas; administrative offices; communication and public relations; art and decorations; materials management; and audio/visual and information technology. These work groups include senior YHP administrators, department chiefs and managers, clinicians, medical assistants, nurses, as well as other clinical and administrative staff. Every detail, from the largest to the smallest, must be examined and a decision made. For example, it is important that we outfit exam rooms to provide for optimal patient comfort and clinical flexibility.

To that end, we are reviewing and fine-tuning decisions that came from our Joint Department Committee (with labor and management working together) on clinical exam room design in a mock-up of an exam room. Currently under consideration is whether to use modular furniture and casework, or custom built-in casework.

Projects for the next year include engineering new work processes; medical supply delivery; waste removal; and ergonomical, functional and flexible furniture selection. Julie Newman, director of the office of sustainability, has partnered with us to help reduce our carbon footprint. Yale graduate students from her office are involved in our work groups helping us select processes, vendors and equipment that incorporate sustainable practices.

As we work together to make the new building an aesthetically pleasing, functional and green health care facility, we always remember that YUHS is first and foremost a human organization, not a building. The focus of our planning is on creating a comfortable and positive transition for our members and staff to the new medical home that we will share. We will keep you posted in upcoming issues of Yale Health Care as the project progresses, and we welcome your questions, comments and suggestions at member.services@yale.edu.

To celebrate our new home, about 200 members of the YHP staff signed a steel beam which will be incorporated into the building’s construction. Pictured here (left to right) are: Alberta Ferrie, and Susan Hawthorne; Carol Paugas (signing), and to the right Anita Beltran and Gen Kaminskas; Jim Zarro.
for Vitamin D, it provides 200 IU of Vitamin D. These values are based on the assumption that no vitamin D will be manufactured by the skin. This vitamin occurs naturally in only a few foods, notably fatty fish and fish liver oils, and small amounts are found in beef liver, cheese, and egg yolks. Other foods such as milk, and certain brands of breakfast cereals, yogurt, and margarine are fortified with Vitamin D.

The tolerable upper limit for this vitamin has been set at 2000 IU for children and adults, and 1000 IU for infants. Although some researchers think that both the recommended intakes and these upper limits may be too low, we do not yet have enough data to be certain about the potential risks of long-term high intake of this vitamin, especially for infants, children, and women of reproductive age. Therefore, avoid taking more than the upper limit for this vitamin unless directed to do so by your clinician. When you calculate your vitamin D intake, make sure to include the amounts contained in any supplements you may be taking, such as calcium and multiple vitamins.

For more information, see http://ods.od.nih.gov/factsheets/vitamind.asp

Linda Bell, MS, RD, CD-N, YHP nutritionist

Confused about supplements? Try ODS

One of the problems with using the Internet to research information about vitamins is that not only do you find some sources whose scientific accuracy is questionable, but some websites may have commercial interests in getting you to buy their products and thus not offer the most objective information. A reliable, up-to-date information source is the Office of Dietary Supplements website within the National Institutes of Health: http://ods.od.nih.gov/

Sunshine vitamin

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According to the American Academy of Ophthalmology, vision problems affect one in twenty preschoolers and one in four school-aged children. Eye problems can begin at an early age so eye screenings are done by your pediatrician shortly after birth and continue as part of ongoing pediatric care. Parents should be aware of several common childhood eye problems. A refractive error (causing nearsightedness or farsightedness) occurs when light that enters the eye does not properly focus on the retina in the back of the eye, causing blurry vision either at near or far distances or both. Eyeglasses are the first step in correcting this problem in young children, but refractive surgery is another option. Strabismus or “crossed eyes” is a vision problem in which the eyes do not look at the same point at the same time. There are many causes of strabismus and treatment varies depending on the cause. Amblyopia or “lazy eye” is defined as decreased vision in an eye without any apparent disease to explain it. This problem can be caused by visual deprivation either from misalignment of the eyes (strabismus), or by very different refractive errors in each eye. Early treatment of the amblyopia can improve the vision in the affected eye. Treatment includes treating the underlying cause if one is found, and patching or drug therapy.

Keeping children’s eyes healthy also involves common-sense practices such as guarding against injury and reducing exposure to the sun’s ultraviolet (UV) rays with brimmed hats and sunglasses. Lifetime exposure to UV rays may contribute to cataract formation and macular degeneration. Check sunglass labels before purchase to make sure that the glasses filter out 99-100% of UV rays. Also check to make sure that the sunglasses fit well and are not damaged. The sunglass lenses should be impact-resistant and should not pop out of the frame.

Most childhood eye injuries occur when children are playing sports. Children should wear batting helmets with polycarbonate face shields while playing baseball, and helmets and face shields approved by the U.S. Amateur Hockey Association when playing hockey. Polycarbonate lenses and protective goggles can help protect eyes during racket sports and basketball. Make sure your children wear protective goggles when playing paintball. Unless specified, regular eyeglasses do not provide enough protection against sport-related injuries.

Good eye care begins at birth

Maria Della Porta, OD, of the YHP Ophthalmology Department, offers some common-sense advice about protecting children’s vision and eye health.

Maria Della Porta, OD of the YHP Ophthalmology Department, offers some common-sense advice about protecting children’s vision and eye health.
healthy ideas

From awake to zzzzz

Adults generally need between seven and eight hours daily for optimal health and functioning. Lack of sleep can lead to serious problems, including motor vehicle accidents, work-related accidents, and poor work or school performance. In addition, one way the body keeps itself awake when it needs sleep is to activate the stress response, potentially weakening the immune system. There is also evidence that getting enough sleep increases longevity. Death from all causes is lowest among adults who sleep seven to eight hours per night, and is higher for people who sleep less than seven hours nightly.

Many people don’t make enough time for sleep or have trouble falling or staying asleep. A 2008 survey by the National Sleep Foundation revealed that 65% of U.S. adults experience some symptoms of a sleep problem at least a few nights per week, with 44 percent reporting sleep problems “almost every night.” Nearly one-third (32 percent) reported driving drowsy at least once per month during the previous year.

If you have trouble getting a good night’s sleep, discuss the situation with your clinician. And here are some general tips to help you sleep better:

- Children need a consistent bedtime and nap schedule, a calm and pleasant bedtime routine/environment, and encouragement to fall asleep on their own.
- Adults should try to get up and retire about the same time each day.
- Establish a relaxing pre-sleep routine such as reading or listening to relaxing music.
- Keep your bedroom quiet, cool, and as dark as possible.
- Use your bed for sleeping and sexual activity only.
- Maintain a regular daily schedule that includes exercise, down time and regular meals, but avoid exercise, heavy meals and caffeinated beverages within four to five hours before bedtime.

For more on this topic, check the Sleep Problems topic in the Healthwise® Knowledgebase, where you can learn about common causes of sleep problems and find additional home treatment options for getting a good night’s rest. (Go to www.yale.edu/yhp and click on the Healthwise® icon). An additional note: if your sleep is often disturbed by an attack of “Charley horse”—an unexpected leg cramp caused when a muscle suddenly and forcefully contracts—check the Nighttime Leg Cramps topic in Healthwise® for causes, treatments and prevention.

Soothe winter-itchy skin

Towards the end of showering apply a liberal amount of bath oil and rinse off gradually with tepid water. Pat dry with a towel—do not rub. This procedure will help your skin absorb needed moisture.

(For more information on skin care, check Skin Care in Healthwise®.)
NEW ID CARDS ON THE WAY
Look for your new Yale Health Plan ID cards in the mail in the coming months. Please note this card will have a unique MRN (medical record number) and replaces any old cards you may have.

WELCOME TO NEW MEMBERS
Welcome to members who joined YHP during the University’s open enrollment period. If you have not already received a membership packet, contact Member Services at 203-432-0246, which is also the number you can call with any membership questions.

NEW LOOK ON LINE
The Yale Health Plan website has a new look. Take a few minutes to review the new layout of our website: www.yale.edu/yhp and explore two important and informative features: Yale Health Online and Healthwise®.

Not feeling well?
Flu season is here—a time of year when many of our adult patients turn to Urgent Care for immediate clinical appointments. While this may seem like the easy answer, waiting times are unpredictable—and perhaps you don’t need a visit. If you do need to be seen, wouldn’t you rather have a specific appointment time with your own clinician or a member of his/her clinical team? You can talk on the phone directly to one of our Internal Medicine triage nurses to figure out what course of action is best for you.

So call Internal Medicine before coming in to Urgent Care for problems like the flu. Speak with one of our nurses, who can help you determine whether your needs can be met in a phone conversation, whether you do need a clinical appointment, or whether Urgent Care is where you belong. If you do need an appointment, we promise to see you promptly in Internal Medicine.

The number to call is 203-432-0038; then press 5.

Daniel S. Rowe, founding YUHS director, dies at 83

In 1971, when Yale University Health Services opened its doors, it was the only university health maintenance organization (HMO) in the country. Paul Genecin, MD, the current YUHS director notes that “YUHS owes its existence to the creative and visionary leadership of Daniel S. (‘Pete’) Rowe, MD,” its founding director who headed YUHS for two decades. At the time of his death, Rowe was professor emeritus of pediatrics and epidemiology and public health at Yale.

Born in Pennsylvania in 1925, Rowe graduated from the University of Chicago and earned his medical degree from Jefferson Medical College in Philadelphia. He served in the Army during World War II and in the Navy during the Korean conflict. He was in private practice and served as director of nurseries at Jefferson Medical College Hospital, before coming to Yale in 1966 as associate director of the Pediatric Clinic at the Yale-New Haven Medical Center. Known for developing a model program for child protection in the United States, he became director of the clinic in 1967.

In 1970, Rowe was named a full professor of pediatrics at Yale Medical School and also became director of YUHS. Upon his retirement as director in 1990, he noted how radical the concept of a university-based, pre-paid group health plan seemed in the late 1960s. “We were accused of practicing ‘socialized medicine’ at best and called communists at worst,” he recalled.

Rowe earned many honors, including the 1968 Francis Gilman Blake Award, given each year by the Yale Medical School senior class for excellence in teaching. But perhaps his greatest accomplishment was helping to develop what he described a few years ago as “an entirely new model for university health....Yale Health Plan was the first comprehensive, prepaid medical care program in the country to be offered to an entire university community.” Paul Genecin adds, “Those of us who knew Pete are deeply grateful for this organization that he built.”
New nutritionist
Lisa Tartamella Kimmel, MS, RD, CD-N, has joined our staff as a nutritionist caring for our student population. Her prior experience includes positions as outpatient nutrition coordinator and hospital ambulatory nutrition specialist with Yale New Haven Hospital. Educated at James Madison University (BS in dietetics) and Southern CT State University (MS in exercise physiology), Kimmel has published a book on childhood obesity, and lectures on topics ranging from nutrition for dancers to deciphering diabetes.

Serio joins Pharmacy staff
Joseph Serio, PharmD, who joined the Pharmacy staff this past August, earned both his B.S. in pharmacy studies and his doctorate in pharmacy from the University of Connecticut. He has worked in a commercial pharmacy setting, and has done advance-practice rotations in community practice, ambulatory care, hospice care, geriatrics, and general medicine.

Huston joins Athletic Medicine Department
Lindsay Huston, MD, has joined the Athletic Medicine Department. A graduate of Stanford University and UC Davis, Huston, a varsity athlete herself, was most recently the assistant team physician for San Diego State University’s football and men’s and women’s basketball teams, as well as a sports medicine fellow at San Jose-O’Connor Hospital. She is also board-certified in family medicine.

Muskin is new Internal Medicine physician
A graduate of Yale University and of Case Western Reserve University School of Medicine, Elizabeth Muskin, MD, has joined the Internal Medicine Department after several years in private practice in the greater New Haven area. She has also been a lecturer at the Hospital of the University of Pennsylvania in Philadelphia.

Employees honored
Each year we honor staff members, both clinical and administrative, whose service exemplifies our mission of providing the highest quality, patient-focused care. In this and the next few issues, you will read about this year’s award winners.

Clinician of the Year
Rochelle Kanell, MS, CNM
A member of the Ob/Gyn Department at YUHS since 1990, Kanell has cared for a generation of YHP members; she now sees patients whose mothers went through their pregnancies with her. She is a “dedicated clinician who cares deeply about the health care of women and who is always ready to undertake a clinical challenge.” Her warmth and kindness are recognized and valued by the women she cares for; her colleagues rely on her “clinical insights, practical wisdom and ethical advice.” The “maternal quality of her care and advice” make her especially popular with the student population, and she often spends time outside of office hours, talking with mothers and daughters.

Physician of the Year
Christine Pohlmann, MD
“Always cheerful and optimistic, with great energy,” Pohlmann has been a member of the Student Medicine Department since 2006. Described by both patients and colleagues as “very empathic and hard-working” she cares deeply about the psychosocial and emotional states of all students, and often stays late to make sure all her patients are taken care of. She also loves to teach (one patient recounts: “Dr. Pohlmann took out a book to show me pictures of my health condition, and explained her thought process”), and medical students enjoy working with her in clinic. Her colleagues cite her “great clinical judgment, her attention to detail, and her wisdom.”
Starting in January, all manufacturers of albuterol inhalers will have to change from CFC (chlorofluorocarbon)-propelled inhalers to HFA (hydrofluoroalkane)-propelled inhalers. This change comes as a result of a federal ban on CFCs put in place in 2005 in response to evidence that CFCs contribute to the thinning of the earth’s ozone layer.

Many patients with asthma and those with chronic obstructive pulmonary disease (COPD) use albuterol (brand names Proventil® HFA, ProAir® HFA and Ventolin® HFA) as part of their medication regimen. Some tips about HFA inhalers:

- The difference between CFC and HFA albuterol inhalers is the way the medication is propelled from the canister into the lungs. The HFA inhaler doesn’t blow out as hard and the puff released from the inhaler seems gentler than the “blast” from a CFC-propelled inhaler. A patient who is used to this “blast” of spray into the back of the mouth may think that the inhaler is not dispensing enough medication, but the amount of medication is the same.

- A new HFA inhaler needs to be primed (sprayed two times into the air) before using. The HFA propellant is gummier than the CFC propellant so the plastic container that holds the canister needs to be rinsed out and air dried at least once a week.

- The taste of the propellant is slightly different.

- The cost of HFA inhalers is approximately three times more than the cost of the CFC inhaler due in part to the fact that they are still on a brand name patent and generic formulations are not yet available.

- The YHP Pharmacy stocks the Ventolin® HFA inhaler. This inhaler also has a built in counter that counts down the number of puffs used so that you know by reading the counter how much medication you have left.

If you need assistance with your new HFA inhaler, please ask the YHP pharmacist in person or call the Pharmacy at 203-432-0033. Elisabeth Reilly in Care Coordination, 203-432-5266, can provide assistance for use of inhalers by children.

Information provided by Martha Asarisi, RPh

Hillhouse Avenue Bridge Reopens
Traffic on Hillhouse Avenue has returned to its original pattern—one-way from Grove Street to Trumbull Street. Members will now be able to use parking spaces on Hillhouse.

From the Pharmacy
NEW INHALERS FOR ASTHMA PATIENTS

Please remember that free parking for YHP members is available both in the lot right next to 17 Hillhouse Avenue and in parking lot 37, just across Trumbull Street.