The length of your “to-do” list before taking a trip may be related to how long you’ll be away, how far away the destination, and how experienced a traveler you are. One item that should be high up on the list is a doctor’s appointment. The field of travel medicine has expanded quite a bit in recent years. Many types of physicians—infected diseases specialists, family practitioners, internists, pediatricians, altitude specialists, diet specialists—have special expertise in travel medicine. The International Society of Travel Medicine is the leading organization for creating guidance and oversight for travel doctors, and the Infectious Diseases Society of America publishes primary guidelines for travel medicine. Both organizations take guidance from the Centers for Disease Control and the World Health Organization to keep practitioners of travel medicine well informed.

Dr. Scott Weisenberg, Director of the Weill Cornell Travel Medicine Clinic, said that ideally “a traveler should come in at least four weeks before the trip. We understand that trips are not always scheduled that far in advance. It’s much better to come in even shortly before the trip than not at all. We primarily see people with trips to developing countries and resource-poor countries, which essentially includes everything except North America, Europe, Australia, and Japan. People coming to the travel clinic will receive advice and counseling on what they can do to reduce the risk of illness during travel. This includes advice on what vaccines they should get to reduce the risk of travel related illness, as well as advice on malaria prophylaxis (whether or not they should take medication to reduce the risk of getting malaria), and also to find out what other sorts of illnesses they would be at risk for during their travel and interventions they can make to reduce the risk of getting sick while abroad.”

One of the guidelines for travelers is to confirm that childhood and routine vaccinations are up to date. Measles and mumps are much more prevalent in other countries, and with those diseases there is the additional risk of the traveler spreading the illness once they return home to other people whose vaccinations aren’t up-to-date. Certain vaccines are recommended for travelers to most regions. Hepatitis-A vaccination is recommended for travelers to most regions, along with, depending on the itinerary, typhoid vaccination. The CDC has recently added hepatitis-B to the set of vaccines to be considered for most travelers. Other vaccinations would be considered for travelers to certain areas of the world. Dr. Weisenberg said they would “include things like yellow fever for travelers to sub-Saharan Africa or South America, or Japanese encephalitis virus for travelers to Southern or Southeast Asia.”

If you are concerned about the safety of vaccines, Dr. Weisenberg pointed out “In general, most vaccines are safe and effective. Some vaccines, for example, yellow fever, carry a rare risk of side effects, particularly in certain patient groups—people who have problems with their immune systems—and we weigh the risk of the vaccination against the benefit on an individual basis. But for the average traveler the vaccines we give are generally very safe. One exception to that was the Japanese encephalitis virus vaccine. The vaccine previously available—now going out of production—had a higher risk of side effects than just about every other vaccine that we give. An alternative vaccine that has far fewer side effects has now become available; now that we have a safer vaccine, its risk/benefit ratio would favor vaccination for more travelers who are going on a longer trip to Southeast Asia.”

Vaccination is only one part of the pre-travel visit. Dietary counseling, maintaining personal hygiene standards during travel, insect avoidance techniques, including using repellants and bed nets, are all part of the general pre-travel advice package. But, as Dr. Weisenberg pointed out, every trip and every traveler has a specific set of concerns. “We also give advice about destination-specific risks. There are certain tropical diseases that travelers may be at risk for in certain areas but not in other areas. We evaluate any risks that a traveler will have because of his or her own medical history. And then there are occasional travelers who do things like high altitude trekking in (continued on page 4)
Arrhythmias

Arrhythmias are irregular heartbeats—disturbances in the heart’s normal rhythmic pattern. Some arrhythmias occur with normal heart rates—between 50 and 100 beats per minute at rest, but others occur at abnormal rates—below 50 beats per minute (bradyarrhythmias) or above 100 beats per minute (tachyarrhythmias). (Some athletes, especially cyclists, marathoners, and swimmers have normal resting heart rates below 50 beats per minutes.) In the United States, more than 850,000 people are hospitalized for an arrhythmia each year.

Dr. Joy Gelbman practices General Cardiology and Cardiovascular Medicine at the Weill Greenberg Center. She discussed the different kinds of arrhythmias and their treatments.

“Arrhythmia is an umbrella term covering a large group of conditions, all of which have to do with abnormalities in the electrical activity of the heart and the heart beating. Some of the conditions are benign but some can be potentially life-threatening.

“The normal heart sends an impulse down an electrical pathway from the top chambers to the bottom chambers and they beat sequentially, but if there is an abnormality in that electrical system it can interfere with this sequence.”

Dr. Gelbman said arrhythmias can affect every segment of the population. “Some arrhythmias—specifically atrial fibrillation—tend to increase with every decade of life, but arrhythmias can affect people of all ages. One predisposing condition to the more dangerous arrhythmias is underlying coronary artery disease. People who have had a heart attack before or who have a weakened heart muscle are at higher risk for having some of the more dangerous heart rhythms.

“Some arrhythmias increase the risk for stroke. When the heart is beating irregularly and not really pumping effectively, blood can pool inside the heart and form a blood clot; that clot can get ejected from the heart and travel to the brain, causing a stroke. We generally recommend that patients with this type of arrhythmia be on blood thinners to prevent that from happening.”

Not every person who has an arrhythmia is aware of the problem. Some people only learn of the condition during an annual checkup.

Dr. Gelbman: “Some people can have an arrhythmia and it can be completely asymptomatic, with the condition only revealed during a routine doctor’s appointment. When the condition is symptomatic the most common manifestation is palpitations, which is a feeling of irregularity in the heartbeat, or a racing or skipped beating sensation, but people can also experience chest discomfort or lightheadedness, chest fullness, or fainting. Just because an arrhythmia is asymptomatic doesn’t mean that it’s not dangerous.”

Treatments for arrhythmias vary depending on the symptoms, the underlying cause, and the degree of disturbance to the patient’s quality of life. Dr. Gelbman noted that not all arrhythmias need to be treated.

Some arrhythmias can come and go (paroxysmal), occurring once a week, once a month, or once a year. Others happen once and never again. Some are not caused by an underlying abnormality, but by a trigger substance like caffeine or stimulants commonly found in over-the-counter allergy medications. Treatment in those cases is simple avoidance of the trigger. But other arrhythmias are more persistent and won’t resolve without some kind of intervention.

“Arrhythmia treatment is a two-pronged issue: one is to treat the symptoms if they are bothersome, and the second prong is that some of the arrhythmias carry associated morbidities with them, which can be reduced with appropriate treatment.

Some arrhythmias are treated with medications, but if the patient can’t tolerate medicines, or for some arrhythmias that are resistant to medicines, procedures called radio-frequency ablations may be the solution. Ablation is done by specialists within cardiology called electrophysiologists. Ordinarily the general cardiologist would refer the patient to the electrophysiologist. Ablation is an invasive procedure where catheters are used to deliver radio-frequency to the site where the arrhythmia originates. This makes a small burn—for lack of a better word—in that area. The resulting scar tissue redirects the electrical pathway. If the procedure is a success, medications may no longer be needed.”

Two types of devices are commonly used in the treatment of arrhythmias—pacemakers and defibrillators. Pacemakers are small devices implanted under the skin of the chest or the abdomen. A pacemaker protects your heart from going too slowly. When it senses the abnormal rhythm, the pacemaker kicks in with a low-energy electrical pulse to prompt the heart to beat at a normal rate. Dr. Gelbman said that defibrillators differ from pacemakers in that “a defibrillator can not only protect your heart from going too slowly, but it’s more sophisticated, in that it can identify life-threatening arrhythmias and deliver a shock.”

Dr. Gelbman’s practice includes patients with hypertension, hyperlipidemia, coronary artery disease, valvular heart conditions, and those who have undergone heart surgery or interventional procedures. She has a particular interest in women’s cardiovascular health. She is an Assistant Professor of Medicine at Weill Cornell Medical College.

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What You Should Know about H1N1 and Other Types of Flu

According to the World Health Organization, between April and the end of July 2009, 1,154 people worldwide have died from the H1N1 strain of influenza, out of 162,380 confirmed cases. The number of actual cases is likely considerably higher, as not all cases are confirmed in a laboratory. Each year, 36,000 people in the United States die from regular seasonal flu, out of approximately 200,000 cases. Dr. Howard Rosenberg, an infectious disease specialist at NewYork-Presbyterian/Weill Cornell Medical Center, discussed facts about flu in general and advice on how to prevent infection from either kind of flu.

“So far the spectrum of illness from H1N1 has been relatively mild compared to typical human influenza, but the concern is that over time a more virulent virus may emerge that leads to more severe disease. Thousands of people every year die from influenza. It’s something that most people just don’t pay much attention to, but the medical community does, which is why we make a concerted effort every flu season to get people at risk immunized.”

Deaths from flu are generally from complications, Dr. Rosenberg said. “The initial influenza infection can be severe, but often it’s the secondary complications, such as bacterial pneumonia, that can lead to more significant morbidity and mortality. So someone contracts the flu, gets better, and then, lo and behold, they get hit with bacterial pneumonia.” The people most likely to develop such complications, Dr. Rosenberg said, are those “at the extremes of age—the very young and the very old, and people with medical comorbidities such as diabetes, chronic lung disease, dialysis patients, and transplant recipients.”

Some reports now indicate that people who had the flu before 1957 may have a degree of immunity to the new H1N1 strain, but as some people over 52 have contracted H1N1, and some of those have died as a result, age is not a guarantee of immunity. Dr. Rosenberg said immunization is the best way to escape all types of flu.

“Take a flu shot when available. We’ll have to see when an H1N1 vaccine becomes available. But conventional flu vaccine is typically released starting in September of every year. People that we target for vaccination comprise the groups who are at risk for complications of flu. However, the Public Health Service says that anyone who wants to increase her immunity to flu should consider taking a flu vaccine.

“Hand washing can also decrease flu transmission as respiratory viruses in general—and flu viruses for sure—spread through the air when a person coughs and sneezes, but can also be transmitted by our hands. Old-fashioned soap and water or topical disinfectants, such as alcohol-based hand sanitizers, are both good choices. Hopefully, people who are coughing are polite and are covering their mouths with a tissue that they then throw away.”

In recent years, new antiviral drugs have been introduced to treat flu. One problem associated with these drugs is that treatment must begin very early in the course of the illness (typically within the first 24 hours) to be effective. Dr. Rosenberg described the limits of their usefulness.

“As an example, oseltamivir can reduce the duration of symptoms by, on average, 24 hours, but to my knowledge there have not been studies showing a reduction in significant morbidity or mortality from influenza with its use. Actually, this past season, the Public Health Service alerted the medical community that conventional flu was actually resistant to it, probably because it had been used ubiquitously and indiscriminately in the past. It may be a drug with limited utility in flu and as with many things in medicine, especially with infectious diseases, prevention is often the best treatment.”

It is still not clear when a vaccine for H1N1 will be produced, whether one or two vaccines will be available for this flu season, and whether or not manufacturers will have to divert resources from the production of seasonal flu vaccine to meet the demand.

Dr. Rosenberg: “It’s not clear exactly what form this is going to take. My guess is that there are going to be 2 different vaccines. I know that vaccine manufacturers are working on H1N1 vaccine, but at present, it isn’t known when it will be available to the public. The technology for making flu vaccine is pretty labor intensive and in some ways relatively primitive. With a finite set of resources it remains to be seen what the supply of the different products is going to look like.”

In the pandemic of 1918–1919, 675,000 Americans died from influenza; there are no exact global figures but estimates range from 50 to 100 million deaths. There has been speculation on whether or not such a thing could happen again. Dr. Rosenberg commented:

“There’s always the potential for that and it’s really the great fear that H1N1, which again, to date, has produced relatively mild consequences, over time could evolve into a more virulent virus causing a more severe spectrum of disease. There’s a complicated interplay between humans, fowl—chickens, geese, ducks, etc.—and pigs, and maybe other farm animals as well, with respective strains of human, avian, and swine flu. These strains circulate within species, but they can also cross species, so H1N1 is really a swine species that is causing flu in human beings. The concern over time is that any flu virus in and of itself can evolve and mutate into a strain that’s more virulent but what could also happen is that flu strains from different species can combine with one another to produce strains that really are quite novel from the human immune system’s point of view. And that
Influenza

is often how a pandemic flu strain can evolve and emerge, through the recombination of flu strains to create some completely novel flu strain unknown to the human immune system.

“One thing that’s different now in 2009 compared to 1918 is the sophistication of the public health infrastructure, meticulously monitoring influenza virus activity worldwide. In that respect, we are light years ahead of where we were in 1918. Another important factor is that back in 1918, there were no antibiotics, so that if you got pneumococcal pneumonia after influenza there was a good chance that you were going to die from it, as opposed to 2009 where if one received timely and proper medical attention, the chances of succumbing to bacterial pneumonia would be much less.”

But, as Dr. Rosenberg said, prevention is the best way to deal with viruses, so get a flu shot, stay away from people who are coughing, and wash your hands.

Howard E. Rosenberg, M.D.
Infectious disease specialist at NewYork-Presbyterian/Weill Cornell Medical Center

Clariictions:
The following attributions were inadvertently omitted from the Spring/Summer 2009 issue of Health News.

“Exercising for Cardiovascular Health”
Gil Weitzman, M.D.
Clinical Assistant Professor of Medicine
NewYork-Presbyterian Hospital/Weill Cornell Medical Center

“Simple Steps to Healthy Summer Feet”
Tzvi Bar-David, D.P.M.
Director, Podiatry Service
NewYork-Presbyterian Hospital/Columbia Medical Center
Department of Orthopedics

Passport? Tickets? Doctor’s Appointment?

(continued from page 1)
Nepal or on Mount Kilimanjaro in Africa, and we'll talk to them about their itinerary and what they can do to reduce the risks from those sorts of activities as well.”

Occasionally, a doctor will advise the trip be cancelled. “Most commonly,” Dr. Weisenberg said, “that happens with pregnant women who are traveling to areas with a high incidence of malaria, because pregnant women are much more vulnerable to getting severe malaria than nonpregnant women, although it can be a life-threatening disease in any patient population. And sometimes we advise people with depressed immune systems who are traveling to areas where they are at high risk of exposure to diseases to consider canceling the trip because they are more vulnerable.”

So as soon as you decide on a destination, perhaps even before you book your flight, make an appointment with a travel specialist and cross that item off your list.

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(continued from page 5)
50 years ago. A big part of this is due to increased awareness and surveillance.

Melanoma Identification
Look for changes in pre-existing moles. If you’ve always had a nice round mole that’s even in color, and it starts growing, or growing darker, or parts of it become elevated, or it starts itching or bleeding or becomes painful, have it checked. These are all symptoms of some kind of cellular activity. First and foremost when things evolve into cancer, there is usually some kind of change.

About 20 years ago the mnemonic device ABCD was presented to the public as a means of evaluating skin lesions: A, spots that are Asymmetrical; B, spots that have Border irregularities; C, Color variations; D, spots that are greater than 5 millimeters in Diameter. However, a lot of atypical moles also fit the ABCD criteria. It has led to earlier detection, but at the same time it’s a little too sensitive, a lot of things that concern patients are not melanomas. Just two years ago the American Academy of Dermatology added E, Evolution.

Another approach for identifying potentially dangerous skin lesions is the “tree from the forest” approach. If you have 200 moles and they all look they same, it’s highly unlikely you have 200 melanomas. That’s also known as the “Ugly Duckling sign”—if you look at someone’s back, and there’s one big black mole and a bunch of little tiny ones, you should be concerned about the big one. You are primarily looking out for change and things that stand out from the ordinary.

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Keeping an Eye Out for Melanoma

(continued from page 5)
Keeping an Eye Out for Melanoma

Melanoma is a kind of skin cancer that originates from pigment cells—the cells that make tan, freckles, and moles. It’s of particular concern because there has been a doubling in incidence almost every ten years for the last four to five decades. Numerous epidemiological studies throughout the world have clearly linked it to excessive sun exposure, particularly among people who burn easily or who have had a lot of sunburns in their youth.

It’s a different class of skin cancer from other, more common skin cancers, such as basal cell carcinoma and squamous cell carcinoma, because it has a greater tendency to metastasize. A melanoma that stays on the skin is curable—once you cut it out it’s gone. But if it spreads and goes into the lungs or other internal organs, it can be highly lethal; it’s a real all-or-nothing kind of phenomenon, and that is what is incredibly intimidating about this cancer.

It’s been said melanoma gives oncology a bad name because it’s been so incurable. Numerous trials of different medications to eradicate advanced disease, metastatic disease, have all failed. There’s nothing FDA-approved available right now that seems to consistently work.

A New Approach

The human genome project offers new opportunities by providing a blueprint of normal gene sequences, allowing us to determine what inherited changes in the genome put you at risk for a disease such as melanoma, enabling us to provide advice on what you should and shouldn’t do to lessen the risk of those susceptibilities. The other offshoot of the human genome project relevant to cancer is determining what drugs will be particularly effective. Knowing what gene mutations are in the tumor can lead the physician to choose drug A and not drug B, because drug A is particularly effective for tumors with those kinds of changes. So the promise of the human genome project is “personalized medicine.” And that’s the big term—personalized medicine.

Will It Spread?

There is a direct mathematical relationship between the thickness of a melanoma lesion and how likely it is to metastasize. There is a notion, although unproven, that melanomas tend to metastasize at a slightly smaller size than other cancers. A melanoma, let’s say a sphere of 4 millimeters across, has a 50% chance of killing you in two years. It’s less likely to spread at 2 millimeters across, and even much less likely at 1 millimeter across. Since these lesions are on the skin surface, melanomas should be one of the easiest cancers to detect, and yet effective screening strategies in the general population remain elusive. It is clear, however, that the average size of a melanoma these days is much smaller than those of (continued on page 4)

Your Membership

You are a phone call away from:
• consultation 24 hours a day
• a physician appointment
• pre-travel planning for medical care
• international access
• air medical evacuation
• second opinions
• coordination of executive physicals