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# yale health care

NEWS FROM THE YALE HEALTH PLAN

VOL. V NO. 3

MAY – JUNE 2002

Thinking about gender and medicine requires that we keep in mind two seemingly contradictory notions

“Is it a boy or a girl?” is often the first question asked when a baby is born. The answer can determine everything from the color of the baby’s clothes to the development of the teenager’s body image to the type of work life considered appropriate for the adult. Increasingly, we are recognizing the ways in which the answer to this question is integrally related to health care.

Thinking about gender and medicine requires that we keep in mind two seemingly contradictory notions: The first is that women and men are more alike than they are different and that women’s health concerns encompass far more than reproductive biology. The second is that there are in fact significant differences between the genders — differences with an impact on the diagnosis and treatment of disease as well as on recommendations for staying healthy.

■ Women appear to be less sensitive to the effects of anesthesia, needing greater doses to lose consciousness and waking up faster. A recent Duke University Medical Center study showed women waking up 7 minutes after anesthesia was removed, in contrast to 11 minutes for men.

Some of these differences are biological. While most of our body systems are the same, certain diseases manifest differently (i.e. differences in symptoms of heart attack) and some conditions are more prevalent in one gender than the other (i.e. greater incidence in women of thyroid problems and in men of cluster headaches). Differences in other problems appear more related to gender expectations than to biological sex; an example is the greater prevalence of eating disorders among girls and women striving to emulate a cultural ideal of desirability to which boys and men are still less vulnerable.

In this issue, one in an occasional series of special issues on specific topics, we’re offering a look at some perspectives in gender-based or gender-specific medicine. We always welcome your feedback. If you would like to comment or if you have ideas for what you would like in future issues, please drop a note to *yale health care* at the address on the back or e-mail [member.services@yale.edu](mailto:member.services@yale.edu) with *yale health care* in the subject line.

Rhea Hirshman, Editor

# Important telephone numbers

# in touch

<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	7:30 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/Claims</b>	432-0250
<b>Inpatient Care Facility</b>	432-0001

While fractures in general are more common in boys ...stress fractures are more common in girls



As is the case with illnesses and injuries among adults, most childhood injuries and illnesses are equally distributed between the genders. However, there are some exceptions, particularly in the area of conditions related to athletic activity.

Before puberty, boys and girls have similar athletic-related complaints and injuries. However, at puberty, girls participating in sports sustain a variety of injuries more common to them than to males. Anyone who is a fan of women's basketball is aware of the rash of ACL injuries that have plagued young female players. The anterior cruciate ligament crosses behind the knee. While males actually suffer more ACL injuries when they participate in contact sports such as football and rugby, the rate of ACL injuries in females is much higher in non-contact situations (i.e. landing after a jump shot) and therefore females are more vulnerable to this problem.

While fractures in general are more common in boys participating in physical activity, stress fractures are more common in girls. A stress fracture is an overuse injury, a bone break that has not gone all the way through. Diagnosed by x-ray, these fractures produce pain that girls may experience more acutely than do boys.

In fact, girls and boys have different pain responses, although the causes for most of these differences are not currently known. While girls rate having a broken bone more painful than do boys, boys experience the tightening of braces as more painful. A complex regional pain syndrome which can occur after injury

also appears more often in girls. Known as RSD (reflex sympathetic dystrophy) the condition often includes swelling and can become chronic, requiring many disciplines for treatment. Patella femoral pain syndrome (PFS), a condition causing pain around the knee, is also more common in female than in male athletes.

Boys are more likely to sustain injuries from accidents caused during activities such as bicycling and skateboarding, as well as from automobile accidents. In general, boys suffer more broken bones and lacerations than girls do. As gender roles change, and as more research is done, we will learn more about how both physiology and socialization affect the relationship between sex and illness and injury.

Carol Morrison, MD  
Chief, Pediatrics  
Rhea Hirshman, Editor

- Infant boys have higher **bone mineral density** and bone mineral content than infant girls, a difference which continues into adulthood. Cells from the bones of women are more susceptible to age-related changes than cells from the bones of men.
- The number of American women **living with asthma** has doubled over the last decade. In 1998, 70% of adults with asthma were women.
- While men have a slightly higher **risk of stroke**, more than 60% of stroke deaths occur in women. A woman's risk of stroke rises during pregnancy due to increased blood pressure. Women who suffer from migraines and/or use oral contraceptives are at an increased risk of stroke. Postmenopausal women are at an increased risk of stroke compared with younger women.



# from the desk of

**PAUL GENECCIN, MD**

**DIRECTOR, YALE UNIVERSITY HEALTH SERVICES**

I spent the month of March, as I do every year, attending on the Internal Medicine service at Yale-New Haven Hospital. Hospital attending involves inpatient care, teaching and learning with a team of Yale residents and medical students. Although demanding, attending is very satisfying and it helps me to stay current — not only with the practice of medicine but also with health care trends. This issue's theme of gender and medicine and my experiences on the wards have challenged me to think about the ways that health care is evolving in light of rapid advances in what we now call "gender-based" or "gender-specific" medicine.

One of the striking changes in medicine is the equal distribution of women and men now in our medical school classes and residency programs, a sharp contrast to the days when medical teams

were overwhelmingly male. This demographic trend is interesting, but from the patient's standpoint, is it also important? I think so.

On hospital wards, women patients often outnumber men, yet many medical practices are based on clinical studies focused on men. As the medical literature increasingly provides better studies on the role of gender in disease, we have a generation of doctors-in-training who expect to use gender-based clinical data to care for patients in new ways. I find residents and students eager to apply this new information to health issues including cardiovascular, immunologic, musculoskeletal, psychological, hormonal and malignant diseases. The days are clearly over when physicians thought that the only important differences between men and women were reproductive.

Good medical care must take into account age, environment, socioeconomic and cultural background, family history, behavioral risks and many other factors. The goal of gender-specific medicine is to provide clinicians with tools they need to care for all patients as we learn to investigate and respect the array of differences in human biology that are influenced by gender. At YHP, there is ongoing collaboration between Internal Medicine and Gynecology, and we are following developments in gender-specific medicine with great interest. Meanwhile, I am gratified to know that a new generation of clinicians will be well-trained to consider the full variety of human experience, including differences in human development, disease and therapeutics that are based on gender.



## Yale Health Online: We make mouse calls

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

### **Student Medicine joins Yale Health Online**

In addition to Ob/Gyn and Pediatrics, Student Medicine is now participating in Yale Health Online, enabling students to request appointments and communicate with their clinical care team in a secure web-based environment. Students with accounts can communicate with their clinicians over the summer. Ophthalmology and Optometry will be participating in the near future. We'll keep you posted.

### **Download school forms**

Using a proxy account, you can request an appointment for camp and back-to-school physicals for children under 12, as well as print school forms from the Health Library section. Click on the "forms" link, then on "Pediatrics," then on "school forms." Complete the form, and drop it off or mail it to the Pediatrics Department or fax it to 203-432-0072. Please remember that proxy accounts are available only for children under 12.

### **Password reminder**

If you have requested and received by postal mail your Yale Health Online information, please make sure to keep the letter and record your password in a safe place. If you forget your password, click on the "forgot password" link on the front page of Yale Health Online.



...men generally have higher caloric needs than women...(while) women have...often higher needs for vitamins and minerals....

**W**hen it comes to nutrition, women and men have much in common. Heart disease is the number one killer of both genders, so heart healthy eating is paramount. This includes a diet low in saturated fat, with ample fiber and vitamins (especially folic acid and vitamins B6 and B12). Both men and women should consume a wide variety of fruits and vegetables. These foods provide phytochemicals which are extremely promising in prevention of cancer (see article in December 2000 issue of *yale health care*). For men, reduced rates of prostate cancer have been shown with consumption of lycopene, the phytochemical found in tomatoes.

One difference in nutritional needs is that, at the same activity level, men generally have higher caloric needs than women because men have greater muscle mass. The average sedentary man requires about 2200 calories to maintain his weight, while the average sedentary woman requires only around 1600-1800 calories for weight maintenance. However, women have the same and often higher needs for vitamins and minerals as men, meaning less room in

their caloric “budget” for empty calorie foods like soda, chips, candy and for alcohol.

Men and women also have differing needs for iron, a need which also varies throughout the life cycle. As iron is a component of hemoglobin, which enables the blood to carry oxygen throughout the body, iron intake is key at times during which the body is making lots of new blood, such as childhood and, for women, during pregnancy. Iron fortification programs have dramatically reduced the incidence of iron deficiency anemia among these groups, although it still remains the most common nutritional deficiency in this country.

However, once boys finish growing, their need for iron decreases. Although it was once thought that extra iron provided “extra energy” for everyone, recent research suggests that men should avoid iron supplementation. A small percentage (about 1%) of the population is genetically predisposed to an iron storage problem called hemochromatosis, a serious condition which leads to gradual accumulation of iron in the liver, spleen and bone marrow.

In addition, preliminary studies suggest that excess iron may contribute to the development of heart disease, possibly by interaction with cholesterol in the blood. Because men can obtain all the iron they need from their diet, any dietary supplements should be iron-free. Women may benefit from supplemental iron during the reproductive years to help replenish blood, especially if they have heavy blood loss through menstruation. After menopause, iron free supplements are usually recommended for women as well. In general, don’t take iron supplements unless advised by your clinician.

No discussion of gender differences in nutrition would be complete without mentioning calcium. Calcium is important for building strong bones in both sexes, and may be helpful in maintaining blood pressure and colon health. However, osteoporosis (bone weakening) is much more of a problem in women than men; girls and women should focus on adequate calcium intake from both food and supplemental sources.

To sum up: To help reduce the risk of problems such as heart disease, certain cancers, stroke, diabetes and arteriosclerosis, both women and men should fill their diets with plenty of whole grains, fresh fruits and vegetables, protein foods low in saturated fat such as beans, soy, fish and poultry, and low fat or fat free dairy foods. Children and women in their childbearing years should pay extra attention to iron intake, while women past menopause and men should avoid iron supplementation. For girls and women, adequate calcium intake up to and beyond menopause is vital. And everyone should exercise at least 30 minutes most days.

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

- Women have enhanced **immune systems** compared to men. This makes them more resistant to many types of infection, but also increases the risk of autoimmune diseases such as lupus, multiple sclerosis and rheumatoid arthritis.
- The sex of both organ donor and recipient affect the likelihood of **transplant success**, with organs donated by women more likely to be rejected than those from men. Also, female transplant patients may have a poorer rate of survival than males. While hormones may play a role, variations in the immune system are probably more critical, as women have a stronger immune response (leading to organ rejection) than men.

## Gender socialization...has an impact on how we respond to a variety of life situations.

While men and women are in many ways more alike than different, there are numerous, often subtle distinctions between the genders when it comes to emotional concerns. Gender socialization, which begins in infancy and continues throughout our lives, has an impact on how we respond to a variety of life situations. Knowing that men and women may respond quite differently when confronted with similar situations can be important in understanding ourselves and our families, friends and colleagues.

One common example of how women and men respond differently is that after a stressful day at work, a man is more likely to want some distance from his family when he first comes home —time to unwind and calm down. A woman is more likely to seek comfort and to want to interact with her children and partner. Women are more likely than men to seek help, both professional and personal, for stress-related or emotional problems.

Men are also less likely to acknowledge feeling depressed and may disguise depressed feelings with alcohol or drugs, with bouts of irritability, aggression and anger, and with outward projections of their moods. Self-medication with alcohol often leaves underlying moods undetected, and alcohol is usually a more acceptable part of the social life of men than women. While hard drinking men can be seen as manlier (“real men”), hard drinking women are seen as less womanly and therefore less acceptable.

Men are usually more accident-prone than women. This tendency may be a way of expressing difficult feelings outwardly or a means of making pain more concrete. Men in general are more likely than women to take physical risks. For some men such risk-taking allows the incurring of physical pain that is more “acceptable” to acknowledge than emotional pain. Sometimes the accidents are deadly. In her 1999 book on suicide, *Night Falls Fast*, Kay R. Jamison, PhD

reported that throughout the world the number one killer of men between the ages of 15 and 44 was traffic accidents; for women it was tuberculosis.

While women are more likely to seek help, they are also more likely to focus emotions inward. Eating disorders are a common manifestation of this inward focus, with women controlling body and appearance as a way of exerting control over other areas of life. Because of the cultural link for women between appearance and personal worth, women who feel unattractive, unsuccessful, or depressed, often assume that these feelings are the result of not being thin enough. Family dynamics and societal demands are also often involved. Gender differences in eating disorders are profound, with women currently representing at least 90% of those diagnosed.

Men who feel unattractive, unsuccessful, or depressed, more often respond outwardly. However, there are indications that the percentage of men with eating disorders is on the rise, especially among males participating in sports such as wrestling, weight lifting, and bodybuilding that involve body size and body sculpting. More globally, as the male body becomes increasingly objectified in

advertising and in the media, particular body parts have become symbols of perfection, desirability and beauty.

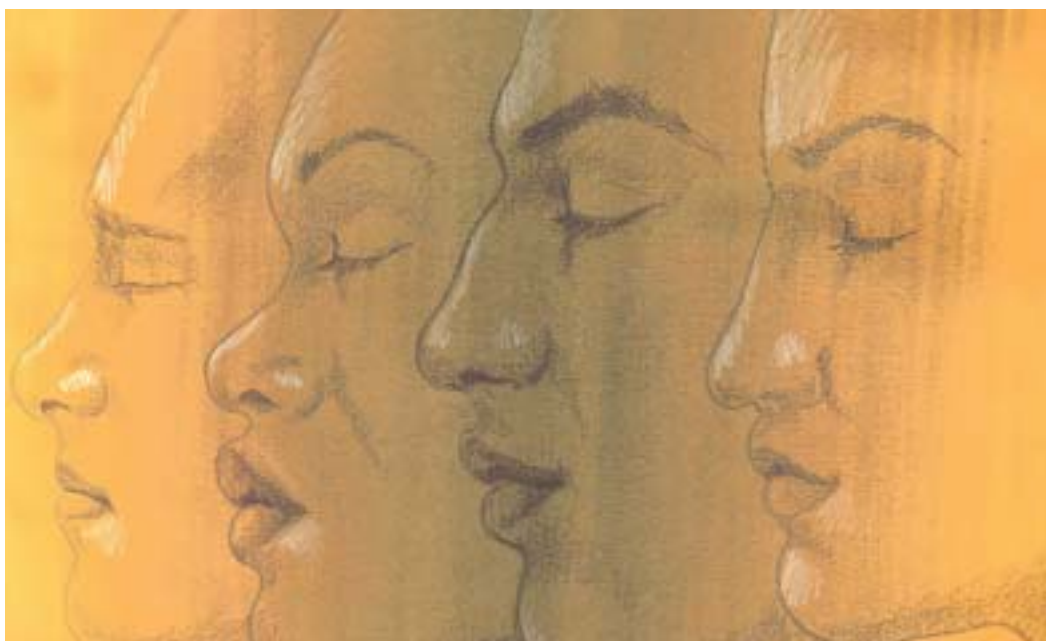
Other common mental health concerns also present gender differences. Women experience major depressive disorders 50% more frequently than do men and panic disorder is diagnosed twice as often in women as men (three times as often if the panic disorder is combined with agoraphobia). Generalized anxiety disorder is equally common in both genders and episodic violent behavior occurs more frequently in men than in women.

What does all of this mean? One key to understanding others is to be aware of how our differences — whether in hormones, socialization, cultural background or life experiences — may drive emotional responses.

Carole T. Goldberg, Psy.D.  
Department of Mental Hygiene

Rhea Hirshman, Editor

- Women have smaller brains than men, and more gray matter (the part of the brain that allows us to think). Men have more white matter (which transfers information between distant regions of the brain). Males typically have twice as many neurons as females, while women have twice as many connections between neurons as males. Women and men do equally well on intelligence tests.
- Male pilots are more likely than females to be involved in plane crashes. Research from the Johns Hopkins School of Public Health also indicates that plane crashes involving female pilots were mostly due to mishandling of the aircraft, while accidents involving male pilots were more likely to be caused by flawed-decision making and inattention.



- In men, the most common **symptom of heart attack** is chest pain. In addition to or other than chest pain, women are more likely to have subtle symptoms such as indigestion, abdominal or mid-back pain, nausea and vomiting.
- Women are more susceptible to **alcohol-related heart damage** at lower levels of alcohol consumption than are men.
- Younger women produce less of the gastric **enzyme which breaks down alcohol** in the stomach. As a result, after consuming alcohol, women under 50 have higher blood alcohol content than men of the same age, even when size differences are taken into account.
- Given the same exposure to smoke, women are more likely to **develop lung cancer** than men. Women have more difficulty quitting smoking. Nicotine replacement therapy is less effective in women; other quitting techniques are more promising.

## As has been the case with much of medical research, drug studies have traditionally bypassed women....

As has been the case with much of medical research, drug studies have traditionally bypassed women either because it was assumed that women could be regarded as “little men”—having the same basic physiology but weighing less—or because of the concern that women’s hormonal changes would “complicate” research (unless the medication being studied was related to female reproduction). A small number of exceptions exist in the areas of depression, osteoporosis and migraines, as these disorders occur in women at a higher rate than in men. While there is currently not a large body of concrete data concerning overall differences in drug responses between women and men, these attitudes and research practices have begun to change. Below are some facts about how drug responses are affected by gender.

- Pain medications seem to have different effects in men and women.
- Men have a better initial response to opioid medications (i.e. morphine). Opioids seem to work more slowly in females but may produce a better response.
- Depending on which kinds of pain receptors are affected, some opioids such as morphine seem to work better in men and some such as pentazocine

(Talwin) and butorphanol (Stadol) seem to work better in women. Further research is required. Until further research is done, however, generalizations cannot be made as to what drug works better for what sex as myriad factors are involved in pain perception and drug response.

- NSAIDs (non-steroidal anti-inflammatory drugs) such as ibuprofen (Motrin), naproxen (Aleve), etc. may have a better pain reduction effect in men than women because women seem to metabolize and eliminate the drug faster.
- Newer medications for osteoporosis (Fosamax, Actonel) are FDA approved for women and not for men, even though male osteoporosis is on the rise because men are living longer. All research was done in women because osteoporosis was considered a “female” disease. These medications have been shown to be effective in men with bone-loss related to use of steroid medications (ie. prednisone).
- Because men are typically heavier than women, drug doses based on weight will often differ between women and men.
- Women may be at an increased risk of medication-induced arrhythmia (irregular heart beat) from certain prescription medications.
- The menstrual cycle may effect drug response in females, but currently there is little data.
- Most drugs are contraindicated during pregnancy and used only when the benefit to the mother outweighs the risk to the fetus.
- Oral contraceptives interact with medications, most notably antibiotics (rifampin, tetracycline, penicillins), decreasing their effectiveness.

Mark Theriault, Pharm D.  
YHP Pharmacy  
Rhea Hirshman, Editor

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published by Yale Health Plan

17 Hillhouse Avenue  
New Haven, CT 06520-8237  
(203) 432-0246 • www.yale.edu/uhs  
email: member.services@yale.edu

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...there are some differences in what women and men need to do to keep track of their health.



Often, we think of health in terms of clinician visits, prescriptions and “doctor’s orders.” But a recent U.S. Department of Health and Human Services publication called *Healthy People 2010*, outlines ten day-to-day factors that have a major impact on health status:

- physical activity
- overweight and obesity
- tobacco use
- substance abuse
- responsible sexual behavior
- mental health
- injury and violence
- environmental quality
- immunization
- access to health care

Most of these factors apply equally to women and men, as do the recommendations for a range of preventive procedures and screenings. However, there are also some differences in what women and men need to do to keep track of their health.

Below are the most recent recommendations from the United States Preventive Services Task Force.

#### Recommended adult preventive procedures:

**Immunization** Tetanus shots should be taken every ten years, although because of a current shortage, YHP is giving the vaccine only in the case of injury. **Flu shots** should be taken yearly by those 50+ and by younger people who are health care providers, who are pregnant, or who have asthma, diabetes, or immunosuppression therapy or disease. Anyone with risk factors such as asthma, diabetes or immunosuppression therapy needs the **pneumovax vaccination** every five years; for those over 65 who have no other risk factors, the recommendation is one dose.

**Hearing screening** Beginning at age 65 or earlier if problems are apparent.

**Vision screening** Begin at age 40 if there have been no previous problems, and then follow clinician’s advice. By age 65 eye exams should take place yearly.

**Blood pressure and weight** Should be checked yearly starting in your mid twenties, more frequently if there is a rising trend in your weight and your blood pressure.

**Colo-rectal cancer screening** Beginning at age 50 and then follow your clinician’s advice.

**Cholesterol screening** This year the American Heart Association and the National Cholesterol Education Program Expert Panel have recommended cholesterol screenings every five years starting at age 20 and more frequently in the presence of risk factors (abnormal results, personal or family history of coronary heart disease, hyperlipidemia, diabetes).

#### Additional considerations for women

**Immunization** Women of childbearing age should make sure they have been vaccinated against **measles** and **rubella**. Flu vaccine should be taken by those who are pregnant and expect to deliver during or just after height of flu season.

**Bone density testing** Baseline should be taken at menopause with regular assessments thereafter.

**Pap smears** Yearly. If results are normal for three consecutive years and there are no risk factors (history of multiple sexual partners, previous abnormal cervical or uterine tests), the frequency can be reduced to once every three years.

**Mammography** Every one-two years between 40-69. Supplemented by monthly self breast exam and a yearly clinical breast exam.

#### Additional considerations for men:

**Prostate cancer screening** Discuss with your clinician, as there are several tests with varying reliability and predictability.

Ellen Budris, RN, MSN  
Manager, Office of Health Promotion  
and Education

- While 198 women graduated from U.S. medical schools in 1904, only 92 graduated in 1915 — a decline due in large part to the closing of several all-women’s medical colleges. A spike in the number of women admitted to medical schools occurred during both WW I and WW II, as fewer male students were available and women were recruited. After each war, however, the number of female medical school admissions declined.
- With the women’s movement of the 1960’s, the proportion of women medical students increased from 6% in 1961 to nearly 11% in 1971. The percentage of first year female medical students nearly tripled to 28% from 1969 to 1979.
- As of 1998, 23% of practicing physicians were women. Estimates are that by 2010 about 30% of physicians and 50% or more of medical students will be women.
- In 1998, men were 5% of working registered nurses (RNs) and 13% of students enrolled in nursing programs (National League for Nursing).



# information

## Watch for glaucoma

The Ophthalmology Department is offering walk-in glaucoma screenings from 12:30 to 2:00 on the first Monday of each month beginning May 6th, except during August. These free screenings are for any YHP member who has not been previously diagnosed with glaucoma. Dates are: May 6, June 3, July 1, September 9, October 7 and November 4.

Glaucoma, which may cause blindness, usually has no warning signs. Simple tests can diagnose glaucoma; proper diagnosis and treatment can slow or stop further loss of vision. Risk factors include: family history of glaucoma; African ancestry; severe nearsightedness; diabetes; long-term use of cortisone or other steroids; previous eye injury; being older than 45.

## End of the (benefit) year

For faculty and staff, the YHP benefit year ends on June 30 (if you are not sure when your benefit year ends, consult Member Services). Below are some tips to make the best use of the Pharmacy and your benefits.

- 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, prescriptions must be called in by the end of the business day on June 30. If you call in a prescription on or 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.



- Plan ahead. Because of increased volume at the end of the benefit year, waiting until the last minute can mean that a prescription refill may be delayed as some medications may be temporarily out of stock or require clinician authorization. So if you know now what your prescription needs are, please get the request into the Pharmacy as soon as possible.

## First time prescriptions

If you are starting a new prescription medication, you will be given initially a maximum of a 15 or 30 day supply depending on the medication. This policy allows you to avoid purchasing a large quantity of a medication that may not be right for you or to which you may have a reaction. Supplies of maintenance medications (those you are taking for an extended period) will then be dispensed for up to 100 days, while other medications will be dispensed for up to 30 days.

## Refills

Please call in refill requests to our IVR line (203-432-0033) at least 24 hours in advance of when you need the medication. Note also that, even if the bottle says “no refill,” you should punch in the information requested, as we often have updated prescriptions on file for maintenance medications.

**CORRECTION:** The caption under the group photo of the APRNs in the March/April issue contained an error. Ann Cosgrove, who was listed, was absent from the photo; Diane Paquette should have been listed. We apologize for the error.

*We would like to remind our members to let us know as soon as possible if they are seen in an emergency room or are admitted to a hospital. Doing so will enable us to follow up and assure that you receive the best care.*

## yale health care

Yale Health Plan  
Member Services  
17 Hillhouse Avenue  
P.O. Box 208237  
New Haven, CT 06520-8237



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.

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