## Guidelines Map New Horizons of Travel Medicine

## BY MIRIAM E. TUCKER Senior Writer

ew travel medicine guidelines issued by the Infectious Diseases Society of America clearly illustrate that the field has expanded far beyond simply giving a few exotic immunizations.

"An awareness has developed among practitioners that prevention of illness in travelers includes not only the provision of vaccines and chemoprophylaxis, but also

a discussion of topics such as personal behavior and safety during travel, prevention of altitude illness, and access to medical care in the event of illness," guidelines author Dr. David R. Hill and his associates said (Clin. Infect. Dis. 2006;43:1499-539).

The comprehensive 40-page document comprises a standard for the practice of travel medicine as well as specific recommendations for pretravel risk assessment, immunizations (including updates of routinely recommended vaccines such as hepatitis A and B, and influenza), diarrhea and malaria prophylaxis, guidance on personal safety, and posttravel medical care.

While most travel medicine should be provided in specialized travel clinics by people who have training in the field, primary care physicians should be able to advise travelers who are in good health and who will be visiting low-risk destinations with standard planned activities, according to the document.

The guidelines are aimed at clinicians

providing care to all travelers including children, coauthor Dr. Phillip R. Fischer said in an interview.

The Centers for Disease Control and Prevention estimates that 1.9 million American children travel overseas each year. Trips often relate to family vacation, school-sponsored education, and humanitarian service. The guidelines list lots of resources for interested physicians who want to prepare to care for traveling children," said Dr. Fischer, a travel medicine specialist who is professor of pediatrics and chair of the division of general pediatric and adolescent medicine at the Mayo Clinic, Rochester, Minn.

The field of travel medicine has developed dramatically over the last 25 years, for several reasons. The number of travelers crossing international borders grew



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from 457 million in 1990 to 763 million in 2004, according to the document. This increase in global travel has led both to more frequent illness during travel and to importation of disease back to the United States with potential transmission to susceptible individuals living here.

Indeed, Dr. Fischer noted, "Most U.S. cases of malaria occur in travelers who took no prophylactic medication, and many went overseas to visit friends and relatives. Pediatricians must be particularly vigilant to help ensure that children with relatives in other countries get appropriate advice and help prior to international trips."

At a minimum, traveling families should be informed about vaccine-preventable illness, avoidance of insects, use of malaria chemoprophylaxis, prevention and self-treatment of traveler's diarrhea, personal behavior and safety, the importance of obtaining travel and evacuation insurance policies, and access to medical care during travel. Additional information should be tailored to the particular itinerary, the authors said.

In general, the guidelines advise that primary care physicians should be able to provide pretravel services to healthy patients visiting low-risk areas like the Caribbean or a Mexican resort. But "as soon as the traveler has complex health conditions, or one is considering administering specialty vaccines-e.g., Japanese encephalitis and yellow fever, or malaria prevention to someone with a seizure disorder-then the level of expertise needs to be greater," Dr. Hill, director of the National Travel Health Network and Centre Hospital for Tropical Diseases, London, said in an interview.

Both the International Society of Travel Medicine (www.istm.org) and the American Society of Tropical Medicine and Hygiene (www.astmh.org) offer certificate programs in the field.

BRIEF SUMMARY: Consult the Full Prescribing Information for complete product information ADDERALL XR<sup>®</sup> CAPSULES re are no adequate and well-controlled studies in pregnant women. There has been one report of severe congenital bony mmity, tracheo-esophageal fistula, and anal atresia (vater association) in a baby born to a woman who took dextroamphet-ne sultate with lovastaint during the first timester of pregnancy. Amphetamines should be used during pregnancy only if **iteratogenic Effects:** Infants born to mothers dependent on amphetamines have an increased risk of premature delivery and birth weight. Also, these infants may experience symptoms of withdrawal as demonstrated by dysphoria, including ation, and significant lassitude. CII Rx Only ADDERALL XR: CAPSULES CIT RAY CAPSULES CIT RAY ON THE ADVECTOR OF A MATHETAMINES HAVE A HIGH POTENTIAL FOR ABUSE. ADMINISTRATION OF AMPHETAMINES FOR PROLONGED PERIODS OF TIME MAY LEAD TO DRUG DEPENDENCE. PARTICULAR ATTENTION SHOULD BE PAID TO THE POSSIBILITY OF SUBJECTS OBTAINING AMPHETAMINES FOR NON-THERAPEUTIC USE OR DISTRIBUTION TO OTHERS AND THE DRUGS SHOULD BE PRESCRIBED OR DISPENSED SPARINGLY. MISUSE OF AMPHETAMINE MAY CAUSE SUDDEN DEATH AND SERIOUS CARDIOVASCULAR ADVERSE EVENTS.

Pediatric Use: ADDERALL XR\* is indicated for use in children 6 years of age and older.

Use in Children Inder Six Years of Age: Effects of ADDERALL XR\* in 3-5 year olds have not been studied. Long-term effects of amphetamines in children have not been studied. Amphetamines are not recommended for use in children under 3 years of age.

Geriatric Use: ADDERALL XR\* has not been studied in the geriatric population.

ADVERSE EVENTS

Hypertension: [See WARNINGS section] In a controlled 4-week outpatient clinical study of adolescents with ADHD. isolated systolic blod opressure elevations BIS mmHg were observed in 764 (11%) placebo-treated patients and 7/100 (7%) plateins receiving ADDERALL XR\* 10 or 20 mg. Isolated elevations in disolic blod opressure B 8 mmHg were observed in 764 (11%) placebo-treated patients and 7/100 (7%) plateins receiving ADDERALL XR\* insteade the administered 10 mg and 20 mg ADDERALL XR\*, respectively. Higher single doses were associated with a greater increase in systolic blood pressure (164/ (25%), placebo-treated patients and 20100 (27%) ADDERALL XR\* included exposures in a stolat of 1315 participants in clinical trials increases were transient, appeared maximal at 21 of 1 AUSY, solated sea and tassociated with symptoms. The premarketing development program for ADDERALL XR\* included exposures in a total of 1315 participants in clinical trials (35 pediatric patients, 350 addiescent patients, 240 adult patintreases adults, 240 adult patients, 240 adult patients

ADDERALL XR <sup>-</sup> IOF 12 IIIOIIU	lis of more.	In a comparison of each a construction of consels advants for extent
Adverse event	% of pediatric patients discontinuing (n=595)	In a separate placebo-controlled 4-week study in adole ADHD, eight patients (3.4%) discontinued treatment dure events among ADDERALL XR®-treated patients (N=2
Anorexia (loss of appetite) Insomnia Weight loss Emotional lability Depression	2.9 1.5 1.2 1.0 0.7	patients discontinued due to insomnia aird one patie depression, motor tics, headaches, light-headedness, an In one placebo-controlled 4-week study among adults patients who discontinued treatment due to adverse ev ADDERALL XR <sup>®</sup> -treated patients (N-191) were 3.1%
nsomnia, 1% (n=2) each for	headache, palpitation, and	nervousness including anxiety and irritability, 2.6% somnolence; and, 0.5% (n=1) each for ALT increase, aging

is continued treatment due to adverse first-treated patients (h=233). Three insomnia and one patient each for hes, light-headedness, and anxidy: eack study among adults with ADHD, atment due to adverse events among nts (h=191) were 3.1% (n=61) for ty and irritability. 26% (n=51) for each for AIT increase animation check

rese events occurring in a controlled trial: Adverse events reported in a 3-week clinical trial of pediatric patients and al trial in adolescents and adults, respectively, treated with ADDERALL XR® or placebo are presented in the tables be rescriber should be aware that these figures cannot be used to predict the incidence of adverse events in the course claration be aware that these figures cannot be used to predict the incidence of adverse events in the course al practice where patient characteristics and other factors differ from those which prevailed in the clinical trials. Sim frequencies cannot be compared with figures obtained from other clinical investigations involving different treatment myestigators. The clied figures, however, do provide the prescribing physician with some basis for estimating th buttorin of drug and non-drug factors to the adverse event incidence rate in the population studied.

In or orug and non-orug factors to the adverse event incidence rate in the population studied, ing adverse reactions have been associated with the use of amphetamine, ADDERALL XR®, or ADDERALL®, ular. Palpitations, tachycardia, elevation of blood pressure, sudden death, myocardial infarction. There have lo ports of cardiomyopathy associated with chronic amphetamine use. rous System: Psychotic episodes at recommended doese, overstimulation, restlessness, dizziness, inson dyskinesia, dysphoria, depression, tremor, headache, exacerbation of motor and phonic tics and Toure spirutes stroke. ade which chronic anniheratione use. oodes at recommended doses, overstimulation, restlessness, dizziness, insomnia sion, tremor, headache, exacerbation of motor and phonic tics and Tourette's eizures, stroke. nal: Dryness of the mouth, unpleasant taste, diarrhea, constipation, other gastrointestinal disturbances. Anorexia and may occur as undesirable effects.

0%

Body System	Preferred Term	ADDERALL XR® (n=374)	Placebo (n=210)	Endocrine: I
General	Abdominal Pain (stomachache)	14%	10%	ADDERALL substance.
	Accidental Injury	3%	2%	Amphetamin
	Asthenia (fatigue)	2%	0%	Tolerance. e
	Fever	5%	2%	
	Infection	4%	2%	and severe s
	Viral Infection	2%	0%	are reports dosage to
Digestive	Loss of Appetite	22%	2%	recommende
System	Diarrhea	2%	1%	prolonaed hi
	Dyspepsia	2%	1%	extreme fatio
	Nausea	5%	3%	are also note
	Vomiting	7%	4%	of chronic in
Nervous System	Dizziness	2%	0%	include seve
	Emotional Lability	9%	2%	irritability, hy
	Insomnia	17%	2%	The most
	Nervousness	6%	2%	intoxication
Metabolic/Nutritional	Weight Loss	4%	0%	indistinguish OVERDOSA

Than Study\* Placebo (n=54) Body Sy General Abdominal Pai 11% 2% Digestive System Loss of Appetite 2%

Metabolic/Nutritional	Weight Loss b	9%
* Appears the same due to		
Dose-related adverse even	ents	
Note: The following events		
reported by 2% to 4% of a	dolescent patients re	ceiving ADDERALL XR® v

njury, astheni , and vomiting (fatigue), dry mouth, dyspepsia \*Included doses up to 40 mg

Body System	Preferred Term	ADDERALL XR® (n=191)	Placebo (n=64)
General	Asthenia Headache	6% 26%	5% 13%
Digestive System	Loss of Appetite Diarrhea Dry Mouth Nausea	33% 6% 35% 8%	3% 0% 5% 3%
Nervous System	Agitation Anxiety Dizziness Insomnia	8% 8% 7% 27%	5% 5% 0% 13%
Cardiovascular System	Tachycardia	6%	3%
Metabolic/Nutritional	Weight Loss	11%	0%
Urogenital System	Urinary Tract Infection	n 5%	0%
Note: The following events or reported by 2% to 4% of ac dence than patients receiving constipation, tooth disorder disorder, palpitation, twitch *Included doses up to 60 n	dult patients receiving ADI g placebo in this study: infe , emotional lability, libido o ing, dyspnea, sweating, d	DERALL XR® with a action, photosensitive decreased, somnole	higher in vity reaction nce, spee

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ia, rash, hypersensitivity reactions edema and anaphylaxis. Serious including Stevens Johnsor toxic epidermal necrolysis have otence, changes in libido. AND DEPENDENCE 1º is a Schedule II controlled

have been extensively abused

sally at low doses. Manifestations of acute overdosage amines include restlessness, tremor a, rapid respiration, confusion ss, hallucinations, panic states and rhahodnovolvsis, Fatigue and Cente

Tactured for: Shire US Inc., Wayne, 7 Made in USA For more information h528-2088, or visit www.adderalkr.cc RALL<sup>2</sup> and ADDERALL XR<sup>2</sup> are registe e US Patent and Trademark Offi tight @2006 Shire US Inc.

381 0107 010 ABFS18 **Shire** 

Seizures There is some clinical evidence that stimulants may lower the convulsive threshold in patients with prior history of seizure, in patients with prior EEG abnormalities in absence of seizures, and very rarely, in patients without a history of seizures and no prior EEG evidence of seizures. In the presence of seizures, the drug should be discontinued. Jisual Disturbance difference and an and a model of the order of the o

deaths, stroke, and myocardial infarction have been reported in adults taking stimulant drugs at usual doses for ADHD In the role of stimulants in these adult cases is also unknown, adults have a greater likelihood than children of having serious

Iden deaths, stroke, and myocardial infarction have been reported in adults taking stimulant drugs at usial doess for ADHL. uoigh the role of stimulants in these adult cases is also unknown, adults have a greater likelihood than children of having serious citural cardiac abnormalities, cardiomyopathy, serious heart rhythm abnormalities, coronary artery disease, or other serious car-problems. Adults with such abnormalities should also generally not be treated with stimulant drugs (see CONTRAINDICATIONS). pertension and other Cardiovascular Conditions nulant medications cause a modest increase in average blood pressure (about 2-4 mmHg) and average heat rate rate out 3-6 bpm) [see ADVERSE EVENTS], and individuals may have larger increases. While the mean changes alone would be expected to have short-term consequences, all plateints should be monitored for larger changes in heart rate rate be aspected to have short-term consequences, all plateints should be monitored for larger changes in heart rate arate preases in blood pressure or heart rate, eq. those with pre-existing hypertension, heart failure, recent myocardial inction, or ventricular arrhythmia (see CONTRAINDICATIONS). sessing Cardiovascular Status in administ history of sudein death or ventricular arrhythmia and playical exam to assess for presence of cardiac disease, and should receive turther cardiac evaluation if findings suggest such disease, and should evel psymbolis such as exertificiant (hest pain, unexplainted synchece, or other symptoms suggestive of cardiac disease ing stimulant treatment should undergo a prompt cardiac evaluation.

inistration of stimulants may exacerbate symptoms of behavior disturbance and thought disorder in patients with existing psychotic disorder.

examing bysolitoic usioned. If Illiness Bile induction of mixed/manic episode in such patients. Prior to initiating treatment with a stimulant, patients with orbid depressive symptoms should be adequately screened to determine if they are at risk for bipolar disorder, such ening should include a detailed byschiatric history, including a tamily history of sucide, bipolar disorder, such ment semergene byschiatric or Manic Symptoms timet emergenet psychotic or Manic Symptoms timet emergenet psychotic or manic symptoms. timet emergenet psychotic or manic symptoms. timet emergenet psychotic or disorder, such a possible causal role of the stimulant, adiscontinuation of treatment be appropriate. In a pooled analysis of multiple short-term, placebo-controlled studies, such symptoms cocurred in to 1.% (4) patients with events out of 3482 exposed to methylphenidate or amphetamine for several weeks at usual doses) timulant-treated patients compared to 0 in placebo-treated patients.

imulant-treated patients compared to 0 in placebo-treated patients. ession ession behavior or hostility is often observed in children and adolescents with ADHD, and has been reported in clinical is and the opstmarketing experience of some medications indicated for the treatment of ADHD. Although there is no ematic evidence that stimulants cause aggressive behavior or hostility, patients beginning treatment for ADHD should be itored for the appearance of or works into flow weight and height in children ages 7 to 10 years who were randomized to either methylphenidate or medication treatment groups over 14 months, as well as in naturalistic subgroups of newly methylphenidate-treated and medication treatment of roughs over 14 months, as well as in naturalistic subgroups of newly methylphenidate-treated and the appendix of the ages of 10 to 13 years), subgets that consistently medicate children treatment for 7 days per week throughout the year) have a temporary Slowing in growth rate (on average, a total of about the average of the appendix of the ages of 10 to 13 years), subgets that consistently medicate children treatment for 7 days per week throughout the year) have a temporary Slowing in growth rate (on average, a total of about the average of the treating the age of 10 to 13 years), subject that consistently medicate a total of a weeks of therapy was –11 bis. And ~28 bis., respectively, for patients receiving 10 mg and 20 mg ADDEFALL XR\*\* er doses were associated with greater weight loss within the initial 4 weeks of treatment. Published data arbiticitated that they herefore, a weight and therefore, growth should be monitored during treatment with sincle that anticipated that they herefore as well. Therefore, growth should be monitored during treatment with midet bis indicipated that they they have this felfect as well. Therefore, growth should be monitored during treatment with midet bis hour to to growth or gaining weight as expected may need to have their treatment miterrupted.

In the evidence of selacities. In the presence of selacities, the drug should be discontinued: said bisturbane, the unites with accommodation and burring of vision have been reported with stimulant treatment. **EXENTIONS Exentions Exentions Exentions Exentions Exentions Exentions Exentions Exertions Exertions** 

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using the second s refrain from nursing. **Pediatric Use:** ADDERALL XR® is indicated for use in children 6 years of age and older. **Use in Children Under Six Years of Age:** Effects of ADDERALL XR® in 3-5 year olds have not been studied. Long-t of amphetamines in children have not been well established. Amphetamines are not recommended for use in chil

INDICATIONS ADDERALL XR® is indicated for the treatment of Attention Deficit Hyperactivity Disorder (ADHD). The efficacy of ADDERALL XR® in the treatment of ADHD was established on the basis of two controlled trials in children aged 6 to 12, one controlled trial in adolescents aged 13 to 17, and one controlled trial in adults who met DSM-IV® criteria for ADHD, along with extrapolation from the known efficacy of ADDERALL®, the immediate-release formulation of this substance. **CONTRAINDICATIONS** Incertons teriosciencies, symptomatic cardiovascular disease, moderate to severe hypertension, hyperthyroidism, wity or idiosyncrasy to the sympathomimetic amines, glaucoma, Agitated states. Patients with a history or g or within 14 days following the administration of monoamine oxidase inhibitors (hypertensive crises may resu

iovascular Events n and Pre-existing Structural Cardiac Abnormalities or Other Serious Heart Problems bus Cardiovascular evens. den Death and Pre-existing Structural Cardiac Abnormalities or Utner Serious Freact Freak for Structural Cardiac Abnormalities or other serious heart problems. Although some serious heart problems alone ca of sudden death, sho shormalities or other serious heart problems. Although some serious heart problems alone ca of sudden death, shormalities, cardioudts generally should not be used in children or adolescents with known s liac abnormalities, cardiomyopathy, serious heart rhythm abnormalities, or other serious cardiac problems at increased vulnerability to the sympathomimiet effects of a simulaint drug cer CONTRAINDICATIONS). Me