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CLINICAL INSIGHTS

Gender Differences and CHD Risk: A 2006 Update

MICHAEL MILLER, MD, FACC
Associate Professor of Medicine, Epidemiology and Preventive Medicine
Director, Center for Preventive Cardiology
University of Maryland Medical System
Baltimore, MD

Disclosures: None

Introduction

Gender differences in relation to coronary heart disease (CHD) risk factor modification has remained a noteworthy topic in recent years. Two recent reviews provide excellent summaries of gender differences vis-à-vis prevalence and management of conventional risk factors and barriers to treatment.[1,2] This review will briefly summarize data published within the past 1–2 years that reinforce the somber notion that, despite increased awareness, women who are at increased risk for CHD remain both under-diagnosed and under-treated compared to their male counterparts.

CHD Risk Factors

Diabetes Mellitus

During the past year, several studies released findings relevant to treatment rates in men and women with type 2 diabetes. One cross-sectional study of nearly 4,000 diabetics examined the extent to which medications were employed to optimally manage elevated glucose, blood pressure and lipids; one-third of diabetics had CHD. Within this group, women were less likely than men to achieve National Committee on Quality Assurance targets for BP <140/90 (OR: 0.88; p<0.001), HbA1c <8% (62 vs. 69%; p=0.01) and LDL-C <100 mg/dL (65 vs. 73%; p=0.002).[3,4] Women with CHD were also 30% less likely to be taking aspirin, extending previous observations of inferior treatment rates in diabetic women.[4] In another study, incident CHD event rates were compared in a diabetic Finnish cohort of 835 men and women. During the 13-year follow-up period, diabetic women were 5 times more likely to experience CHD death or nonfatal MI compared with diabetic men. In this cohort, elevated blood pressure and hypertriglyceridemic low HDL-C predicted excess CHD risk in the diabetic women.[5] Arguably, the most compelling data demonstrating unequivocal gender-related differences in diabetics was derived from a meta-analysis of 37 prospective studies comprising nearly 450,000 patients. Overall, the likelihood of CHD death in diabetic women was 50% higher compared with diabetic men. Again, in evaluating potential explanations for the excess risk, the authors noted that diabetic women were more likely to have associated hypertension and dyslipidemia compared to diabetic men and less likely to be prescribed cardioprotective therapies, including aspirin, statins, and blood pressure lowering medications.[6]

While it is well known that diabetic women lose the gender protection from CHD, similar findings also apply to renal failure. That is, women without diabetes are much less likely to progress to end-stage renal disease (ESRD) compared to non-diabetic men. In contrast, diabetic women are much more likely to develop ESRD. To evaluate renal function in diabetic men and women, Cherney *et al.*[7] found that with clamped hyperglycemia, diabetic women showed reductions in renal blood flow and rise in renal vascular resistance and filtration fraction (FF), whereas these hemodynamic parameters were unchanged in diabetic men. Over time, these adverse hemodynamic consequences may contribute to renal deterioration. In contrast, ACE inhibition may be more protective in women by favorably influencing GFR and FF,[7] and that when combined with estrogen may stimulate release of endogenous tissue plasminogen activator.[8] Because ACE inhibitors may delay or prevent incident diabetes mellitus,[9] these results suggest that such diabetic protective strategies[10] be considered earlier in high-risk women (e.g., impaired fasting glucose) to reduce the potentially higher attendant risk of diabetes.

Hypertension and Dyslipidemia

In addition to diabetes, hypertension poses a greater risk of initial CHD events in women compared with men as shown in Figure 1.[11] In recently published data from the SYMPHONY (Sibrafiban versus aspirin to Yield Maximum Protection from ischemic Heart event postacute cOroNary sYndromes) trial,[12] a much higher prevalence of hypertension was identified in U.S. women presenting with acute coronary syndromes than men (63% vs. 50%). Interestingly, while these hypertensive women were more likely to receive antihypertensive agents than hypertensive men at presentation (notably calcium

Clinical Insights *continued on page 4*

in this issue...

No One Left Behind— But Where Are We Going?

PETER H. JONES, MD
NLA President
Associate Professor of Medicine
Section of Atherosclerosis and Lipid Research
Baylor College of Medicine
Houston, TX

This may be the final edition of my President's Column for the *Lipid Spin* as my term expires this April and Jim McKenney follows as president. Although we have only had three presidents of the National Lipid Association (NLA), Jim will be the first pharmacist at the helm, which in itself distinguishes the NLA from many other professional medical associations. If you have not read our mission statement lately, I encourage you to review it as published at www.lipid.org. It states proudly that we are a multidisciplinary team of professionals dedicated to the treatment of our patients' lipid disorders.

The Challenge of Certification

We understand that the field of lipidology is not exclusively contained within the physician's realm of authority. Indeed, nurses and pharmacists among others do play a key role in cardiovascular disease prevention and treatment. The wise integration of all professionals in the healthcare arena can serve as powerful resources for enhancing treatment plans.

At the present time, the American Board of Clinical Lipidology (ABCL) certification exam is only offered to physicians; however, as a multidisciplinary organization, we must and will address the needs of *all* our constituents. Non-physicians represent 40 percent of the membership and we know there is tremendous interest in the certification process. Remarkably, 89 lipidologists from across the country took the first examination of the American Board of Clinical Lipidology this past November in Dallas. That was a significant landmark in our history and the culmination of a dedicated effort that began among the ranks of the Southeast Lipid Association (SELA), years before the NLA and the ABCL were established.

In keeping with this progress, we need to establish a certification program beyond that offered for physicians. In this regard, a major initiative for 2006 is the creation of an advanced practice certificate (APC) program that not only recognizes achievement, but also serves to codify a "best practices" protocol in the management of lipid disorders. How the process differentiates among professions (nursing, pharmacy, dietetics and others) will be a significant challenge as we formulate an education process to facilitate successful completion of a comprehensive exam. Should the basis of the new program be created and offered in 2006, the ABCL is expected to offer the first advanced practice certificate (APC) exam in 2007. Ultimately, we will not leave behind those who wish to be part of the certification process.

Long before the first examinees of the current ABCL exam put down their No. 2 pencils, your Board has been modeling education pathways for "lifelong learning." Our goal is to identify the major stages of professional development and create programs that support a transition to advanced levels for every discipline.

Rather than define our members solely in terms of their professional credentials, we have recognized five levels of professional development. The chart on page 3 illustrates a continuum of education that culminates in the professional certification of our members. As an association, our goal is to create opportunities that motivate our members to achieve an enhanced understanding of the field of lipidology. Our education agenda is thus focused on advancement and achievement rather than on a specific discipline of health care professional.

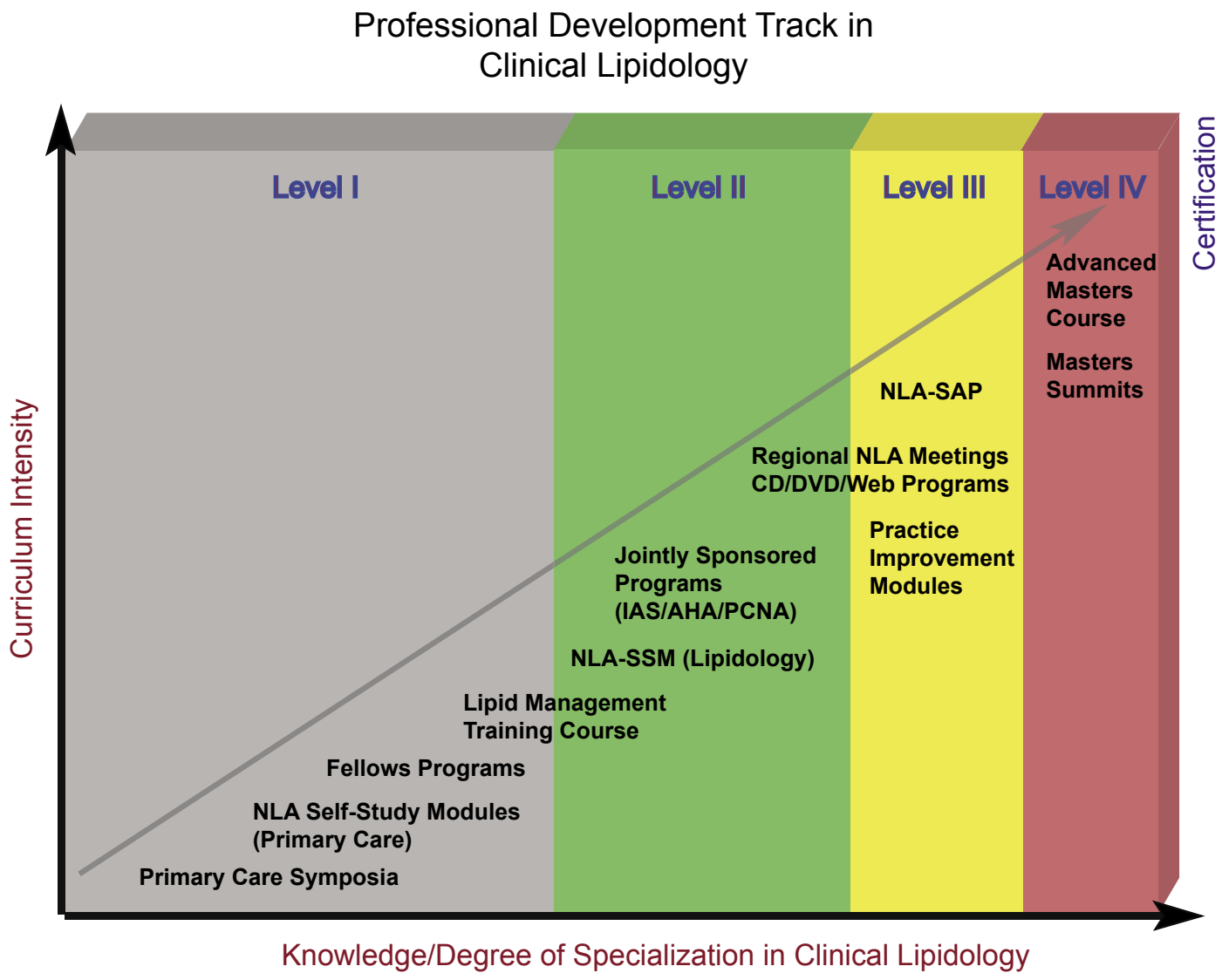
The programs depicted on the chart reflect our existing or planned catalog of courses along this pathway. We expect to modify this chart further in the coming year as we establish additional programs at every level of knowledge and interest.

The Professional Development Track for Lipid Specialists

Level I—Basic-Primary Care and Physicians in Training
This level represents the vast pool of medical professionals (not necessarily NLA members) with an interest in expanding their practice to include the management of patients with lipid disorders or who are still in an in-training status preparing for the next level of practice. Most have limited experience in lipids and many members of this group will look to join the NLA to heighten their knowledge and better serve their patients. A small percentage of these participants will eventually move toward a professional path in lipid care but the majority will not, having acquired the knowledge necessary to integrate lipid management into their practice without the need for the further education that the NLA provides. Although there are many non-members in this group, the NLA has a responsibility to recognize and provide programs that address these limited needs. The reality is that this group will have the largest impact on patient care; therefore, we must offer programs that keep them engaged in the professional dialogue.

Level II—Basic Lipid Specialists
The rank and file of our organization resides within the Level II development path. These are professionals who routinely manage patients with lipid disorders and who rely on the NLA to provide programs that either help them establish lipid clinics or maintain continuous improvement of their skills. These members have mastered the basic concepts and techniques and routinely attend and participate in NLA offerings where they share ideas and experiences with the leadership to improve the overall field of lipid management. We anticipate that most members currently at Level II will eventually seek certification as part of their evolving practice.

Level III—Intermediate
This group comprises the segment of our membership that extensively focuses on lipid management. These professionals have dedicated themselves to self-analysis and improvement of their own strengths and weaknesses in their practice. Further, these members typically have additional interest in the examination of medical strategies that achieve better outcomes. Typically, these members demonstrate an interest in complex management issues and tend to focus on programs that offer topics dealing with specialized patient populations.



Level IV—Advanced
This category of membership represents those who have shown a commitment to achieving professional credentials through the extensive study of lipidology, its associated research, and its clinical application.

Level V—Certification
This is the culmination of an individual's desire to master the subject of lipidology, and it formally recognizes professional achievement in the field. This goal is actually less of an end point and more of the beginning of a continuous process of growth that demands lifelong study throughout our careers. Beyond certification, these members will continue their education and be invited to participate in activities we refer to as "Masters Summits." These gatherings will facilitate the highest level of discourse on current research and its clinical applications.

Where are we going?

Our growth as an organization has been truly phenomenal and our agenda has broadened in proportion to this increase in size. The last strategic plan for the NLA resulted in the creation of an independent certifying board for lipidology. Since attaining that goal, we have continued to plan for the future. In this regard, I have called a meeting this March where the NLA Executive Committee and the presidents and presidents-elect of each chapter will formulate a new strategic plan for the next five years. Everything is on the table and we are going to ensure that our programs will be worthy of your participation and serve the best interests of your practice and your patients. In April at the NLA Annual Scientific Sessions in Boston, I hope to share with you an enhanced vision of the future. You can be assured that every step we take will be focused on our members first and aimed toward strengthening our professional development, resulting in the highest level of patient care. ❤

CLINICAL INSIGHTS

Clinical Insights *continued from page 1*

channel antagonists and diuretics), median SBP was still 3 mm higher in women. Not surprisingly (as based on earlier trends), hypertensive women were also less likely to undergo coronary arteriography following presentation than hypertensive men. This was particularly concerning because hypertensive women were also 2.4 times more likely to die within 90 days of hospitalization. Finally, hypertensive women were also less likely to receive aspirin, beta-blockers, heparin, and statins than hypertensive men upon discharge.

Risk factor	Sex	Control (%)	Case (%)	Odds ratio (99% CI)	PAR (99% CI)
Current smoking	F	9.3	20.1	2.86 (2.36-3.48)	15.8% (12.9-19.3)
	M	33.0	53.1	3.05 (2.78-3.33)	44.0% (40.9-47.2)
Diabetes	F	7.9	25.5	4.26 (3.51-5.18)	19.1% (16.8-21.7)
	M	7.4	16.2	2.67 (2.36-3.02)	10.1% (8.9-11.4)
Hypertension	F	28.3	53.0	2.95 (2.57-3.39)	35.8% (32.1-39.6)
	M	19.7	34.6	2.32 (2.12-2.53)	19.5% (17.7-21.5)
Abdominal obesity	F	33.3	45.6	2.26 (1.90-2.68)	35.9% (28.9-43.6)
	M	33.3	46.5	2.24 (2.03-2.47)	32.1% (28.0-36.5)
Psychosocial index	F	–	–	3.49 (2.41-5.04)	40.0% (28.6-52.6)
	M	–	–	2.58 (2.11-3.14)	25.3% (18.2-34.0)
Fruits/vegetables	F	50.3	39.4	0.58 (0.48-0.71)	17.8% (12.9-24.1)
	M	39.6	34.7	0.74 (0.66-0.83)	10.3% (6.9-15.2)
Exercise	F	16.5	9.3	0.48 (0.39-0.59)	37.3% (26.1-50.0)
	M	20.3	15.8	0.77 (0.69-0.85)	22.9% (16.9-30.2)
Alcohol	F	11.2	6.3	0.41 (0.32-0.53)	46.9% (34.3-60.0)
	M	29.1	29.6	0.88 (0.81-0.96)	10.5% (6.1-17.5)
ApoB/ApoA1 ratio	F	14.1	27.0	4.42 (3.43-5.70)	52.1% (44.0-60.2)
	M	21.9	35.5	3.76 (3.23-4.38)	53.8% (48.3-59.2)

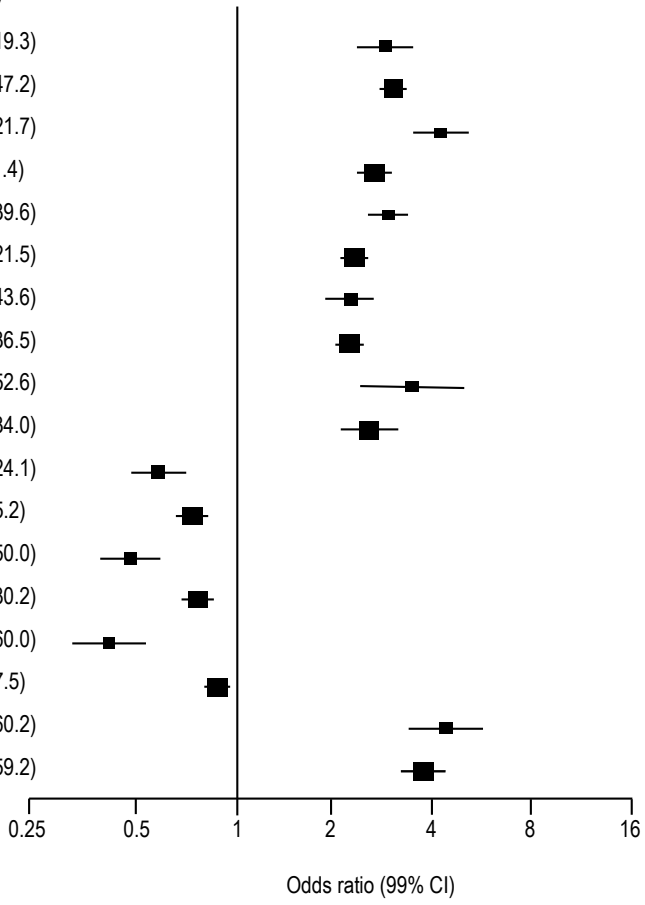


Figure 1. Association of risk factors with acute myocardial infarction in men and women after adjustment for age, sex, and geographic region (from Reference 11)

As hypertension and lipid abnormalities commonly coexist, one recent study evaluated gender-related differences in nearly 40,000 hypertensive dyslipidemics without symptomatic CHD. The study revealed that women were significantly less likely to undergo annual cholesterol screening and receive statin therapy than age-related men.[13]

To provide additional support that gender bias contributes to treatment differences in the use of lipid lowering therapy in men and women, Abuful and colleagues posed a questionnaire to 172 physicians to assess responses to case histories of middle-aged male and female patients with CHD. Under these hypothetical conditions, there was a significantly reduced tendency to prescribe aspirin and statins to the female patients despite identical case histories. A second portion of the study that involved record review demonstrated that less than 50% of women with CHD and LDL >100 mg/dL were prescribed lipid lowering therapy compared to nearly 75% of men, illustrating that gender bias may in part reflect attitudinal differences underlying lower lipid-lowering treatment rates in women with CHD.[14]

Depression

Although not viewed as a traditional risk factor, mounting evidence supports a role for major depression as a predictor of CHD event rates in women. For example, in the Women's Health Initiative Observational Study of more than 90,000 women followed for a mean 4.1 years, depression was associated with a 50% increased risk of CVD death following adjustment for other risk variables.[15] Compared to men, women are more likely to suffer depression following MI and coronary artery bypass grafting. This may reflect women's poorer support networks in contrast to men, who generally receive more spousal support. As a result, depression in women may be associated with a more unfavorable CHD outcome.[16] Fortunately, selective serotonin reuptake inhibitors, such as sertraline, may effectively and safely treat depression in women with CHD.[17]

CHD Biomarkers

Of the inflammatory biomarkers, high sensitivity CRP has gained increased recognition as a potentially useful diagnostic test in subjects at intermediate risk for CHD.[18] However, while women have higher mean CRP levels and a higher prevalence of CRP >3mg/L,[19,20] this

biomarker also tracks very well with conventional risk factors thereby making its clinical impact as an independent CHD risk variable considerably less impressive.[20, 21] More exciting is the prospect of other recently identified markers that may predict CHD in women. They include advanced glycation endproducts (AGEs), byproducts resulting from glucose modification of proteins, which in turn may promote cellular inflammation and lipoprotein glycoxidation. While AGEs predict atherothrombosis in diabetics, one recent study found that elevated AGE levels also predicted CHD mortality in non-diabetic women.[22]

Summary

CHD remains the most common cause of death in both men and women in the U.S. as well as in many industrialized societies. Yet, women continue to lag behind in efforts aimed at CHD risk factor modification. More concerted efforts such as the Women's Agenda Targeting Cholesterol in Heart Disease (WATCH) program are expected to heighten awareness of this concern so that healthcare professionals may reverse this disturbing trend and facilitate efforts toward maximizing CHD preventive efforts in both sexes. ❤

Reference List

1. Bello N, Mosca L. Epidemiology of coronary heart disease in women. *Prog Cardiovasc Dis*. 2004;46:287-95.
2. Bittner V. Perspectives on dyslipidemia and coronary heart disease in women. *J Am Coll Cardiol*. 2005;46:1628-35.
3. National Committee on Quality Assurance: Diabetes Physician Recognition Program. Available at: http://www.ncqa.org.
4. Wexler DJ, Grant RW, Meigs JB, Nathan DM, Cagliero E. Sex disparities in treatment of cardiac risk factors in patients with type 2 diabetes. *Diabetes Care*. 2005;28:514-20.
5. Juutilainen A, Kortelainen S, Lehto S, Ronnemaa T, Pyorala K, Laakso M. Gender difference in the impact of type 2 diabetes on coronary heart disease risk. *Diabetes Care*. 2004;27:2898-904.
6. Huxley R, Barzi F, Woodward M. Excess risk of fatal coronary heart disease associated with diabetes in men and women: meta-analysis of 37 prospective cohort studies. *BMJ*. 2006;332:73-78.
7. Cherney DZ, Sochett EB, Miller JA. Gender differences in renal responses to hyperglycemia and angiotensin-converting enzyme inhibition in diabetes. *Kidney Int*. 2005;68:1722-8.
8. Pretorius M, Luther JM, Murphey LJ, Vaughan DE, Brown NJ. Angiotensin-converting enzyme inhibition increases basal vascular tissue plasminogen activator release in women but not in men. *Arterioscler Thromb Vasc Biol*. 2005;25:2435-40.
9. Abuissa H, Jones PG, Marso SP, O'Keefe JH Jr. Angiotensin-converting enzyme inhibitors or angiotensin receptor blockers for prevention of type 2 diabetes: a meta-analysis of randomized clinical trials. J *Am Coll Cardiol*. 2005;46:821-6.
10. Deedwania PC, Fonseca VA. Diabetes, prediabetes, and cardiovascular risk: shifting the paradigm. *Am J Med*. 2005;118:939-47.
11. Yusuf S, Hawken S, Ounpuu S, et al; INTERHEART Study Investigators. Effect of potentially modifiable risk factors associated with myocardial infarction in 52 countries (the INTERHEART study): case-control study. *Lancet*. 2004;364:937-52.
12. Frazier CG, Shah SH, Armstrong PW, Bhapkar MV, et al; SYMPHONY and the Second SYMPHONY Investigators. Prevalence and management of hypertension in acute coronary syndrome patients varies by sex: observations from the Sibrafiban versus aspirin to Yield Maximum Protection from ischemic Heart events postacute cOroNary sYndromes (SYMPHONY) randomized clinical trials. *Am Heart J*. 2005;150:1260-7.
13. Hendrix KH, Riehle JE, Egan BM. Ethnic, gender, and age-related differences in treatment and control of dyslipidemia in hypertensive patients. *Ethn Dis*. 2005;15:11-6.
14. Abuful A, Gidron Y, Henkin Y. Physicians' attitudes toward preventive therapy for coronary artery disease: is there a gender bias? *Clin Cardiol*. 2005;28:389-93.
15. Wassertheil-Smoller S, Shumaker S, Ockene J, et al. Depression and cardiovascular sequelae in postmenopausal women. The Women's Health Initiative (WHI). *Arch Intern Med*. 2004;164:289-98.
16. Naqvi TZ, Naqvi SS, Merz CN. Gender differences in the link between depression and cardiovascular disease. *Psychosom Med*. 2005;67 Suppl 1:S15-8.
17. Glassman AH, O'Connor CM, Califf RM, et al; Antidepressant Heart Attack Randomized Trial (SADHEART) Group. Sertraline treatment of major depression in patients with acute MI or unstable angina. *JAMA*. 2002;288:701-9
18. Pearson TA, Mensah GA, Alexander RW, et al. Markers of inflammation and cardiovascular disease: application to clinical and public health practice: A statement for healthcare professionals from the Centers for Disease Control and Prevention and the American Heart Association. *Circulation*. 2003;107:499-511.
19. Khera A, McGuire DK, Murphy SA, et al. Race and gender differences in C-reactive protein levels. *J Am Coll Cardiol*. 2005;46:464-9.
20. Miller M, Zhan M, Havas S. High attributable risk of elevated C-reactive protein level to conventional coronary heart disease risk factors: the Third National Health and Nutrition Examination Survey. *Arch Intern Med*. 2005;165(18):2063-8.
21. Khera A, de Lemos JA, Peshock RM, et al. Relationship between C-reactive protein and subclinical atherosclerosis: the Dallas Heart Study. *Circulation*. 2006;113:38-43.
22. Kilhovd BK, Juutilainen A, Lehto S, et al. High serum levels of advanced glycation end products predict increased coronary heart disease mortality in nondiabetic women but not in nondiabetic men: a population-based 18-year follow-up study. *Arterioscler Thromb Vasc Biol*. 2005;25:815-20.

A Suggested Protocol for Statin Use by Women of Child-Bearing Age

JAMES A. UNDERBERG, MD

Clinical Assistant Professor of Medicine
Division of General Internal Medicine
NYU Medical School
New York, NY

[Note: Dr. Peter Toth will resume contributing Practical Pearls in our next issue of the *Lipid Spin*—*ed.*]

Statin medications have become the most frequently prescribed medication class in the United States today.[1] With widespread use of these pharmaceuticals comes the risk of exposing women of childbearing age to a drug class that has been deemed category X for use in pregnancy. Worse still, there is no known benefit in most patients from short term use during pregnancy. Current FDA labeling warns "do not use if you are pregnant or breastfeeding." This admonition is appropriately echoed in the labeling on the OTC statin-like product red rice yeast. In fact, in January 2005, during an FDA hearing on the use of statins as over-the-counter medications, two of the major issues concerning the panel were the use of statins in pregnancy and the risk/benefit of these drugs in women <55 years of age (childbearing). The panel voted by significant margins in each case that the drugs were far too toxic to the fetus to justify their use in pregnancy and that current labeling was inadequate to prevent women of childbearing age from using these drugs. And so we are left with the question of how and when we can use these drugs safely and appropriately.

In a recent letter published in the *New England Journal of Medicine* in 2004, the authors discuss a series of 178 cases of first trimester fetal exposure to statins reported to the FDA.[2] In this account they note a significant number of adverse outcomes, mostly holoprosencephaly and VACTERL (three or more of the following findings: vertebral, anal, cardiac, tracheal, esophageal, renal, and limb defects). They point out that these defects "have been linked to inhibition of cholesterol biosynthesis, down-regulation of the cholesterol-dependent sonic hedgehog morphogenetic pathway, or both."[3,4] Among the group of statins evaluated, the anomalies were limited to those in the lipophilic class, with no abnormalities associated with Pravachol, a hydrophilic agent. The authors surmise that lipophilic statins, which achieve embryo-placental concentrations similar to those of maternal plasma, have greater tissue penetration than hydrophilic statins.[5]

Several studies suggest that maternal hyperlipidemia may have an effect on the development of fetal atherosclerosis. Napoli, et al.,[5] demonstrated that fatty streak development in fetal aortas was greater in mothers with elevated cholesterol levels when compared to mothers with normal cholesterol levels. Although animal studies have confirmed these findings,[6,7] their significance is unclear. While maternal cholesterol levels may affect early atherosclerotic development in children, there is no evidence that treating maternal hyperlipidemia during pregnancy affects cardiovascular outcomes in children.

The key question in managing cholesterol in women of childbearing age is whether or not there is a need for statin therapy for cardiovascular risk reduction. Current recommendations are clear: Women who have just discovered they are pregnant or who have made decisions to conceive, should discontinue their statin therapy. The issue that more often arises, however, concerns women in this age group who are currently not considering pregnancy (but may in the future). How do we manage statin use in these patients?

Understanding that the age range for childbearing is significant, from the onset of menses through the end of the menopause (one year of absent menses)—for women at significant risk of cardiovascular disease this represents a large proportion of their lifespan. To withhold statin therapy throughout this entire time frame would remove a significant preventive cardiovascular option for half of our population. For this reason a unique risk/benefit assessment must be made for each patient along with a plan to minimize potential complications associated with the use of these drugs in women of childbearing age. In younger women, who have a longer time period of potential child bearing, the CV risk must be higher to justify statin use. It seems reasonable to treat those in very high risk populations—CHD risk equivalents and secondary prevention patients, diabetics, and those with underlying inherited disorders of cholesterol metabolism (such as homozygous Familial Hyperlipidemia, Heterozygous FH, or Familial Combined Hyperlipidemia with a family history of premature atherosclerosis), patients with recurrent pancreatitis from hypertriglyceridemia syndromes and patients who meet current NCEP guidelines for use of statins. In these individuals, there is a real short-term benefit from statin therapy, as the risk of adverse outcomes is high. In such patients, statins can be used safely as long as a detailed protocol is followed informing the patient of the risks, and outlining a process to minimize those risks.

Once the decision has been made that the patient meets one of the categories mentioned above, we propose utilizing a protocol for the use of statins in women of childbearing age that closely mirrors that used by dermatologists treating women who take the drug isotretinoin. A detailed description of the risks and benefits needs to be outlined to the patient, both verbally and in written form in the presence of a witness. A contract needs to be signed by the patient in the presence of a witness agreeing to the use of two forms of birth control for at least one month before starting statin therapy (with the understanding that these may both need to be barrier methods as oral contraceptives may worsen some types of dyslipidemia or increase risk in patients with history of thromboembolic events). The patient should have two pregnancy tests prior to starting the statin. She then needs to wait until the second or third day of her next normal menstrual period before starting the medication. The patient must contact the physician if there are any menstrual abnormalities, or if the patient decides she would like to conceive (prior to any attempt to do so). Additionally, if she thinks she may be pregnant, she must stop her medication immediately.

With the above protocol in mind, the choice of medication should be made based on the type and degree of hyperlipidemia being treated. Statin choice and dosage is based on degree of LDL reduction anticipated and/or the need for combination with other lipid lowering medications. If the option exists, one could make a case for choosing a hydrophilic statin, either pravastatin or rosuvastatin. Frequent monitoring of the patient at regular intervals and renewal restrictions are tools that will facilitate regular patient-physician contact, ensure compliance with the safety protocol, and hence minimize any potential complications.

In summary, statin use in women of child-bearing age is likely to be encountered by most physicians who treat patients at risk for cardiovascular disease. We must not deny treatment where it can be beneficial, and at the same time we must recognize the wide age range were risk does exist with the use of statin medications in these women.

Practical Pearls *continued on page 8*

From the Journals

RONALD B. GOLDBERG, MD
Professor of Medicine, University of Miami School of Medicine
Director, Lipid Disorders Center
Associate Director, Diabetes Research Institute
Miami, FL

A Tale of Two PPAR Agonists
The past few months have seen the publication of two controlled clinical trials aimed at demonstrating that the pharmacologic PPAR receptor agonists, pioglitazone (ACTOS) a thiazolidinedione (TZD) PPARγ agonist, and fenofibrate (Tricor, Antara) a fibrate PPARα agonist, reduce cardiovascular events in diabetic subjects. Considerable preclinical evidence strongly suggested that both trials would demonstrate significant cardiovascular disease (CVD) benefit for these agents, which are thought to have beneficial cardiovascular effects in subjects with insulin resistance and type 2 diabetes.

The Prospective Pioglitazone Clinical Trial in Macrovascular Events (PROactive) was conducted in 5238 type 2 diabetic subjects with established CVD, in the UK and Europe. In this 36 month study, powered to show a 20% reduction in events once a total of 760 events had occurred, masked pioglitazone (increasing from 15 mg to 45 mg daily according to tolerability) versus placebo treatment was added on to previous antihyperglycemic therapy which included metformin (61%), sulfonylurea (62%) or insulin (33%) either alone or in various combinations. The two treatment groups were well-matched at baseline; at the end of the study the pioglitazone-treated group had significantly lower HbA1c levels (↓0.5%) lower SBP (↓3mm Hg) and triglyceride values (↓13.2%) and a lower LDL/HDL ratio, and higher HDL-C concentrations (↑8.9%) than the placebo-treated group. Compared to the placebo group, the pioglitazone-treated cohort had a non-significant 10% reduction in the primary endpoint (572 versus 514 events), which was a composite of both "hard" (all cause mortality, non-fatal myocardial infarction [MI] and stroke) and "softer" (acute coronary syndrome, revascularizations and major amputation) events (p=0.0951). However there was a 16% (p=0.0273) reduction in the pioglitazone-treated group for the secondary endpoint, which comprised only the "hard events" (358 versus 301 events) with a reduction in the numbers of deaths, non-fatal MIs and strokes. The only significant safety issue that emerged was the finding of an additional 41 hospitalizations for heart failure in the pioglitazone-treated group (overall rate 5.7%) compared to placebo (4.1%) with no differences between the two groups in the frequency of death from heart failure.

The Fenofibrate Intervention and Event Lowering in Diabetes (FIELD) trial was a multinational randomized controlled trial of fenofibrate versus placebo over 5 years in 9,795 subjects with type 2 diabetes mellitus (mean age 62 years, duration 5 years, HbA1c 6.9%, 22% having a history of CVD), not on statin therapy and with an LDL-C of 124 mg/dL (3.1 mmol/L), triglyceride 154 mg/dL (1.73 mmol/L), and HDL-C 44 mg/dL (1.1 mmol/L) (296). Although the hazard rate for the primary endpoint of non-fatal MI plus coronary heart disease (CHD) death was reduced by 11%, this did not reach significance due to a non-significant increase in the rate of CHD death (19%). However, non-fatal MI—a prespecified secondary outcome—was significantly decreased by 24% (p=0.01), as were total CVD events (11%, p=0.035), coronary revascularization (21%, p=0.003), and, interestingly, there was less albuminuria progression (2.6%, p=0.002) and less retinopathy needing laser therapy (1.6%, p=0.003). Fenofibrate was safe despite a concomitant statin "drop in" rate of 7% in fenofibrate-allocated individuals without CHD, with only a slight increase in pulmonary embolism (1%) and pancreatitis (0.8%) compared to placebo treatment.

How are we to interpret the results of these two well-conducted clinical trials? From a clinical trialist's perspective they have to be viewed as not confirming the primary hypothesis that these agents will significantly reduce the number of primary outcome events compared to placebo. This argues against the position that these agents unequivocally reduce CVD events. The equivocal findings in both trials also underline the perils of overinterpreting convincing preclinical findings. The finding of positive effects on secondary endpoints in each case indicates that in certain circumstances these drugs may have a CVD benefit, but this needs more confirmation. In the case of PROactive, one may with hindsight argue with the decision by the investigators to use a combined endpoint consisting of both "soft" and "hard" CVD outcomes instead of the standard non-fatal MI, fatal CHD with/without stroke, or to end the study after only 3 years, which is a short duration for an intervention trial. It may also be possible that the drug effect would be greater in subjects with less advanced atherosclerosis. In regard to the FIELD trial the results are especially difficult to understand, since an earlier angiographic study with fenofibrate had shown a significant increase in minimal lumen size of stenoses, and the VA HIT study had demonstrated significantly reduced MI and stroke in men with pre-existing CHD using a sister drug—gemfibrozil. One might postulate that the two fibrates are very different or that there are signficant differences in the two patient populations, or perhaps a detracting effect of drop-in statin use in FIELD that did not occur in the earlier VA HIT study explains some of the differences in findings.

In the final analysis, it is the clinician who has to decide if and when to use these medications. The fact that the excess risk for CVD in our patients with diabetes remains very high despite established modern cardioprevention strategies, the demonstration that pioglitazone and fenofibrate are generally well-tolerated and apparently safe (with the exception of patients susceptible to congestive failure in the case of TZD treatment), and the findings of significant benefit for both agents on secondary cardiovascular endpoints will probably be sufficient for many physicians to continue using these medications for their primary indications at the current level of practice or even more frequently. It hardly needs saying in conclusion that we need more information. Fortunately, there are several ongoing clinical trials involving either TZDs or fenofibrate that will be reported on in the next 5 years that will help to clarify the effects of these agents on CVD. ❤

REFERENCES

1. Dormandy JA, Charbonnel B, Eckland DJ, et al. Secondary prevention of macrovascular events in patients with type 2 diabetes in the PROactive Study (PROspective pioglitAzone Clinical Trial In macroVascular Events): a randomised controlled trial. *Lancet*. 2005;366:1279-1289.

2. The FIELD Study Investigators. Effects of long-term fenofibrate therapy on cardiovascular events in 9795 people with type 2 diabetes mellitus (the FIELD study): randomised controlled trial *Lancet*. 2005;366: 1849-1861.

The National Lipid Association & Northeast Lipid Association

2006 Annual Scientific Sessions

April 7–9, 2006
The Seaport Hotel • Boston, Massachusetts

Don't miss this opportunity to join your fellow colleagues at this year's national conference. If you've attended past sessions, then you know this event will offer cutting-edge information, fascinating presentations from the leaders in the field of lipidology, and a variety of events and gatherings that allow you to interact with other specialists and experts in a relaxed setting. If this is your first conference, expect the very best of continuing medical education.

This year's Scientific Sessions are being held at the landmark Seaport Hotel overlooking Boston Harbor, set amid the historic charm of beautiful New England.

Meeting Registration

Registration is available Online at the NELA website: www.lipid.org/chapters/nela. For more details see page 13.

Hotel Reservations

Seaport Hotel
One Seaport Lane
Boston, Massachusetts 02210
Phone: 617-385-4500
www.seaportboston.com

Make reservations by March 10, 2006 to secure the room rate of $189 per evening.
Call 1-877-SEAPORT and request the Northeast/National Lipid Association room block.

Save the Date!

Practical Pearls *continued from page 6*

Where concerns about risk and benefit are unclear, referral to a lipid specialist might be an appropriate option to further clarify a treatment plan. If proper guidelines and protocols are followed, there is no reason these drugs cannot be used safely in the patients who require them. ❤

REFERENCES

1. NDC Health 2004 Drug Prescription Survey
2. Edison RJ, Muenke M. Central Nerous System and Limb Anomalies in Case Reports of First-Trimester Statin Exposure. *N Engl J Med* 2004;350:1579-1582
3. Muenke M, Beachy PA. Holoprosencephaly. In: Scriver CR, Beaudet AL, Sly WS, Vaalle D, eds. Metabolic & Molecular Basis of Inherited Disease. 8th ed. Vol. 4. New York: *McGraw-Hill*, 2001:6203-30
4. Kim J, Kim P, Hui CC. The VACTERL association: lessons from the Sonic hedgehog pathway. *Clin Genet* 2001;59:306-15.
5. Physicians' desk reference. 55th ed. Montvale, N.J.: *Medical Economics*, 2001.
6. Napoli C, D'Armiento FP, Mancini FP, et. al. Fatty streak formation occurs in human fetal aortas and is greatly enhanced by maternal hypercholesterolemia. Intimal accumulation of low density lipoprotein and its oxidation precede monocyte recruitment into early atherosclerotic lesions. *J Clin Invest* 1997;100(11):2680-90
7. Napoli C, Witztum JL, Calara F, deNigris F, Palinski G. Maternal hypercholesterolemia enhances atherogenesis in normocholesterolemic rabbits, which is inhibited by antioxidant of lipid-lowering intervention during pregnancy: an experimental model of atherogenic mechanisms in human fetuses. *Circ Res* 2000;87:946-52.
8. Palinski W, D'Armiento FP, Witzum JL, et al. Maternal hypercholesterolemia and treatment during pregnancy influence the long-term prognosis of atherosclerosis in offspring of rabbits. *Circ Res* 2001;89:991-6.

Scientific Sessions

April 7-9, 2006 • Seaport Hotel, Boston, MA

FRIDAY, APRIL 7, 2006 3:00–6:00 pm

Assessing Cardiovascular Risk: Lipoproteins

3:00 pm **Welcoming Remarks**
David Capuzzi, MD, PhD

3:05 pm **Measuring and Managing Lipoprotein(a)**
Ernst Schaefer, MD

3:40 pm **Apolipoproteins vs. Lipid Profile: Comparative Utility**
Allan Sniderman, MD

4:15 pm Panel Discussion and Q&A

Assessing Cardiovascular Risk: Atherosclerosis Imaging

4:30 pm **Coronary Calcium and CT Angiography**
Thomas Behrenbeck, MD, PhD

5:05 pm **Intimal Medial Thickness: A New Clinical Tool?**
Linda Hemphill, MD

5:40 pm **Panel Discussion and Q&A**

6:00 pm Welcome Reception

7:00 pm Dinner Symposium

SATURDAY, APRIL 8, 2006 8:00 am–2:30 pm

Cardiovascular Disease Risk Management

8:00 am **The Pathogenesis of Atherosclerosis and the Role of the Vessel Wall**
Peter Ganz, MD

8:35 am **HDL: Biochemistry, Composition, Sizing, Function, Metabolism**
Thomas Dayspring, MD

9:10 am **HDL: Classic & Novel Treatments**
Peter Toth, MD, PhD

9:45 am **Panel Discussion and Q&A**

10:05 am Break

10:45 am **Triglyceride-rich Lipoproteins: Biochemistry and Treatments**
Edward Fisher, MD, PhD

11:30 am Luncheon
Poster Presentations

Managing Dyslipidemia in the Patient with Diabetes or the Metabolic Syndrome

12:30 pm **Assessing CV Risk in Patients with Type 1 Diabetes**
Trevor Orchard, MD, M.Med.Sci

1:05 pm **Antiatherosclerotic Effects of Diabetic Agents**
Paresh Dandona, MD, PhD, MBBS, DPhil

1:40 pm **Treating the Dyslipidemia of Insulin Resistance: What Are the Targets?**
Om Ganda, MD

2:15 pm **Panel Discussion and Q&A**

3–4:30 pm **Elective Workshops**

1. **Special Populations: Treating Post-transplant and HIV Patients**
   Andrew Bostom, MD, MS
2. **Clinical Application of Advanced Lipid Testing and Atherosclerosis Imaging: Case Studies**
   James Underberg, MD, Roda Plakogiannis,PharmD and Donald Smith, MD, MPH
3. **Designing and Operating a Clinically Successful Lipid Clinic Program**
   Joyce Ross, MSN, CRNP, Janet Long, MS and Mary Card, RD, MBA
4. **Establishing a Regional LDL Apheresis Program**
   Leonard Keilson, MD, MPH

6–10:00 pm Evening Events and President's Dinner

Scientific Sessions

SUNDAY, APRIL 9, 2006 8:00 am–Noon

8:00 am NLA and NELA Business Meetings

8:30 am **Report from the NLA Statin Safety Task Force**
James McKenney, PharmD, Chair

9:30 am **Dyslipidemia Therapy Through the Use of Nutraceuticals: What Is the Evidence?**
Wahida Karmally, DrPH, RD

Obesity – Impact on the Cardiometabolic Risk Profile

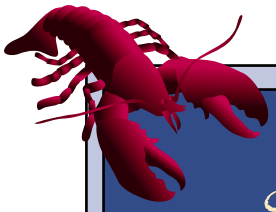
10:05 am **Pharmacologic Options for the Management of Obesity and Intra-Abdominal Adiposity to Reduce CVD Risk**
Louis Aronne, MD

10:40 am **Surgical Strategies to Improve the CVD Risk Profile in Obese Adults**
William Laycock, MD

11:15 am **Addressing the Cardiometabolic Implications of Childhood Obesity**
Susan Lynch, MD

11:50 am **Panel Discussion and Q&A**

Noon ADJOURN



2006 Poster Session Criteria

Poster Categories

1) **Lipid Clinic Management Best Practices**
Posters from Members in Practice

2) **Novel Research Findings**
Posters from Academic Programs or Industry

3) **Novel Research Findings**
Posters from In-Training Residents and Fellows

Submission Process

You may participate by submitting an abstract on www.lipid.org/chapters/nela/abstract. Abstracts will only be accepted electronically and specific directions are given on the website. The deadline for abstract submission is March 10, 2006. Poster space is limited, so please make sure to get your abstract in early. You will be notified by March 24, 2006 if your poster is accepted. If accepted, lead presenters are expected to attend the Scientific Sessions in Boston to answer questions on their posters from the judges and attendees.

Poster Awards

Lead presenters (NLA Active Members only) identified in the abstract submission will receive free registration to the meeting and a $200 travel grant upon sign-in at the registration desk.

Posters will be judged by the NELA Board and the best posters will be awarded First Prize of $500 (abstract published in the *Lipid Spin*), Second Prize of $300, or Third Prize of $250.

POSTER SESSION HOURS

FRIDAY April 7, 2006	5:00–6:00 pm
SATURDAY April 8, 2006	7:00–8:30 am / 10:05–10:45 am 11:30 am–12:30 pm
SUNDAY April 9, 2006	7:00–8:00 am

Winners will be announced Sunday, April 9, 8:00–8:30am

Accreditation

Target Audience
This activity is designed to meet the educational needs of physicians, physician assistants, pharmacists, nurses and registered dietitians in the practice of lipid management.

Learning Objectives
NLA CME activities are intended to lead to better patient care. At the conclusion of this educational activity, participants will be better able to:

- Detect and assess traditional and emerging risk markers for atherosclerotic cardiovascular disease.
- Review management options and emerging therapies for dyslipidemia, including low HDL and hypertriglyceridemia.
- Incorporate the use of advanced lipoprotein testing to improve patient care.
- Identify the potential contribution of carotid IMT to cardiovascular risk assessment.
- Assess the implications of recent trials for clinical management of patients with dyslipidemia.
- Identify the constellation of cardiovascular risk markers in diabetic and/or obese patients.
- Discuss the cluster of metabolic and vascular abnormalities that contribute to cardiovascular disease in patients with insulin resistance.
- Develop insight and skills in assessing and managing statin-associated adverse events.
- Identify the pros and cons of surgical strategies for the treatment of obesity.

CME credit provided by the National Lipid Association

Physicians
This activity has been planned and implemented in accordance with the Essential Areas and Policies of the Accreditation Council for Continuing Medical Education (ACCME) by the National Lipid Association. The National Lipid Association is accredited by the ACCME to provide continuing medical education for physicians.

The National Lipid Association designates this educational activity for a maximum of 12.75 Category 1 credits toward the AMA Physician's Recognition Award. Each physician should claim only those credits that he/she actually spent in the activity.

Physician Assistants
AAPA accepts Category 1 credit from AOACCME, Prescribed credit from AAFP, and AMA Category 1 CME credit for the PRA from organizations accredited by ACCME.

CE credit provided by the Institute for Continuing Healthcare Education

Nurses
The Institute for Continuing Healthcare Education is accredited as a provider of continuing nursing education by the American Nurses Credentialing Center's Commission on Accreditation.
This activity offers 15.3 contact hours to participating nurses. This credit may be applied toward licensure requirements in those states that recognize American Nurses Credentialing Center's Commission on Accreditation (ANCC-COA) accredited providers. Accreditation applies solely to educational activities and does not imply approval or endorsement of any commercial product by the ANCC-COA.
Susan R. Grady, RNC, MSN is the nurse planner for this activity.

Dietitians
This program is co-sponsored by the Institute for Continuing Healthcare Education and the National Lipid Association. The Institute for Continuing Healthcare Education, provider number IN003 is a Continuing Professional Education (CPE) Accredited Provider with the Commission on Dietetic Registration (CDR) from March 28, 2004 to March 27, 2007. Registered dietitians (RDs) and dietetic technicians, registered (DTRs) will receive 12.75 continuing professional education units (CPEUs) for completion of this Level 2 program. Continuing Professional Education Provider Accreditation does not constitute endorsement by the CDR of a provider, program, or materials.

Pharmacists
This program is cosponsored by the Institute for Continuing Healthcare Education and the National Lipid Association. The Institute for Continuing Healthcare Education is accredited by the Accreditation Council for Pharmacy Education as a provider of continuing pharmacy education. This program is acceptable for 12.75 hours (1.275 CEUs) of continuing education credit in states that recognize ACPE–accredited providers (ACPE ID# 781-999-06-001-L04).

Criteria for Success
Certificates of completion will be awarded based on the participant's attendance, completion of registration for credit form and evaluation form, and will be mailed within 4 weeks after the program. Please see the Meeting Registration form for pricing information.

Schedule at a Glance

	Thursday April 6, 2006	Friday April 7, 2006	Saturday April 8, 2006	Sunday April 9, 2006
6:30 a.m.				
7:00 a.m.			7:00–8:00: Breakfast in Exhibit Hall	7:00–8:00: Breakfast in Exhibit Hall
7:30 a.m.	7:30–8:30: NLA Masters in Lipidology Course Registration Opens & Breakfast	7:30–8:00: LMTC and Masters Course Breakfast		
8:00 a.m.		8:00–2:00: Masters Course 8:00–2:30: LMTC	8:00–3:00: Scientific Sessions	8:00–8:30: NLA and NELA Business Meeting
8:30 a.m.	8:30–5:30: Masters Course begins	8:00–12:00: American Board of Clinical Lipidology Exam #1		8:30–12:00: Scientific Sessions
9:00 a.m.	9:00–10:00: NLA Lipid Management Training Course (LMTC) Registration Opens & Breakfast			
9:30 a.m.				
10:00 a.m.	10:00–4:00: LMTC		10:05–10:45: Break in Exhibit Hall	
10:30 a.m.				
11:00 a.m.		11:00: Scientific Sessions Registration Opens		
11:30 a.m.		11:30–12:15: LMTC Lunch	11:30–12:30: Lunch in Exhibit Hall & Poster Presentations	
Noon				12:00: Scientific Sessions Adjourn
12:30 p.m.		12:30–1:15: Masters Lunch		
1:00 p.m.	1:00–1:45: Masters Lunch 1:15–1:45: LMTC Lunch			
1:30 p.m.				
2:00 p.m.		2:00: Masters Adjourns	2:00–6:00: American Board of Clinical Lipidology Exam #2	
2:30 p.m.		2:30: LMTC Adjourns		
3:00 p.m.		3:00–6:00: Scientific Sessions Begin	3:00–4:30: Elective Workshops	
3:30 p.m.				
4:00 p.m.	4:00: LMTC Adjourns for Day			
4:30 p.m.				
5:00 p.m.				
5:30 p.m.	5:30: Masters Course Adjourns for Day			
6:00 p.m.	No Evening Activities	6:00–7:00: Attendee Welcome Reception in Exhibit Hall		
6:30 p.m.			6:30–7:30: American Board of Clinical Lipidology Convocation Ceremony	
7:00 p.m.		7:00–9:00: Dinner Symposium: NLA Complex Lipid Management: Hypertriglyceridemia		
7:30 p.m.			7:30–10:00: President's Reception, Dinner & Dance	
8:00 p.m.				
8:30 p.m.				
9:00 p.m.				
9:30 p.m.				

Pre-Conference Courses

Scientific Sessions

ABCL Activities

Symposia

Break/Refreshment/Social

Registration

2006 Annual Scientific Sessions
April 7-9, 2006 • Seaport Hotel, Boston

northeast lipid association

Full Name _____ First name to appear on badge _____

Organization/Company _____

Address _____

City _____ State _____ Zip _____

Phone _____ Fax _____ Email _____

Scientific Sessions Registration Fees
Includes course syllabus and one admission badge for food functions.

☐ To join the NLA and register for Inaugural Meeting (must submit application with registration)	$275	= $____
☐ Current NLA Member	$225	= $____
☐ Non-Member	$375	= $____
☐ Residents and Fellows *(must submit proof of residency or fellowship with registration)*	$0	= $____

Social events

☐ I will attend President's Dinner, Saturday, April 8	$0	= $____
	Registration Total	= $____

Guest Fees
Includes one guest admission badge to Saturday President's Dinner, and access to exhibit hall reception Friday evening.

☐ Adult	$75	$75 x ___	= $____
☐ Child (ages)_____	$40	$40 x ___	= $____
		Guest Total	= $____
		TOTAL FEES	$____

Elective Workshops (please select one)

☐ 1. Special Populations: Treating Post-transplant and HIV Patients

☐ 2. Clinical Application of Advanced Lipid Testing and Atherosclerosis Imaging: Case studies

☐ 3. Designing and Operating a Successful Lipid Clinic Program

☐ 4. Establishing a Regional LDL Apheresis Program

Special Assistance:
I have special needs or diet. Please explain: _____

Guest Name(s) to appear on badge:
NOTE: Your badge is your pass to all exhibit hall events. Only registered individuals will receive a badge.

_____

_____

_____

Payment Information - Checks and money orders must be made payable to NLA. If your institution is paying your registration fee, please ensure that the check is appropriately identified with your name.

☐ Check ☐ MasterCard ☐ VISA ☐ AmEx

Credit card issued in name of:

_____

Card Number: _____

Exp. Date: _____

Signature: _____

Registration Deadline - Registration and payment must be received no later than March 24, 2006 in order to have a name badge and syllabus materials available. On-site registration will only be accepted on a space available basis.

Cancellation Policy - Telephone cancellations cannot be accepted. A written notice of cancellation must be received no later than two weeks prior to the meeting for a refund. A $25 administration fee will be deducted. No refunds will be made after March 24, 2006.

Hotel Reservations: Make reservations by March 10, 2006 to secure the room rate of $189.00 a night. Call 1-877-SEAPORT and request the NELA/National Lipid Association room block.

Three Convenient Ways To Register:

Fax:
904-998-0855

Mail:
National Lipid Association
8833 Perimeter Park Blvd., #301
Jacksonville, Florida 32216

Website:
www.lipid.org

Any questions regarding this meeting please contact Shannon Sheridan at 904-998-0854

NLA Continuing Education Programs

Levels of Education for All Members

The NLA is working to develop and implement a lifelong learning program that will pave the way for professional development and recognition of the distinct and specialized knowledge required of clinical lipid specialists. Lipidology is a dynamic field that requires one to stay abreast of the latest clinical research and treatment guidelines and to apply this knowledge in practice. The NLA strives to develop new educational programs at all levels of competency and provide continuous clinical updates, opportunities for self-assessment and practice improvement. NLA programs are also available for those who want to prepare for certification by the American Board of Clinical Lipidology. The following is an overview of this year's upcoming educational events. Many new continuing education initiatives are planned for 2006–2007.

Professional Development Track for Lipid Specialists

LEVEL I-II Basic	**NLA Lipid Management Training Course (pg 14)** *A beginner-to-intermediate-level course providing essential information, tools, and resource materials for the systematic management of dyslipidemia as well as the successful administration of a lipid clinic, cardiovascular risk intervention program, or preventive cardiology service.*
LEVEL II Basic to Intermediate	**Regional Annual Scientific Meetings (pg 20)** *The annual regional meetings of the NLA chapters provide an opportunity for members to meet with colleagues in their region, discuss local issues and innovations, and participate in scientific sessions on current topics in lipid management and clinical applications of atherosclerosis research.*
LEVEL III Intermediate	**NLA Self-Assessment Program (NLA-SAP) (pg15)** *The NLA-SAP 3-volume series offers a comprehensive, interactive clinical problem-solving program that will objectively validate, strengthen and reinforce your knowledge of clinical lipidology, and help you to prepare for certification by the American Board of Clinical Lipidology (ABCL).*
LEVEL IV Advanced	**Masters in Lipidology Advanced Training and Board Review Course (pg16)** *This 2-day intensive Board Review Course is provided by the NLA as a CME activity to prepare physicians seeking certification by the ABCL or who wish to participate in an in-depth, advanced review of the specialty of clinical lipidology.*

Lipid Management Training Course

NATIONAL LIPID ASSOCIATION

The NLA Lipid Management Training Course presents a comprehensive, in-depth indoctrination to lipid science that is open to all interested healthcare professionals. This interactive workshop will provide you with the knowledge and tools necessary to work effectively in a lipid practice, and will serve as a preparatory course for the Annual Scientific Forum and other advanced lipid training. Participants earn endorsed lipid education credits that help to fulfill the CME requirements necessary to be eligible for the American Board of Clinical Lipidology certifying examination.

Benefits of Attending:

Receive essential information, tools, and resource materials for your lipid practice:

- Complete syllabus with slide presentations
- A copy of the *Management of Lipids in Clinical Practice* handbook
- A CD-ROM containing supplementary materials for your lipid practice including flow sheets, patient education materials, forms and more

2006 Program Dates

April 6–7, 2006
Seaport Hotel – Boston, MA

October 19–20, 2006
The Intercontinental (Fairmont) Hotel – Kansas City, MO

Faculty Includes:

Dean A. Bramlet, MD
Tampa, FL

Alan S. Brown, MD
Naperville, IL

John R. Crouse, III, MD, Course Director
Winston-Salem, NC

John R. Guyton, MD
Durham, NC

Ralph La Forge, MSc
Durham, NC

Mary P. McGowan, MD
Concord, NH

Neil J. Stone, MD
Chicago, IL

This activity has been approved for AMA PRA credit by the National Lipid Association and CE credit by the Institute for Continuing Healthcare Education.

To register: Call 904.998.0854 to request a brochure or visit www.lipid.org/education/lmtc to register online.

NLA Continuing Education Programs

NATIONAL LIPID ASSOCIATION SELF-ASSESSMENT PROGRAM

The NLA-SAP series offers a comprehensive, interactive clinical problem-solving program that objectively validates, strengthens and reinforces your knowledge of clinical lipidology.

Each volume of the NLA-SAP provides up to 60 hours of AMA Category 1 medical education credit. Also, the hours obtained in the NLA-SAP can be applied toward meeting the CME requirements necessary to be eligible for the American Board of Clinical Lipidology certifying examination.

Benefits of the NLA-SAP

1. Prepare for board certification in clinical lipidology or use the credit to renew your state practice license, hospital practice privileges, and prepare for credentialing by managed care organizations.
2. Learn from the experience of leading practitioners, clinical researchers, and experts in lipidology.
3. Complete the NLA-SAP anywhere—no travel or lodging costs and no time away from your patients and family.

This program is for medical professionals who seek continuous commitment to lifelong professional development and enrichment, and who want to acquire new knowledge, reinforce core knowledge, and prepare for certification in clinical lipidology.

Volume I: *Diagnosis and Management of Dyslipidemia*
Volume II: *The Metabolic Syndrome*
Volume III: *Vascular Biology & Advanced Lipid Metabolism*

Program Chair: Michael H. Davidson, MD

Sponsored for CME Credit by the National Lipid Association

Developed and published by Professional Evaluation, Inc.

Supported in part by an unrestricted educational grant from AstraZeneca

Ordering Information

Name (First) (MI) (Last) (Degree)

Address

City State Zip

Email

Phone Number

	Quantity	Member	Non-Member	Total
___	Volume I	$275	$300	$_____
___	Volume II	$275	$300	$_____
___	Volume III	$275	$300	$_____
___	3-Volume Set	$750	$900	$_____
			Total Enclosed	$_____

Payment Information
Checks and money orders must be made payable to the NLA. If your institution is paying, ensure that the payment is appropriately identified with your name.

☐ Check ☐ Mastercard ☐ Visa ☐ AmEx

Credit Card issued in name of:_____

Card number: _____

Exp Date: _____

Signature: _____

3 Easy Ways to Order:

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Jacksonville, FL 32216

By Fax (Credit card orders only)
904.998.0855

Online
www.lipid.org/sap

NLA Continuing Education Programs

MASTERS IN LIPIDOLOGY
Advanced Training and Board Review Course

The 2-day intensive Masters in Lipidology board review course is offered by the NLA to physicians seeking an in-depth, advanced review of the specialty and/or certification by the American Board of Clinical Lipidology (ABCL). This comprehensive course covers clinical aspects of the prevention, diagnosis and management of dyslipidemias and the metabolic syndrome, as well as and the fundamentals of vascular biology.

Participants receive the 3-volume NLA Self-Assessment Program (NLA-SAP), which is included in the course fee. After successful completion of the Masters course and all three volumes of the NLA-SAP, students meet the eligibility requirements of the ABCL and are prepared to perform well on the certifying exam.

2006 Course Dates

April 6–7, 2006
Seaport Hotel, Boston, MA

August 10–11, 2006
Amelia Island Plantation, Amelia Island, FL

October 19–20, 2006
The Intercontinental (Fairmont) Hotel, Kansas City, MO

Faculty Includes:

H. Bryan Brewer, Jr., MD
Washington, DC

William Cromwell, MD
Charlotte, NC

Michael H. Davidson, MD,
Chicago, IL

Terry A. Jacobson, MD
Atlanta, GA

Daniel J. Rader, MD
Philadelphia, PA

Neil J. Stone, MD
Chicago, IL

Peter P. Toth, MD, PhD
Sterling, IL

This activity has been approved for AMA PRA credit by the National Lipid Association. It is supported in part through an educational grant from AstraZeneca.

To register
Call 904.998.0854 to request a brochure or visit **www.lipid.org/education/masters** to register online.

ABCL Certification

The Pursuit of Excellence

Nearly 150 physicians passed the first ABCL certifying examination held in November 2005. These dedicated specialists now hold the title of Diplomate in Clinical Lipidology. Moreover, they have demonstrated their professional commitment to the prevention of cardiovascular disease and will document their expertise in lipid management for patients, professional colleagues and external organizations.

American Board of Clinical Lipidology

The American Board of Clinical Lipidology is an independent certifying organization offering the only certification program for physicians specializing in Clinical Lipidology. The ABCL has established a rigorous credentialing process and an examination that assesses and validates the specialized knowledge and advanced training required to practice in this dynamic and complex field.

To become credentialed, candidates must meet the basic requirements and the training requirements established by the ABCL. These requirements require candidates to earn 200 credit hour equivalents or "points" based on documented participation in "lipid-focused" CME and expertise in lipid management. The credentialing criteria have been designed to provide any physician with demonstrated knowledge and experience in Lipidology an avenue to become certified as a clinical lipid specialist. Visit www.lipidboard.org for the eligibility requirements and an application.

Special Benefit for NLA members Who Achieve Certification

The National Lipid Association recognizes the efforts of its members to attain board certification. If you successfully complete the NLA Masters in Lipidology Board Review Course or all three volumes of the NLA-Self-Assessment Program (NLA-SAP) and credential to sit for the ABCL certification exam, you will receive a $300 credit voucher from the NLA. To recognize the achievement of board certification, the NLA is pleased to extend a 10-year pre-paid membership (a $500 value) to active NLA members who successfully pass the exam and become certified by the ABCL.

2006 ABCL Examination Dates

Spring Examination
Location: The Seaport Hotel, Boston, MA

Friday, April 7, 2006	8am – Noon
	or
Saturday, April 8, 2006	2pm – 6pm
Application Deadline:	*Postmarked by March 1, 2006*

Fall Examination
Location: The Intercontinental (Fairmont) Hotel, Kansas City, MO

Saturday, October 21, 2006	2pm – 6pm
Application Deadline:	*Postmarked by September 13, 2006*

News & Notes from the National Office

Lipid Insights: Implications of the Field Study

The Midwest Chapter would like all NLA members to participate in a new archive Web program series where members of the Midwest Chapter summarize articles in the field of Clinical Lipidology and comment on the latest clinical research. This new CME activity will be offered quarterly to Midwest Chapter members, and then released to all chapters, to stay current with literature and research of relevance to members. The first program from this series, Implications of the Field Study, is available online at www.lipid.org/education/lipidinsights. The program offers .5 hours of CME accredited by the NLA.

2006 Dues

Our goal is to keep our membership strong and dues represent a base commitment to the organization. Annual dues are $50 per year and can be paid by statement or online (www.lipid.org). This year we added the option of a three-year dues payment. This helps reduce the cost of mailing dues and collections. If you choose this option you will receive a 15% discount and pay only $135. If you have any questions or do not have a dues statement, please contact the NLA office and ask for Adam Beamer (904-998-0854) or email Adam at abeamer@lipid.org. Group membership for practices with three or more members is available.

Consumer Affairs Committee to Examine Product Claims and Benefits

Most consumers are drawn to products whose advertising strategies highlight health and cholesterol-lowering benefits. However, does the average consumer really know the significance of such claims in relation to overall cardiovascular health? The Committee will be meeting this spring with the goal of developing consumer advice to be posted on our Website and made available to members for distribution to patients.

Strategic Planning Meeting Scheduled for March 2006

This March, members of the NLA Executive Committee, Chapter presidents and presidents-elect will be meeting in Atlanta to review the organization, its growth, and future direction. The recommendations will be formally presented to the Board of Directors at their meeting in April and discussed at the business meeting with members on April 9, 2006. The plan will also be published in a future edition of the Lipid Spin.

Baylor Virtual Lipid Preceptorship

The NLA and Baylor University are partnering on a project to develop and release a comprehensive interactive Web-based learning system entitled the "Virtual Lipid Preceptorship." At this phase the organization has received funding through a grant from Merck/Schering-Plough to engage in a "proof of concept," which is expected to be developed over the next 6–8 months. The NLA will play an integral role in developing content for the program and testing the proof. At this point we expect members of the newly formed Southwest Chapter to lead the evaluation process.

When launched, the Preceptorship will focus on educating participants in the principles and applications of continuous improvement in clinic settings. This aspect of practice-based improvement is consonant with the new directions taken by specialty and subspecialty medical boards. It is also congruent with good general business practices. Through the planned activities, participants will be introduced to processes that characterize the high-performing lipid management organization. They will also be provided opportunities and guidance in applying continuous quality improvement principles in their own practices to initiate and sustain improvements in patient services, productivity, and cost effectiveness of care.

Following the testing and refinement of the components of the Preceptorship, the program will be deployed with a pre-assessment to guides participants into appropriate modules available to all members. We hope that this project will be funded beyond the proof stage and released to all members in 2007. The NLA will work to have this program approved as a practice improvement module for Board recertification requirements.

Physician, heal thyself?

C. Richard Conti, MD and editor-in-chief of the journal Clinical Cardiology, reports conducting an informal survey in 2005 of 176 physicians and cardiovascular specialists (Conti RC. Who Takes a Statin? Clin Cardiol. 2005;28:549). In addition to general questions regarding their physical health, respondents were queried specifically regarding their use of statins. According to Dr. Conti, "The overall combination of male and female responders taking statins was 47.1% (83 of 176)." Of the entire group, only 22% reported hypertension and 26% reported LDL cholesterol >130mg/dL. Although his findings are the result of a limited poll, Dr. Conti posits the following observations: First, that cardiovascular specialists who have risk factors are inclined to use statins. Second, of his 83 responders taking statins, 32.5% had no significant risk factors. Third, there is a strong correlation between age and statin use; "Of respondents in their 30s, only one was taking a statin." But of those in their 70s, "all nine (100%) were taking statins."

Statin Safety Task Force Update

The results of the Task Force Phase I effort on statin safety will be released in late February or April 2006 as a supplement to the American Journal of Cardiology. The findings will also be featured during a presentation at the 2006 Annual Meeting in Boston. Meanwhile, the Phase II effort focusing on non-statin therapeutics is underway. A planned publication timeline for Phase II has been established for the fall of 2006. Funding for this study was made possible from grants from Abbott Laboratories, AstraZeneca, Kos, Sankyo and Merck/Schering-Plough.

Convocation to Honor ABCL Diplomates in Boston

The American Board of Clinical Lipidology (ABCL) will officially honor the newly named Diplomates of Clinical Lipidology—physicians who passed the Board certification exam—in a ceremony to be held during the Boston meeting on April 8, 2006. The Diplomates will also be recognized by the NLA as guests of honor by the NLA President, Dr. Peter Jones, during the President's Dinner and Dance on Saturday evening. Diplomates will soon receive their invitations in the mail with more details.

In addition, all conference attendees are invited to attend the convocation and are encouraged to register for the dinner program. For more information on the ABCL and the certification process, see pg. 16 or visit www.lipidboard.org.

News & Notes *continued on page 18*

News & Notes from the National Office

News & Notes continued from page 17

Applying for Certification? The NLA Offers Support

To all ABCL certification applicants that are NLA members and who have either taken the Masters Course or completed the three volumes of the NLA-SAP, and successfully credential, the NLA will rebate the $300 credentialing fee. Because the ABCL and NLA are independent organizations, full payment of $1,200 must be made to the ABCL. The NLA will provide the rebate after the ABCL informs the NLA of a member's successful credentialing.

Further, the NLA Board has passed a 10-year dues exemption for NLA members who successfully complete the Board certification exam. This is a $500 value (based on 2006 dues). There is no requirement other than pre-existing membership and a successful passing score to receive this benefit. For more information, contact Jennifer DiPietro at the NLA (jdipietro@lipid.org).

International Member Interest

The NLA Board of Directors has received interest from international professionals in joining the NLA. The Board has established a policy that international members will be given an Associate membership status if they are a current member of the recognized chapter of the International Atherosclerosis Society (IAS) in their own country (if such chapters exist). These members will have access to NLA programs online and be sent electronic correspondence only. International members pay dues annually and are entitled to attend NLA programs at the member rate.

Communications Committee Considering NLA Clinical Journal

The Communications Committee under the guidance of Drs. Maria Lopes-Virella and Ronald Goldberg are examining options for a proposed NLA Journal. A report of the Committee is expected to be discussed by the NLA Board of Directors at the April Board of Directors Meeting in Boston.

Something to Say?

Let us know if you missed a mailing or have thoughts about the NLA. Suggestions and opinions from our membership help us improve our services. Contact Adam Beamer at the NLA office with your feedback: abeamer@lipid.org or 904-998-0854.

Did You Know?

The benefits of membership in the NLA include exclusive resources at www.lipid.org, including:

- The Clinical Trials Research Center
- Member Blogs at the NLA
- BioCritique
- Online Continuing Education Programs

NLA Attends DC Guidance Summit

The NLA was an active participant at Guidance Summit II, hosted by the American Medical Women's Association, Men's Health Network and the National Women's Health Resource Center. The Washington, DC event was held at the Jefferson Hotel on January 18, 2006 and explored the topic: Appropriate Patient Care: The Role of Patient & Provider in Achieving Cholestorol Goals. Dr. James McKenney, president-elect of the NLA, presented his perspectives on the subject of patient compliance with medical and pharmacological directives. The 35 attendees at the Summit represented thought-leaders from a range of fields associated with public health policy.

NLA Co-Sponsor of AHA Obesity Conference

Dr. John Guyton and Daniel Sosnoski of the NLA at the Symposium

The Grand Hyatt Hotel in Washington, DC was the site of the Obesity, Lifestyle, and Cardiovascular Disease Symposium held from January 19–21, 2006. Among the some 300 attendees and presenters were such prominent NLA members as Drs. Robert Eckel, John Guyton, Scott Grundy, Barbara Howard, Penny Kris-Etherton, and Neil Stone. The NLA was also an exhibitor at the Symposium and the Association's booth drew considerable attention.

THE *Lipid Spin*

Editors
Ronald B. Goldberg, MD
Professor of Medicine,
University of Miami School of Medicine
Director, Lipid Disorders Center
Associate Director, Diabetes Research Institute
Miami, FL

Maria F. Lopes-Virella, MD, PhD
Professor of Medicine and Pathology
Medical University of South Carolina
Ralph H. Johnson Medical Center
Charleston, SC

Co-editors
Lynn Cofer, MSN, RN, FAHA
Clinical Director,
Midwest Heart Specialists Lipid Clinic
Naperville, IL

Peter P. Toth, MD, PhD, FAAFP, FICA, FAHA, FACC
Director of Preventive Cardiology
Sterling Rock Falls Clinic, Ltd
Sterling, IL
Clinical Associate Professor
Southern Illinois University School of Medicine
Springfield, IL

NLA Staff Editor
Daniel Sosnoski
National Lipid Association

NLA Executive Director
Christopher R. Seymour, MBA
National Lipid Association

The Lipid Spin *is published quarterly by the National Lipid Association*
8833 Perimeter Park Blvd. #301 • Jacksonville, FL 32216
Phone: 904-998-0854 • Fax: 904-998-0855

Visit us on the web at: www.lipid.org

ABCL Recognizes Clinical Lipidology Diplomates

On December 6, 2006, the American Board of Clinical Lipidology officially awarded Diplomate status to the following physicians who qualified for this dist
Boston on Saturday, April 8, 2006. The National Lipid Association congratulates these dedicated professionals.

Sidney Alexander, MD
Burlington MA

Eyad Alhaj, MD
Florence KY

Yasmine S. Ali, MD
Nashville TN

Ziad Arabi, MD
Combs KY

Billy S. Arant, Jr., MD
Chattanooga TN

Michael F. Bartell, MD
St. Louis MO

Alan Baskin, MD
Dumont NJ

Seth Joshua Baum, MD
Boca Raton FL

Thomas P. Bersot, MD, PhD
San Francisco CA

Karan K. Bhatia, MD
Winter Haven FL

Vera A. Bittner, MD
Birmingham AL

Michael J. Bloch, MD
Reno NV

Dean A. Bramlet, MD
Tampa FL

H. Bryan Brewer, MD
Washington DC

Eliot A. Brinton, MD
Salt Lake City UT

Alan S. Brown, MD
Naperville IL

B. Greg Brown, MD, PhD
Seattle WA

W. Virgil Brown, MD
Decatur GA

David M. Capuzzi, MD, PhD
Philadelphia PA

Robert V. Carida, MD
Palm Beach FL

Sanford A. Carimi, MD
Janesville WI

David G. Carmouche, MD
Baton Rouge LA

Alan Chait, MD
Seattle WA

Elena Citkowitz, MD, PhD
New Haven CT

Gregory S. Cohn, MD
Parkland FL

Stephen Crespin, MD
St. Louis MO

William C. Cromwell, MD
Charlotte NC

John R. Crouse, MD
Winston-Salem NC

Tara Lynn Dall, MD
Oconomowoc WI

Michael H. Davidson, MD
Chicago IL

Thomas D. Dayspring, MD
Wayne NJ

Mark Deeg, MD, PhD
Indianapolis IN

Rolando L. deGoma, MD
Trenton NJ

Narinder Duggal, MD
Poulsbo WA

Carlos A. Dujovne, MD
Mission KS

Fred H. Faas, MD
Little Rock AR

James M. Falko, MD
Columbus OH

Sergio Fazio, MD, PhD
Nashville TN

Jeffrey N. Feldman, MD
Union NJ

Sonja K. Fredrickson, MD
Richmond VA

Jeffrey S. Freeman, DO
Philadelphia PA

Edward A. Gill, MD
Seattle WA

Laxmana M. Godishala, MD
Minneapolis MN

Anne C. Goldberg, MD
St. Louis MO

Joe D. Goldstrich, MD
West Des Moines IA

Antonio M. Gotto, MD, DPhil
New York NY

Scott M. Grundy, MD, PhD
Dallas TX

John R. Guyton, MD
Durham NC

Thomas Haffey, DO
Thornton CO

Clark C. Hampe, MD
Tyler TX

Robert H. Harner, MD
Rockford IL

Charles R. Harper, MD
Duluth GA

D. David Hartman, MD
Boise ID

Linda C. Hemphill, MD
Lexington MA

David H. Hoisington, MD
Dimondale MI

William J. Hollins, MD
Columbia SC

Mary H. Honkanen, MD, PhD
Mobile AL

Barry K. Hull, MD
Peachtree City GA

D. Roger Illingworth, MD, PhD
Portland OR

Michael L. Isaacson, MD
Jonesboro AR

William L. Isley, MD
Rochester MN

Terry A. Jacobson, MD
Atlanta GA

Peter H. Jones, MD
Houston TX

Dean G. Karalis, MD
Philadelphia PA

Larry Kaskel, MD
Libertyville IL

Leonard M. Keilson, MD
Scarborough ME

Douglas G. Kelling, MD
Concord NC

Sudhir K. Khanna, MD
Shamokin PA

Peter T. Klementowicz, MD
Nashua NH

Raymond W. Kordonowy, MD
Ft. Myers FL

John B. Kostis, MD
New Brunswick NJ

Peter O. Kwiterovich, MD
Baltimore MD

John A. Kyncl, MD
Waukegan IL

Wai H. Lee, MD
Elkhart IN

Joseph L. Lillo, DO
Scottsdale AZ

Maria F. Lopes-Virella, MD, PhD
Charleston SC

J. Antonio G. Lopez, MD
Placerville CA

Steven Margolis, MD
Troy MI

David J. Maron, MD
Nashville TN

Mary P. McGowan, MD
Concord NH

William E. Means, MD
Winston-Salem NC

Basant K. Mittal, MD
Shamokin Dam PA

John M. Morgan, MD
King of Prussia PA

Pamela B. Morris, MD
Mount Pleasant SC

Tome Z. Nascimento, MD
Ventnor City NJ

David T. Nash, MD
Syracuse NY

Stephen D. Nash, MD
Syracuse NY

Carl E. Orringer, MD
Pepper Pike OH

Thomas A. Pearson, MD, PhD
Rochester NY

Bryan C. Pogue, MD
Meridian ID

Gregory S. Pokrywka, MD
Baltimore MD

L. Michael Prisant, MD
Martinez GA

Colin R. Raitiere, MD
Parksville KY

Alan J. Reichman, MD
Sugar Land TX

Lucian C. Rice, MD
Asheville NC

Charles P. Riley, MD
Pensacola FL

Guido Helmut Ring, MD
Cordele GA

Jennifer Robinson, MD
Iowa City IA

Hal M. Roseman, MD
Nashville TN

Paul D. Rosenblit, MD
Huntington Beach CA

Eli Roth, MD
Cincinnati OH

Melvyn Rubenfire, MD
Ann Arbor MI

Carl J. Rubenstein, MD
Oklahoma City OK

Charles D. Russo, MD
Sea Ranch Lakes FL

Angelo M. Scanu, MD
Chicago IL

Ernst J. Schaefer, MD
Boston MA

Linda G.P. Schneider, MD
Hampton VA

Michael B. Schwartz, MD
Wheaton IL

M. Saleem Seyal, MD
Prospect KY

Elton T. Shapiro, MD
Aventura FL

Rakesh Shrivastava, MD
Rochester NY

Scott W. Shurmur, MD
Omaha NE

Jeffrey A. Siegel, MD
Simpsonville SC

Donald A. Smith, MD
New York NY

J. Orson Smith, MD
Tallahassee FL

Edward N. Smolar, MD
Boca Raton FL

Stephen E. Spencer, MD
Boise ID

Daniel W. Stock, MD
McCordsville IN

Neil J. Stone, MD
Winnetka IL

David J. Strobl, DO
Okemos MI

James M. Sutton, MD
Lafayette IN

Mary Ellen Sweeney, MD
Alpharetta GA

Brian C. Swirsky, MD
New Haven CT

Jerry R. Tanner, DO
Eagle River AK

John C. Tapp, MD
Bowling Green KY

Barry C. Tedder, MD
Jonesboro AR

Mary N. Tilak, MD
Merrillville IN

Robert Tota, MD
Fairfield CT

Peter P. Toth, MD, PhD
Sterling IL

James A. Underberg, MD
New York NY

Kari Uusinarkaus, MD
Colorado Springs CO

Perry J. Weinstock, MD
Camden NJ

Alan B. Wiggers, DO
Brooklyn OH

Peter W. Wilson, MD
Charleston SC

Kevin S. Winfield, MD
Houston TX

Daniel E. Wise, MD
Charlotte NC

C. Michael Wright, MD
San Diego CA

Kathleen Wyne, MD, PhD
Dallas TX

Khalid Zakariya, MD
Bloomfield Hills MI

Michael J. Zema, MD
Patchogue NY

Franklin J. Zieve, MD, PhD
Richmond VA

Lipid Education Programs

The following are lipid education programs endorsed or sponsored by the NLA.

Visit page 10 for the NLA Masters in Lipidology Advanced Training and Review Course schedule, page 11 for theNLA Self-Assessment Program (NLA-SAP), and page 12 for the Lipid Management Training Course.

February 24–25, 2006
Lipid & Metabolism Symposium
Embassy Suites Hotel, Lincoln, NE
Contact: J. Hoffman
E-mail: jhoffman@neheart.com

March 17, 2006 / May 26, 2006 / June 16, 2006
Duke Lipid Clinic Preceptorship Program
8:00 a.m.–5:30 p.m.
Duke University, David Thomas Executive Conference Center
John Guyton, MD, Medical Director
Contact: Ralph LaForge, MSc
To register, call 919-490-3794
E-mail: rlaforge@nc.rr.com

April 7–9, 2006
National Lipid Association & Northeast Lipid Association 2006 Annual Scientific Sessions
Seaport Hotel, Boston, MA
E-mail: ssheridan@lipid.org
Learn more and register at: www.lipid.org/chapters/nela

April 14, 2006
Duke Lipid Clinic Preceptorship Advanced Course
8:00 a.m.–5:30 p.m.
Duke University, David Thomas Executive Conference Center
John Guyton, MD, Medical Director
Contact: Ralph LaForge, MSc
To register, call 919-490-3794 (note: this is an advanced course)
E-mail: rlaforge@nc.rr.com

April 20–22, 2006
Preventive Cardiovascular Nurses Association 12th Annual National Symposium
Hyatt Regency Denver at Colorado Convention Center, Denver, CO
Website: www.pcna.net

August 11–13, 2006
9th Annual Scientific Forum of the Southeast Lipid Association
Amelia Island Plantation
Amelia Island, Florida
More information will be available online soon
E-mail: ssheridan@lipid.org
www.lipid.org/chapters/sela

October 20–22, 2006
3rd Annual Scientific Forum of the Midwest Lipid Association
The Intercontinental (Fairmont) Hotel at the Plaza
Kansas City, MO
E-mail: ssheridan@lipid.org
Website: www.lipid.org/chapters/mwla

Related Meetings and Events

March 2–4, 2006
46th Annual Conference on Cardiovascular Disease Epidemiology and Prevention in association with the Council on Nutrition, Physical Activity, and Metabolism
Pointe Hilton Squaw Peak Resort, Phoenix, AZ
E-mail: scientificconferences@heart.org
www.my.americanheart.org

April 7 and April 8, 2006
American Board of Clinical Lipidology Certification Exam
Offered both days at the site of the NLA/NELA Annual Scientific Sessions
Seaport Hotel, Boston, MA
E-mail: jdipietro@lipidboard.org
www.lipidboard.org

April 27–29, 2006
7th Annual Conference on Arteriosclerosis, Thrombosis, and Vascular Biology
Denver Marriott, Denver, CO
E-mail: scientificconferences@heart.org
www.my.americanheart.org

May 7–9, 2006
7th Scientific Forum on Quality of Care and Outcomes Research in Cardiovascular Disease
Omni Shoreham Hotel, Washington, DC
E-mail: scientificconferences@heart.org
www.my.americanheart.org

June 18–22, 2006
International Atherosclerosis Society XIV International Symposium on Atherosclerosis
Rome, Italy
Contact: Giovanni Lorenzini Foundation
E-mail: info@isa2006.org
www.isa2006.org

July 23–August 5, 2006
32nd Ten-Day Seminar on the Epidemiology and Prevention of Cardiovascular Disease
Granlibakken Conference Center
Tahoe City, CA
E-mail: scientificconferences@heart.org
www.my.americanheart.org

October 21, 2006
American Board of Clinical Lipidology Certification Exam
The Intercontinental (Fairmont) Hotel
Kansas City, MO
E-mail: jdipietro@lipidboard.org
www.lipidboard.org