



Healthy  
skin/5

YUHS  
renovations/6

Pain  
meds/7

# yale health care

NEWS FROM THE YALE HEALTH PLAN

VOL. VII NO. 3

MAY-JUNE 2004

## Tea's Benefits Are in the Bag

LINDA BELL, MS, RD, CD/N

YHP Nutritionist

With the return of warmer weather (finally!), we find our visions of relaxing drinks drifting away from steaming cups of hot cocoa by the fire to cool glasses of lemonade on the porch. Next time you want for a refreshing beverage, consider brewing a pot of tea and drinking it hot or iced.

Aside from water, tea is the most commonly consumed beverage in the world. Recent research is uncovering numerous potential benefits of drinking tea; these include reduced risk of heart disease and stroke, prevention of some cancers, and support of strong bones and teeth.

A large variety of tea is available in our markets. *Camella sinensis* is the name of the plant that produces white, green, oolong, and black teas. The difference in the color and the flavor of these four teas comes from differences in processing. The more processing the leaves undergo, the darker they turn. White tea is the least processed, and also the least studied and least widely used variety and usually the most expensive. Green teas are quickly steamed before packaging, making them the next least processed.



Oolong and black teas are dried, crushed, and fermented. Each of these teas provides antioxidant compounds called polyphenols; these protect against cell damage by neutralizing free radicals, potentially harmful byproducts of cellular fuel burning.

Tea experts recognize only products made from the *Camella sinensis* plant as "tea"; products made from the leaves, roots, bark, seeds, or flowers of other plants and called "herbal teas" are more

*continued on page 2*

## Does an Aspirin a Day Keep the Doctor Away?

ALAN GREENGLASS, MD

Chief, Internal Medicine

Just a few years ago aspirin seemed to be forgotten, as more people turned for pain relief to products such as acetaminophen (Tylenol) and NSAIDs (i.e., ibuprofen and motrin). But the title of a July, 2003 article in *Consumer Reports*—"Aspirin for Everything?"—highlights the recent upsurge of interest in this old medicine chest standby. Television and print ads show lists of health concerns, and ask you to decide if you should be taking aspirin for "heart health." Has something changed? Is aspirin really good for us, or is this attention to it just marketing hype?

Let's look at two recently publicized potential uses for aspirin—using it for heart health and for the prevention of colon cancer.

**For heart health:** Scenes on television and in the movies where someone with chest pain is given an aspirin are accurate, as aspirin's effectiveness in improving heart attack outcomes in some people and circumstances is well-established. Studies have shown that chewing a baby aspirin at the time of the event can lessen the damage of an acute heart attack.

*continued on page 4*

## TEA'S BENEFITS

continued from page 1

accurately known as “tisanes.” Many of these beverages, made from plants such as peppermint, chamomile and ginger, have long been used as home remedies for medicinal purposes such as calming upset stomachs. However, herbal infusions may not provide the beneficial polyphenol compounds present in green and black teas.

One exception is red, or roobios herbal tea, made from the roobios plant found in South Africa. This herbal infusion contains lower levels and different types of polyphenols than green or black tea, and it is unclear whether it shares the same health enhancing properties. It does have an advantage, however, of being naturally caffeine free.

Why all the fuss about tea? The following are some of the health benefits thought to be linked to regular tea consumption.

**Cancer protection** Drinking green and black teas seems to be associated with a lower risk of cancer due to the cancer-fighting properties of the polyphenols. Studies suggest a reduced risk of gastric, esophageal, and skin cancer with consumption of 4-6 cups daily.

**Cardiovascular health** Population and clinical studies suggest that tea drinkers are less likely to have heart attacks and that those who have heart attacks are more likely to recover. A recent study has found that drinking black tea significantly lowered levels of LDL (bad) cholesterol.

**Bone and tooth health** Studies point to increased bone density in tea drinkers, possibly due to the fluoride and catechins found in tea. Also, by suppressing bacterial growth in the mouth, tea is thought to be protective against cavities.

**Potential diet buddy?** Another intriguing potential benefit of tea is a metabolism boosting effect, which might aid in weight reduction. For the past few years, many weight reduction products have been marketed containing tea extract, although this property remains under study. However, switching from higher calorie drinks like soda or coffee with cream and sugar to plain tea can reduce total daily caloric intake and therefore help support weight control efforts.

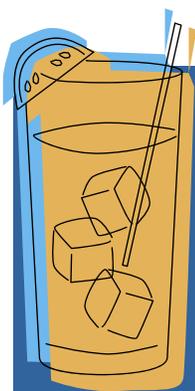
## Important telephone numbers

<b>Urgent Care</b>	432-0123
<i>Open 24 hrs/day, seven days per week</i>	
<b>Toll Free</b>	1-877-YHP-CARE
<b>Information</b>	432-0246
<b>Pharmacy</b>	432-0033
<i>Hours of operation</i>	
Monday, Friday	8:00 AM-6:30 PM
Tuesday, Wednesday	8:00 AM-6:45 PM
Thursday	8:30 AM-6:30 PM
Saturday	8:30 AM-3:30 PM
<b>Patient Representative</b>	432-0109
<b>Medicare/Retiree Coordinator</b>	432-8134
<b>Outpatient Referrals</b>	432-7397
<b>Claims</b>	432-0250
<b>Inpatient Care Facility</b>	432-0001

# in touch

Numerous varieties of tea are on the market, from the most basic to those with flavorings ranging from vanilla to mango. Brew tea in boiling water for at least 3-5 minutes to achieve the maximal amount of polyphenols. Tea does contain caffeine, albeit less than coffee (36 mg vs. 103 mg for 6 ounces) so those looking to avoid caffeine can choose a decaffeinated variety, although some of the beneficial polyphenols may be lost in the decaffeination process.

Drinking freshly brewed tea confers the highest levels of polyphenols. Brewed iced tea can also provide significant antioxidant power; just make sure to keep it covered and refrigerated. Canned or bottled teas can be high in sugar and may not contain the same levels of antioxidants, so read labels carefully. Even better, brew your own pot or pitcher of tea, add a slice of lemon or orange, and savor the rich flavor and aroma of one of the world's favorite beverages.



### Bacteria love sun tea

While using the rays of the sun to make tea is popular, sun tea—with its combination of warm (but not hot) water and organic matter—is the perfect medium

for potentially dangerous bacteria. Nationwide, instances have been reported of people's falling ill after drinking tainted iced tea.

The Centers for Disease Control and the National Tea Association recommend the following when making tea.

- Brew tea bags at 195 degrees F for three to five minutes.

- Never maintain brewed tea for more than eight hours at room temperature and discard any unused, unrefrigerated tea after eight hours.
- Wash, rinse, and sanitize tea-making equipment regularly.
- Instead of making “sun tea,” brew tea overnight in the refrigerator.
- Store tea bags and loose tea in a dark, cool, dry place away from odors and moisture, but not in the refrigerator.

*Adapted from “Bacteria-filled iced tea can cause illness,” Fort Collins Coloradoan, June 1996, Pat Kendall.*



# from the desk of

**RAVI DURVASULA, MD**

**MEDICAL DIRECTOR, YALE UNIVERSITY HEALTH SERVICES**

**O**ur convenient location, integration of services in one building and access to care 24 hours a day make Yale Health Plan the health care choice of nearly seventy-five percent of the Yale community. YHP is proving to be an ideal setting in which to pursue ambitious quality improvement initiatives. Some of our most important programs to improve the health and well being of our members have been introduced over the past three years under the rubric of “population-based medicine.”

In contrast to traditional encounter-based practices, in which care is delivered at the time of medical appointments, population-based medicine identifies groups of patients at risk for certain conditions and delivers preventive care prospectively, often independent of traditional appointments. Registries are maintained and patients are contacted to receive medical interventions or education that assure highest standards of care for the entire group, not just for those who seek individual medical attention.

I am delighted to report that several of these programs have attained outcomes far exceeding Connecticut and national averages for care.

One successful initiative is the pneumococcal vaccine program. Pneumococcal pneumonia and invasive pneumococcal disease affect tens of thousands of Americans annually. They result in death for individuals in high-risk groups including those over 65 and those with medical conditions that compromise immune function such as HIV infection, cancer, chronic heart and lung disease or chronic steroid use. Though the pneumococcal vaccine is safe and effective it is currently given to less than twenty-five percent of at-risk individuals nationwide and to about forty-five percent in Connecticut.

But since we began our pneumococcal vaccine tracking, outreach and education program at YHP less than two years ago, rates of pneumococcal vaccination of high-risk groups soared from 22% to the current level of 83%.

Another high profile population medicine program, in place for nearly three years, is our Diabetes Care Initiative. Over 600 patients with active diabetes mellitus have been identified and tracked, with standards of care and prevention promulgated by the American Diabetes Association applied to them. We launched a variety of initiatives such as group medical appointments, educational sessions, vaccine programs and individualized appointments aimed at specific diabetes-related health issues. The registry is tracked daily and patients are contacted to assure compliance with highest care and prevention standards.

The results? YHP members with diabetes receive levels of retinal screening, foot care, lipid measurement and vaccination against influenza and pneumococcal disease that are nearly double national and state averages. We have also seen in the past six months many secondary gains, such as lowering of blood pressure and lipid levels across the entire 600 plus member registry.

*continued on page 7*



## NEW PHARMACY WEB PAGE

Be sure to visit the new Pharmacy web page, which is filled with tips on using the Pharmacy, the latest information on policies and procedures, and tidbits on medication use (for instance: do you know the best place to store your medications?)

Or why some medications have to be taken with food? Or what to do if you miss a dose?). Surf over to the main YUHS page at [www.yale.edu/uhs](http://www.yale.edu/uhs) and then click on “departments/clinical departments” and then on “Pharmacy.” This page will be updated regularly, so visit it often.

And speaking of the Pharmacy, remember that you can use Yale Health Online to access the Pharmacy system. Over 4000 YHP members are now using Yale Health Online, the secure, interactive web site which allows you to communicate with your clinicians about a range of non-urgent matters from any computer. If you haven't yet signed up, do so now and communicate with YUHS from wherever your summer takes you.

[www.yalehealthonline.yale.edu](http://www.yalehealthonline.yale.edu)



## ASPIRIN A DAY

*continued from page 1*

Additionally, people at higher than normal risk for heart disease can reduce their risk of future heart attacks by taking a baby aspirin (81mg.) daily. In fact, the U.S. Preventive Services Task Force (part of the Centers for Disease Control, or CDC) recommends that “clinicians discuss aspirin chemoprevention with adults who are at increased risk for coronary heart disease. Discussions with patients should address both the potential benefits and harms of aspirin therapy.” “High risk” individuals are males in their 50s or older and females in their 60s or older, especially if they smoke, or have high cholesterol, high blood pressure or diabetes.

Aspirin’s effect comes from its ability to decrease the stickiness of blood cells, so they are less likely to form clots in the heart’s arteries. But do other medications sitting on the same shelf also reduce heart attack risk? The answer is generally, No. Pain relievers such as acetaminophen (Tylenol) do not have aspirin’s anti-clotting effects.



Common non-steroidal anti-inflammatory drugs (NSAIDs) may have no effect and may interfere with the helpful effects of aspirin. And many of the newer anti-inflammatories like Vioxx and Celebrex may actually increase the risk of heart disease.

Low doses of aspirin seem to be most effective. Higher doses haven’t been shown to be more helpful and increase the risk of side effects, which can include strokes involving bleeding into the brain, and gastrointestinal bleeding.

The preventive effects of aspirin for **colon cancer** are less clear. Some studies showed the “accidental” finding that people taking aspirin (both low and regular dose) for other reasons had fewer colon polyps (a precursor of cancer) and less colon cancer.

Some further studies confirmed this finding, while others did not. The theory is that decreasing inflammation in the intestine will help prevent polyp formation, and one out of ten of a certain type of polyp becomes cancer.

Those who have had colon polyps or cancer and those with a strong family history of polyps or colon cancer may want to consider preventive aspirin therapy. Again, because acetaminophen is not an anti-inflammatory, it would not work to reduce colon cancer risk. While there is reason to theorize that anti-inflammatories like ibuprofen or naproxen might help, there is not yet good research-based evidence in this area.

Of course, any decision about aspirin therapy should be undertaken in consultation with your primary care clinician, who will help determine your health risks based on personal and family health history. Other factors to consider in making this decision are potential for allergy to aspirin (many people with pollen allergies or asthma are allergic also to aspirin) and the risks of potential side effects.

# YHP staff

### BARRY GOLDBERG HONORED

Barry Goldberg, MD, chief of Sports Medicine at YUHS and clinical professor of Pediatrics at Yale University School of Medicine, received a Distinguished Service Award in March from the Connecticut Athletic Directors’ Association.

The citation for the award, which was given for distinguished service outside the field of athletic administration notes, “Through his clinical work and research, Dr. Goldberg has had a profound and lasting influence on the health, safety and well-being of thousands of young people who participate in sports.”

It calls him a “standout in the medical profession” and cites him for “his depth of knowledge and experience” and for a “personable style...that has endeared him to the children, patients and athletes that he cares for.” Goldberg has been director of Sports Medicine at YUHS since 1988.



### NEW PHYSICIAN IN STUDENT MEDICINE

Laura Zug  
Quimby, MD has  
joined the YUHS  
Student Medicine  
Department.

She received her BA in German from Bowdoin College and her MD from Dartmouth Medical School, and did her residency at the University of Wisconsin and Middlesex Hospital in Connecticut. Her experience includes working in American medical clinics in Moscow, Russia and Kiev, Ukraine. Although she began at YUHS earlier this year, Quimby is a familiar face around campus, as she has lived here since 2000 with her husband, Peter Quimby, the dean of Davenport College, and their family.

# healthy ideas

## PAMPER SKIN WITH LESS SUN, MORE HEALTHFUL FOODS

Although the most important risk factor for skin cancer is excess sun exposure, lifestyle factors, including diet, may also play a role in preventing the disease. While more studies are needed to determine the exact dietary strategies notes dermatologist James M. Spencer, MD, of Mount Sinai School of Medicine in New York City, dietary habits which promote health may also be found to aid in reducing skin cancer risk.

Primary skin cancer preventive strategies include:

- Avoid excess sun exposure (especially between 10 a.m. and 2 p.m.).
- Limit sun exposure to 20 minutes daily or wear protective clothing such as a shirt and hat.
- Avoid tanning booths.
- Use a broad-spectrum sunscreen with a sun protection factor (SPF) rating of 15. Reapply frequently.
- Schedule annual skin cancer exams with a dermatologist and have him or her show you how to do monthly skin examinations at home.
- Don't smoke.



Secondary preventive strategies may include:

- Eat a diet high in colorful fruits and vegetables for protective antioxidants and phytochemicals. Antioxidants such as vitamin A, C and E protect against sun damage by disarming wrinkle-causing free radicals.
- Eat whole foods rich in antioxidants. Researchers found that people living in sunny Greece, Australia and Sweden, whose diets were high in fruits, vegetables, whole grains, fish and olive oil and low in meat, desserts and high-fat dairy products had fewer wrinkles and less photoaging.

- Use olive oil. Since many antioxidants in vegetables are fat soluble, mono-unsaturated fats such as olive oil may help increase their absorption.
- Eat more carotenoid-rich foods such as cantaloupe, mango, sweet potatoes and tomatoes. Researchers at the University of Arizona in Tucson found that carotenoids work like sunscreen. Subjects with the most skin carotenoids had the greatest protection.
- Eat a low fat diet high in omega-3 fatty acids. Research indicates that people with a history of skin cancer who eat a low fat diet (20% of calories) have reduced rates of subsequent precancerous and cancerous skin growths compared to those eating a high fat diet. Although a few studies found fish oil supplements (up to 10 grams a day) to be sun protectors, eating high-omega-3 foods such as salmon, flaxseed and walnuts is preferred.
- Researchers at the University of Texas recently revealed that compounds found in chili peppers—capsaicin and resiniferatoxin—killed skin cancer cells by starving them of oxygen.

*The information in this article was excerpted by Linda Bell, MS, RD, CD/N, YHP nutritionist, from an article by Sandy Sotnick, MS, RD. For more information check the web site for the American Academy of Dermatology: [www.aad.org](http://www.aad.org).*

*more healthy ideas on back cover*

## PHARMACY NOTES BENEFIT YEAR ENDS JUNE 30

For faculty and staff, the YHP benefit year ends on Wednesday, June 30 (if you are not sure when your benefit year ends, consult Member Services). The information below will allow you to make the best use of the Pharmacy and your benefits between now and that date.

- Prescriptions at the YHP Pharmacy must be picked up within two weeks after the date they are filled. Any prescription not picked up within that period will be returned to stock.
- To be credited to the current benefit year, your prescriptions must be filled by June 30. This means that if you call in a prescription before June 30, but do not pick it up within two weeks it

will be returned to stock. The prescription will then need to be reprocessed in July and the cost will be charged to the new benefit year that begins on July 1. It will not be credited to the deductible for the current benefit year.

- Please plan ahead if you want to assure that prescriptions you need during this period are credited to the current benefit year. Because of volume at the end of the benefit year, waiting until the last minute may mean that a prescription may not be filled on or before June 30. Also, some medications may be temporarily out of stock or require clinician authorization. So if you know what your

prescription needs are, please get the request into the Pharmacy at least several days before June 30.

- Please note that we cannot provide extra quantities of medications or fill prescriptions early. So if, for example, you obtain a three-month supply of your medication in May, you cannot obtain another three-month supply in June. A very few exceptions may be made in unusual circumstances. If you anticipate making a request of this nature, please do so several weeks before the end of the benefit year.

Questions? Call the Pharmacy at 203.432.0033.



# information

## NEW LAB LOCATIONS

Please note changes in some of our CLP (Clinical Laboratory Partners) locations.

- The 99 Circular Avenue location in Hamden is now closed.
- The station at 3018 Dixwell Avenue in Hamden is open.
- A new Bridgeport location is open at the Merritt Medical Building, 3715 Main Street.

## yale health care

published by Yale Health Plan

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## PEDIATRIC PHYSICALS NEEDED FOR SCHOOL, CAMP, DAYCARE

Connecticut schools require a physical exam; most schools will accept a physical exam done any time after January 1 of the year that the child is entering. Daycare and after school programs also require these exams; many summer camps require a physical exam within the previous 12 months for a child to enroll, and many sports programs have similar requirements. If you know your child will be attending camp or entering school or day care, please schedule these exams three to four

months in advance so we may update all necessary information, and try to avoid the busier months of May, June, August and September. Call the Pediatrics Department at 203-432-0206 for an appointment.



## KUDOS FOR YUHS LAB SERVICES

A recent state inspection—required every two years—gave the YUHS lab a **perfect 100% score**. This inspection looks at both clinical and administrative procedures in the laboratory.

## MAKING SPACE

YUHS will undertake several construction projects and departmental moves over the next 12 months in order to expand and improve our clinical areas. We will begin in May with the renovation of two separate areas on the 4th floor. The changes will be as follows:

- The Member Services Department will be relocated to the space made available when we moved our business offices to 55 Whitney Avenue.
- The Member Services space will be renovated for Student Medicine (currently on the 3rd floor) and Employee Health (currently on the 1st floor).
- The space on the 1st floor will allow an expansion of the Surgery Department's waiting area.
- Student Medicine's move to the 4th floor will expand the number of exam rooms.
- When Student Medicine moves to the 4th floor, Dermatology (on the 2nd floor) will gain extra exam rooms in a new 3rd floor space.
- The Obstetrics and Gynecology Department (2nd floor) will expand into the old Dermatology space and gain additional exam rooms.

In addition to the space gains, these projects have been designed to improve accessibility for our patients. While there may be some minor re-routing of patients or some brief service disruptions, any disruption will be kept to a minimum. We will bring you more information as this project goes along.



Population-based initiatives aimed at immunization of children under 2 have been in place for years in our Pediatrics Department. Careful monitoring and registration have resulted in a 96% immunization rate, the highest in Connecticut for large pediatrics practices. Recently, the department received an award from the state for attaining this level of care.

In addition, over the past two years, the Pediatrics Department has embarked on a successful asthma program, delivering to nearly 250 children care aimed at preventing pediatric asthma complications. Some of these complications arise in children who receive excessive amounts of bronchodilator therapy at the expense of anti-inflammatory medication. With the help of our Pharmacy, Pediatrics staff track the ratio of bronchodilator to anti-inflammatory medicine use in all children with asthma and contact parents of those most at risk for long-term complications. Also, all children are targeted yearly for vaccination against influenza, which is particularly dangerous in children with asthma. This past winter, we achieved a rate of 63% influenza vaccination rate for pediatric asthma patients. This is the highest in Connecticut and is more than twice the state average.

These programs are only a few of our initiatives. With the creation of the Office of Population Medicine and strategic partnerships with our Care Coordination, Health Promotion and Education and Quality Management Departments, YHP is offering our members medical care at standards that far surpass state and national levels.

## Use OTC Pain Meds Prudently

The variety of over the counter (OTC) pain medications gives consumers many options. However, these drugs should be used with attention to possible side effects, even though most people can take them safely. The two types of OTC pain medications—acetaminophen and non-steroidal anti-inflammatory drugs (NSAIDs)—can be found as single agents or as combination products with more than one active ingredient.

Acetaminophen (sometimes abbreviated as APAP) is a pain-reliever/fever-reducer that has been available as an OTC product since 1955. Tylenol is the brand name, but generic versions are also available. Products containing acetaminophen are available as tablets, chewable tablets, capsules, liquids, drops and suppositories.

Take acetaminophen with food or milk to avoid upset stomach. Follow directions. Also be aware of the difference between drops and liquids. Acetaminophen drops are highly concentrated (80mg per 0.8ml) compared to the liquid formulations (160mg per 5ml). Confusion between drops and liquids may lead to an overdose and serious adverse events. If there is any confusion, contact a pharmacist or your clinician.

Additional precautions:

- Do not take if you have had an allergic reaction to products containing acetaminophen.
- Consult your clinician if you have a history of liver disease or if you drink three or more alcoholic beverages daily.
- If a skin rash develops, contact your clinician immediately.
- Consult your clinician before taking if you are pregnant, plan on becoming pregnant, or are breast-feeding.

OTC non-steroidal anti-inflammatories (NSAIDs) include aspirin (Bayer, Anacin, Bufferin, Ecotrin), ibuprofen (Motrin, Advil), naproxen (Aleve), and ketoprofen (Orudis). Aspirin has been used for over 100 years and has been available without a prescription since 1915. Ibuprofen has been available OTC since 1984, and



naproxen and ketoprofen since the mid-1990s. Acetaminophen and NSAIDs relieve pain and reduce fever; NSAIDs also reduce inflammation. NSAIDs are available as tablets, chewable tablets, capsules, drops, suspensions, and suppositories.

Anyone with an allergy to aspirin or any NSAID should not take any other NSAID. In addition, note the following:

- Do not take if you have active peptic ulcer disease.
- Consult your clinician if you have any of the following: asthma; a history of gastrointestinal ulcers, bleeding, or perforation; a history of liver or kidney disease; hypertension or congestive heart failure.
- Consult your clinician if you are taking blood thinning medications such as warfarin (Coumadin), aspirin, clopidogrel (Plavix).
- Consult your clinician if you are pregnant, planning pregnancy, or breast feeding.

Follow label directions. Side effects can include nausea, vomiting, dyspepsia, dizziness, abdominal pain, and heartburn. Long-term use may put you at risk for developing ulcers.

While most people can take NSAIDs safely, stop taking them if you experience any of the above reactions, or unusual bleeding, any allergic response (hives, swelling, shortness of breath, chest tightness), sudden decrease in urine production or a sudden unexplained weight gain.

For more information, contact your pharmacist or clinician.

Material for this article was provided by Mark Theriault, PharmD and Martha Asarisi, RPh of the YUHS Pharmacy.



## HEALTHY IDEAS

*continued from page 5*

### DON'T KEEP TICKING

Lyme disease is caused by a bacteria transmitted through the bite of an infected deer tick. The risks of being bitten by a Lyme-disease carrying tick are highest from May to September when immature ticks are most prevalent. Common-sense precautions can help reduce your risk.

- The American Lyme Disease Foundation notes that up to 80% of cases begin in the back yard, so preventive measures should be taken close to home as well as when you are on an outing. Ask your clinician about the use of topical tick repellents.
- Ticks search out exposed skin, so keep covered: wear a hat and tuck pants into boots; avoid open-toed shoes and going barefoot. Wear long sleeves, long pants tucked into lightly colored long socks when walking in the woods—even in the warm weather. Wash clothing in hot water immediately after you've been outdoors.
- Ticks can ride into your house on your pets, so check them thoroughly and frequently.

- Clear your lawn of piles of wood, leaves and branches, where ticks like to congregate, and let the lawn dry between waterings; ticks cannot survive in dry, sunny areas.
- Keep bird feeders a distance from the house; they attract mice, some of which carry the tick.
- Because transmission is highly unlikely to occur within the first 36 hours of tick attachment, it is vital to check for these tiny insects (about the size of a sesame seed) before they embed themselves into your skin. Finding and removing ticks before they can transmit disease should be routine for anyone who spends time out of doors.
- If you do find a tick, remove it by grasping firmly with blunt tweezers as close to your skin as possible, and with a steady motion pull the tick's body away from your skin. Be especially careful to not squeeze the body of the tick. Remove it carefully without crushing it and dispose of it in a sealed plastic bag. Note the date, in case symptoms develop and the clinician wants to know when the bite occurred.



- Do not use petroleum jelly or any other products on the tick because that will make the tick difficult to hold onto. Cleanse the area with antiseptic afterwards.
- Watch for a red “bull’s eye” rash which may appear 7 to 14 days after the bite.
- Because as many as 25% of people bitten by infected ticks do not develop the characteristic bull’s-eye rash, be alert for fever, headaches, fatigue, stiff neck, joint pain, general achiness, vision problems, numbness or flu-like symptoms. If any of these or the rash occurs, consult your clinician.
- Late-onset Lyme disease can occur months or years after the tick bite and can manifest itself in a variety of ways, including neurologic and cardiac problems. So if you know or suspect that you have a tick bite, seek medical help promptly.

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## yale health care

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