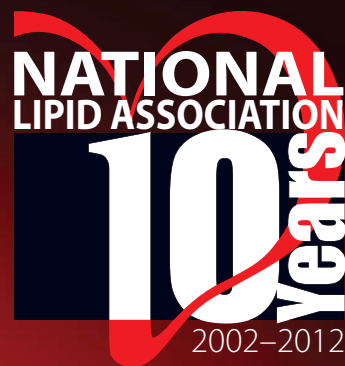


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LipidSpin



A DECADE OF LEADERSHIP
in Lipidology

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Clinical Pedometry—A Brief Overview and Instructions for Healthcare Providers
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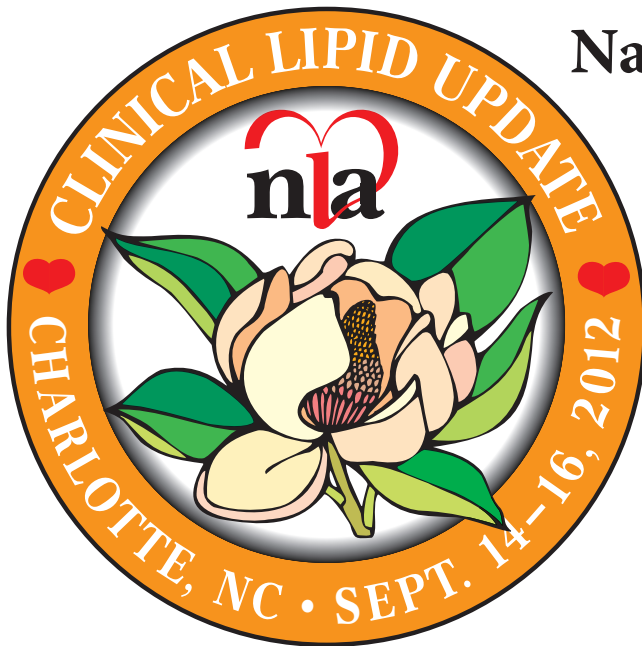


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In This Issue: Spring 2012 (Volume 10, Issue 2)

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The National Lipid Association makes every effort to provide accurate information in the *Lipid Spin* at the time of publication; however, circumstances may alter certain details, such as dates or locations of events. Any changes will be denoted as soon as possible. The NLA invites members and guest authors to provide scientific and medical opinion, which do not necessarily reflect the policy of the Association.

*indicates ABCL Diplomate status

2 From the NLA President

A Fond Farewell

—Penny Kris-Etherton, PhD, RD, CLS, FNLA

3 Joint Statement by EAS, IAS, and the NLA on CETP Inhibition and HDL

4 From the SELA President

A Bright Future Ahead

—Terry A. Jacobson, MD, FNLA*

5 Editor's Corner

Celebrating Our Past, Present and Future

—James A. Underberg, MD, FNLA*

6 Specialty Matters

Key Considerations for Improving Operational Success and Solvency of Lipid Clinics and Cardiometabolic Risk Management Programs

—Ralph La Forge, MSc, CLS, FNLA

9 Practical Pearls

Clinical Pedometry—A Brief Overview and Instructions for Healthcare Providers

—Ralph La Forge, MSc, CLS, FNLA

12 Lipid Luminations

Using Text Messages to Improve Adherence

—David T. Nash, MD, FNLA*

—Julia P. Bolick MS, RD, CD, CLS, FNLA

—Laxmana M. Godishala, MD, FNLA*

—Lori M. Neri, CRNP, MSN, CLS, FPCNA

—Wayne S. Warren MD, FNLA*

14 Member Spotlight

—Connie Grantham, RN, BSN, CLS, FNLA



Look for the NLA Community logo to discuss articles online at www.lipid.org

15 News and Notes

16 Events Calendar

17 Foundation Update

21 USAGE Survey: Understanding Statin Use in America and Gaps in Education

From the NLA President:

A Fond Farewell



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and look for "From the NLA President."

As my year as President for the National Lipid Association comes to a close, I wish to thank so many dedicated colleagues who have worked tirelessly to sustain and grow the excellence of our organization. The NLA is truly remarkable in applying its mission to benefit our members and all who we serve.

The success of any organization reflects the excellence of the "team." I am so very proud of the many individuals who served on various committees. I owe them my deep gratitude for their service. Although the list of committee chairs and members is on the NLA website, I nonetheless want my last column to be one that recognizes them for their many contributions. For members who aspire to a leadership position, I encourage you to be involved. Please share your ideas with the NLA leadership.

In my previous messages, I shared with you that two new committees have been established, the **Advocacy Committee** and the **Practice Management Committee**.

Formation of these committees was driven by enthusiastic members who saw a need and wanted to share their time and expertise in the spirit of moving NLA forward. First, I want to acknowledge **John Nelson, MD, FNLA**, for his vision in seeing the need for advocacy, and sharing his many advocacy experiences with the PLA as a member of the new NLA Advocacy Committee. This committee has been very active under the leadership of **Terry Jacobson, MD, FNLA**. The other new committee, the Practice Management Committee, was created to define best practices in Clinical Lipidology in all disciplines germane to the NLA. This committee is Co-Chaired by **Ralph La Forge, MSc, FNLA**, and **Kaye-Eileen Willard, MD**. Under discussion is the concept of recognizing centers and programs of excellence in Clinical Lipidology, which will be a mark of distinction for the recipients, and a goal for all to pursue.

Other individuals who are serving our organization as committee chairs/co-chairs and contributing to its greatness are:

Communications Committee

James Underberg, MD, FNLA,
Co-Editor-in-Chief, *Lipid Spin*, Co-Chair

Robert Wild, MD, PhD, FNLA,
Co-Editor-in-Chief, *Lipid Spin*, Co-Chair

Alan Brown, MD, FNLA,
Lipid Luminations Satellite Radio Program

W. Virgil Brown, MD, FNLA,
Editor-in-Chief, *Journal of Clinical Lipidology*

Consumer Affairs Committee:

Jerome Cohen, MD, FNLA, Chair

Finance Committee:

Matthew Ito, PharmD, FNLA, Chair

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International Committee:

Michael Davidson, MD, FNLA, Co-Chair

Peter Toth, MD, PhD, FNLA, Co-Chair

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Continuing Medical Education (CME) Committee:

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Terry Jacobson, MD, FNLA, Co-Chair

Graduate Medical Education Committee:

Wm. James Howard, MD, FNLA, Chair

Program Development Committee:

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Scientific Meetings Committee:

Anne Goldberg, MD, FNLA, Chair

Self-Assessment Programs (SAP) Committee:

Carl Orringer, MD, FNLA, Chair

Foundation of the NLA:

Anne Goldberg, MD, President

In closing, it has been a distinct privilege to serve as President for the NLA over the past year. Working with the NLA Board (including the Chapter Presidents) and the Executive Committee (**Michael Davidson, MD, FNLA, Peter Toth, MD, PhD, FNLA, Matt Ito, PharmD, FNLA, and Terry Jacobson, MD, FNLA**), and all committee chairs and co-chairs has been such a rewarding experience. Thank you everyone for all that you have done this past year. I would be remiss if I did not whole-heartedly thank the many superb contributions of the NLA staff—they are phenomenally talented

(Chris Seymour, Nicola Sirdevan, **Brian Hart, Ashish Bajaj, Lindsay Otto, Megan Seery, Chris DeVille, Deborah Sipkovsky, Katie Smith, Katherine Purcell, Clark Morgan, Maggie Kincaid, Allison Fellers, Tetiana Bilyayeva, Tad Kellermann, Meredith Falero, Sandra Goode, Shannon O'Leary, Brenda Hunter, and Cynthia Moore**).

With this, I offer a fond farewell to all. I look forward to many future interactions with the many friends that I have made. Now, I pass the gavel to **Peter Toth, MD, PhD, FNLA**, who will lead the NLA with vision and purpose. ■

Joint Statement by EAS, IAS, and the NLA on CETP Inhibition and HDL

The development of dalcetrapib, a cholesteryl ester transfer protein (CETP) inhibitor, was terminated on May 6, 2012 by Hoffmann-La Roche (Genentech) after its Phase III dal-OUTCOMES trial in acute coronary syndrome patients failed to demonstrate a significant reduction in cardiovascular adverse events.¹ In contrast to the earlier CETP inhibitor, torcetrapib, no safety concerns were reported.

While disappointing, the pursuit of an extensive program of clinical trials and basic research to develop dalcetrapib has provided new information on the biology of HDL in both man and animal models, and on CETP inhibition as a viable therapeutic target for raising levels of HDL-cholesterol. Several other CETP inhibitors that raise HDL-cholesterol levels to a greater extent than dalcetrapib

and also significantly lower LDL cholesterol and novel HDL-raising agents remain under development by both major pharmaceutical manufacturers and biotechnology companies. We anticipate that these ongoing research efforts will shed further light on the feasibility of acute and/or chronic HDL modification as approaches to improve cardiovascular outcomes in dyslipidemic patients with cardiometabolic disease.

The National Cholesterol Education Program in the United States and the 2011 European Society of Cardiology/EAS Guidelines for the Management of Dyslipidaemias² emphasize that low levels of HDL-cholesterol represent a strong and independent risk factor for the development of premature atherosclerosis and cardiovascular disease; and the measurement of HDL-

cholesterol should be used in predicting risk and choosing goals for reduction of LDL and non-HDL cholesterol. Further research may provide a means of changing HDL-cholesterol with a beneficial effect on the incidence of cardiovascular disease.

References

1. "Roche Provides Update On Phase III Study of Dalcetrapib." Roche press release, May 7, 2012.
2. ESC/EAS Guidelines for the Management of Dyslipidaemias. June 2011, *Atherosclerosis*. 2011 July; 217(1):3-46.

From the SELA President:

A Bright Future Ahead



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and look for "From the SELA President."

It is a tremendous honor and privilege for the Southeast Lipid Association (SELA) to host the commemorative edition of the *Lipid Spin* to honor the tenth anniversary. As you will read in the commemorative issue, the history of the NLA is directly linked to the beginning of SELA and its phenomenal growth and success. Back at the first planning meeting in Atlanta, I do not think even the original founders of the organization expected the dramatic success that it would have and how it virtually defined the new and emerging field of "Clinical Lipidology." Its success continues to grow with its expanding membership base, and its impact on education, clinical care, advocacy, and public health.

The anniversary of SELA and the NLA also coincides with the 25th anniversary of the approval by the FDA of the first statin (lovastatin) which revolutionized the care of patients in both primary and secondary prevention. The discovery of the

LDL receptor by Drs. Michael Brown and Joseph Goldstein and the wide-scale use of statins heralded a new era in prevention. As I look at the latest development of new classes of drugs such as the PCK-9 inhibitors, I am encouraged about the prospects for the future and how much work still remains to be done in reducing the ravages of CVD.

As the recent President of SELA, I am very proud of several NLA and SELA accomplishments during the past year. Two important recent NLA initiatives have been the Expert Consensus Conference on Inflammatory Biomarkers and Lipoprotein Testing and the expert conference on Familial Hypercholesterolemia. Both of these reports were designed to assist our members with some of the latest cutting-edge issues in Clinical Lipidology. The consensus reports have been well-received and have earned accolades both nationally and internationally. Finally, during the 2012 Annual Scientific Sessions in Scottsdale, Arizona, the results of the USAGE study (Understanding Statin use in America and Gaps in Education) will be revealed. This was a study of more than 10,000 statin users, and gives us a glimpse of real-world issues with medication compliance, statin switching

and discontinuation behaviors. The report highlights a greater incidence of statin side effects than reported in clinical trials, and shows the importance of side effects in determining compliance, switching, and discontinuation.

As I complete my SELA presidency this year, I am reminded about what a great organization we have and how much we have accomplished in such a short timeframe. I give a great deal of credit to the NLA staff who work diligently behind the scenes to make our organization such a success. However, what excites me the most is seeing the passion of our members in their roles in teaching, research, advocacy, and public health. I have never met a group of individuals so committed in their passion to eliminating the burden of CVD in our nation. The breadth of the talent in our organization, its deep interdisciplinary roots, and its desire to make a *significant* difference has driven me even further. I have been very excited to have been part of it, and look forward to the next decade of achievement. I thank all of my colleagues for making my presidency and the organization quite a success. ■

Editor's Corner: Celebrating Our Past, Present and Future

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"History is the witness that testifies to the passing of time; it illumines reality, vitalizes memory, provides guidance in daily life and brings us tidings of antiquity."—Cicero (106 BC - 43 BC), Pro Publio Sestio

In his message, SELA President **Terry Jacobson, MD, FNLA**, remarks on the many milestones that the tenth anniversary of the NLA is recognizing. He mentions the discovery of statins, and how the work of **Michael Brown, MD**, and **Joseph Goldstein, MD**, and their discovery of the LDL receptor led to the development of the statin class of medications.

In the fall of 1981, I was an impressionable biochemistry student at Yale University, where I had the good fortune of taking a graduate course on "The Molecular Basis of Inherited Disease." The first lecture in that course was the story of Drs. Brown and Goldstein's work, which ultimately led to their being awarded the Nobel Prize. Hearing this story unfold before my eyes was a career-changing event. It moved my path from basic science research to clinical medicine. As I write this, I can still remember where I was sitting in class that day.

Years later, at the International Atherosclerosis Meetings in Boston, I was able to listen to Drs. Brown and Goldstein tell the rest of their story. They recounted their research since the LDL receptor discovery, leading to the detailed mechanistic description of Sterol Regulatory Binding Proteins, which in my mind is worthy of yet a second Nobel Prize. How much more impact could two men have on a single area of medicine?

My practice life and focus now targets these very same patients, and good fortune has allowed me to be closely involved with patients who have inherited LDL receptor disorders and suffer from familial hypercholesterolemia (FH). I have met and spoken with strong advocates for this condition, and have seen the NLA develop recommendations that hopefully will "move the bar" and impact the way we view screening for FH as a risk factor in our soon-to-be released new national cholesterol guideline recommendations.

Recently, a friend gave me as a present a copy of the original manuscript of the Brown and Goldstein FH publication. At the same time I was in the process of writing a review on new treatments for

FH, based heavily on their original work. It dawned on me that they were awarded the Nobel Prize in 1985. Interestingly this is the same year that the movie *Back to the Future* was released. This serves to remind me how linked we are to our past.

The NLA's future is exciting. To truly celebrate our future we need to also respect and celebrate our past. These issues of *Lipid Spin* and our upcoming meetings highlight exciting moments, and serve to ignite the passion in all of us to continue in a field that, up until 10 years ago, had no national home.

I can only imagine where we will be a decade from now. I look forward to the journey. In the words of Marty McFly, "Maybe you weren't ready for that...but your kids are going to love it." ■



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Go to "Topics/Lipid Spin Spring 2012"
and look for "Editor's Corner."

Specialty Matters:

Key Considerations for Improving Operational Success and Solvency of Lipid Clinics and Cardiometabolic Risk Management Programs



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Diplomate, Accreditation Council for Clinical Lipidology



Discuss this article at www.lipid.org
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Lipid and cardiometabolic risk (CMR) management programs exist in all sizes and settings. Most operate in a fee-for-service environment, but some are contracted and held to strict quality and cost requirements. The largest issues in operating and sustaining these programs, beyond medical and administrative support, are the financial viability of these programs—at least covering direct costs—and whether they can fulfill their primary purpose, which is to achieve National Cholesterol Education Panel lipid goals in a significant fraction of dyslipidemic and/or high-cardiometabolic-risk patients.

Attaining fiscal solvency can be challenging, particularly in outpatient physician office fee-for-service lipid clinics

and cardiometabolic risk management (CMR) programs. With little or no increase, or even decreases in Medicare-allowable payments for office visits over the next two to three years, we will have to be creative in how we choose, staff and deliver lipid and CMR services. For now, the following key methods can help to ensure a productive business model:

1. **Minimize unnecessary staff expenses.** From a fee-for-service billing perspective, Medicare and most other health plans only allow one fee visit to be charged and documented a day. In most cases, it will be neither economically prudent nor justified from a patient's return-visit perspective to segment therapy via multiple separate office visits with a nurse, pharmacist, dietitian, exercise specialist, etc. The lipid specialist in most cases should be capable of counseling on diagnostic, pharmacotherapy and lifestyle therapy. Full-service lipid specialist providers with sufficient cross-training in clinical assessment, pharmacotherapy, dietary and lifestyle counseling skills are most likely to be the most efficient and

productive staff model. The lipid, or CMR risk reduction practitioner, in this model manages his own patients through the course of care, though always with the physician seeing the patient and instituting inaugural therapy on the first new-patient visit. When clearly necessary, a referral to a clinical dietitian or exercise specialist can be made.

2. This is a sensitive issue for many astute lipid specialists, but one should **be judicious about ordering a litany of tests**, particularly those involving advanced lipoproteins, genetic markers, scans, etc. Questions to consider include:

- Will the test results change or alter therapy—is it a risk marker that will clearly modify therapy or is the test parameter a target of therapy?
- Is there a clear indication for ordering the advanced test that has consensus support? If so, does the health plan or other payer recognize this indication, and is it covered?

Health care reform, regardless of reform's final morphology, will surely contract versus advance reimbursement for advanced testing—this is already the case with diagnostic imaging technologies.

3. A lipid clinic service should not be perceived as a mechanism to siphon off straight forward dyslipidemia cases that can be managed by most local providers.

Lipid clinics function best when they focus on and demonstrate proficiency at addressing more complex cases of dyslipidemia and dyslipoproteinemia and special populations such as patients with polycystic ovary syndrome (PCOS), human immunodeficiency virus (HIV) or pediatric dyslipidemia and/or those who are at high risk but historically have been resistant or unresponsive to therapy, including those with statin intolerance. Lipid clinic visits should prioritize separate, dedicated visit time to more challenging cases that require a higher level of clinical and laboratory evaluation and medical decision-making that clearly justifies greater than 99211 or even 99212 current procedural terminology (CPT) codes.

*It is also possible to offer a helpful and productive service that doesn't necessarily include providing therapy. Diagnostic-only service with recommendations for therapy (see example referral form—Figure 1) is possible, though this service cannot use consultation evaluation and management CPT codes. Clinic referral forms should not be overly complex; they should be simple and straightforward.

4. One should be conservative with new-patient and return-visit time.

New-patient visits should not last more than 25 minutes and return visits should not last more than 15 minutes;

20 minutes would be exceptional. This would allow at least two new-patient visits an hour or from three to six return visits an hour. Perhaps the biggest obstacle to solvent operations is unnecessarily lengthy return visits—those that exceed 15 minutes—and an inefficient, nonproductive patient-scheduling template. For example, 20-minute return visits generally take excessive staff time relative to the billed level of service.

5. One way to improve on patient throughput, or increasing the number of return patients seen in an hour, is to **have a standing monthly 75-minute patient group education meeting facilitated by a lipid specialist staff member.** Such a meeting will allow from six to ten patients to get more practical therapeutic lifestyle instruction

and problem solving. This can remove many patients' lesser issues and questions from the exam room to the classroom and decrease return-visit time. Relatively small "co-payments" of around \$10 per patient can be generated from each such group meeting.

6. It helps to **be knowledgeable about the current Medicare-allowable payments** specific to the geographic area for each CPT code used for billing new- and return-patient visits. See CMS website: www.cms.gov/PhysicianFeeSched.

*As important as CPT familiarity is, it will also be important to be familiar with the forthcoming International Classification of Diseases, 10th revision, (ICD-10) coding system. The U.S. Department of Health and Human

Lipid Clinical Referral Form

Date: _____

Patient name: _____

Referring physician: _____

☐ Primary prevention ☐ Secondary prevention (CVD, PVD, Diabetes)

Current medicines/supplements: _____

Last lipid profile date and results

Date: TC: LDL: HDL: TG: non-HDL: Other: _____

Requested service: ☐ diagnostic ☐ Rx only ☐ diagnostic & management

Dyslipidemia issue

- ☐ Resistant/intolerant to prior therapy
- ☐ Hypercholesterolemia
- ☐ Mixed dyslipidemia (LDL + TG)
- ☐ Hypertriglyceridemia
- ☐ Isolated low HDL
- ☐ Diabetic dyslipidemia
- ☐ Other: _____

Figure 1. Sample referral form. Available for download in the group document section at www.lipid.org.

Services has mandated the replacement of the International Classification of Diseases, ninth revision, Clinical Modification (ICD-9-CM) code sets used by medical coders and billers to report healthcare diagnoses and procedures with ICD-10 code sets, effective on or after Oct. 1, 2014. ICD-10 implementation will radically change the way coding is done and will require a significant effort to implement. These new codes will be somewhat more discriminating about the specificity of lipid and lipoprotein disorders.

7. Be prepared to **adapt to future (2013) office-visit Medicare payment freezes or decreases in office-visit reimbursement rates**, depending on whether the practice setting involves primary care physicians or specialists.

8. **Consider a concierge delivery approach**, such as a monthly or annual cash fee for services, to CMR management programs. Meaningful value—flexible provider access, labs, education, etc.—will be required for this to work. This approach is growing in popularity but requires judicious pricing and service packaging. There are legal implications for concierge services and they are not for everyone, but they have been and can be an alternative to fee-for-service CMR programs.

9. **Become familiar with patient-centered medical homes (PCMHs) and accountable-care organizations (ACOs)** and be proactive in working with such groups to advise and demonstrate complex lipid disorder and high cardiometabolic risk referral criteria. It is paramount to understand that these organizations are very sensitive to costs, including excessive laboratory testing, quality-of-care and objectively measured outcomes.

10. You may need to **re-engineer the lipid clinic staff to provide alternating-day CMR reduction services—with a focus on high-risk primary-prevention prediabetes/metabolic syndrome patients—with lipid clinic days**. Lipid clinic visits should warrant separate dedicated visit

healthcare expenditures, collaboration with local healthcare systems, prowess with designing and procuring lipid and CMR management contracts with PCMHs and employee benefits managers, and managing and reporting key lipid, CMR and behavioral outcomes. ■

The more a program
prepares for very
real opportunities
to improve care and
improve solvency,
the greater the
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program will survive.

time for complex lipid disorder cases. There are growing financial incentives for CMR programming, particularly when it focuses on deferring diabetes risk. Such programs can be contracted with health plans and employee benefit managers for reasonable per-patient, per-year rates. The author has several operational protocols for how CMR programs can work in outpatient office settings.

Final word: Although there are going to be operational challenges ahead—they're already here with impending 2012-2013 decisions by Congress and the Medicare Payment Advisory Commission—the more a program prepares for very real opportunities to improve care and solvency, the greater the probability that the program will survive. Such preparation includes improving operational efficiencies, efficient staffing, avoiding unnecessary

Practical Pearls:

Clinical Pedometry—A Brief Overview and Instructions for Healthcare Providers

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Simple step counters, or pedometers, have gained much research support in recent years for their ability to incentivize and measure physical activity, especially in preventive endocrinology programs such as those involving prediabetes, metabolic syndrome and diabetes populations. More than 900 published and peer-reviewed studies completed since 1999 have demonstrated the use of simple pedometers in prevention and clinical settings (see select recent references). It is important to differentiate between pedometers and accelerometers, which are more expensive research tools. Physical-activity accelerometers measure steps, but they also measure other dynamic forces, such as acceleration, and usually in at least two axes, they have been shown to more reliably estimate energy expenditure but not necessarily steps themselves. Accelerometers are not cost-justified for routine clinical use. Both accelerometers and well-engineered pedometers are equally reliable for recording step count, and step count is perhaps the most important outcomes measure for most clinical applications.

Pedometers are specifically tailored to walking or stepping activities versus activity that involves mostly upper-extremities movements. Each intentional walking step represents an insulin-sensitizing muscular contraction, similar in mechanism to the diabetes drug metformin, which contributes to improved insulin sensitivity, blood lipid control and fat weight loss. Reliable and well-engineered step counters are reproducibly accurate and can be used for most physical activities for which there is a stepping motion—such as walking—and activities such as climbing stairs, dancing, hiking, running, etc., which involve movement of the trunk, hips and legs.

Consistent evidence supports that 30 minutes of at least moderate-intensity walking is equivalent to around 3,000 steps in adults. There is also evidence that a walking speed of ≥ 100 steps per minute represents the lower boundary of moderate-intensity walking for most adults. To meet current U.S. public health guidelines, people are encouraged to walk a minimum of 3,000 steps in 30 minutes (around 3 mph for most adults) five days

a week.¹ Three rounds of taking 1,000 steps within 10 minutes each day can also be used to meet the recommended goal. This walking speed, when maintained, is sufficient to stimulate insulin sensitization among other cardiometabolic mechanisms that are important in diabetes and cardiovascular disease (CVD) prevention. Does this mean that anything slower than 3,000 steps in 30 minutes is not clinically effective? Absolutely not. But higher muscle-contraction frequencies, or walking speeds, will result in greater peroxisome proliferator-activated receptor (PPAR) and adenosine monophosphate-activated protein kinase (AMPK) activation, and both are key metabolic mechanisms that underscore cardiometabolic risk reduction (see Figure). It is also important to note that the 3 mph speed threshold would



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be faster than necessary for people under 5'7" and perhaps slower than optimal for those taller than 6'2", so height and gait mechanics should be taken into consideration.

The number of daily steps generally required for weight loss is considerably higher—>11,000 steps a day for men and >9,000 steps a day for women²—than the step count required for overall cardiometabolic risk reduction, although the actual number of steps a day for weight loss also depends on initial body weight and walking speed.

Research consistently has demonstrated that pedometers are best at measuring step count, less accurate at estimating distance and least accurate at measuring caloric expenditure. **Step count itself, in contrast to estimated distance or caloric expenditure, is the primary outcome measure for healthcare providers.** Each intentional walking step is a measure of the number of large muscle group contractions, each of which is an insulin-sensitization process not unlike the mechanism of action of thiazolidinediones and metformin, both of which are AMPK activators (in the case of thiazolidinediones, this is independent of PPAR gamma activation).

It is important to note that, for patients who are obese or who have metabolic syndrome, prediabetes or diabetes, the *relative increase or change* in daily or weekly step count above their previous sedentary step count baseline is the most important exercise outcome parameter for improving cardiometabolic health.

Instructions for Patient Application

1. Clip the pedometer to a belt or waistband over the midline of one leg or

in line over one foot. The pedometer must fit tightly to the waist. It may be best to fit the pedometer to the waistband of the user's underwear if there is no belt or the pants waistband is not snug.

Each intentional walking step represents an insulin-sensitizing muscular contraction, similar in mechanism to the diabetes drug metformin.

2. We recommend pedometers that have been validated to accurately measure steps and have step filters. Step filters are built into a pedometer's electronics and reduce the recording of spontaneous and fidgety movements. Good pedometers are generally inexpensive, less than \$16 each when purchased in moderate volume, and well-engineered. Its worth finding models featuring clinically-prescribed step counts, incorporating variable step-filter functions and a large memory that means the pedometer only needs resetting once a week, or less often.

3. Most adults take from 1,800 to 2,200 steps per mile, depending on leg length, height and walking style. To gauge how many steps are needed to complete a mile, one should walk a measured mile—such as four laps around the inside lane of a local quarter-mile track—and record the step count.

Overall Recommendations for Patients Starting a Program

1. One should measure and record how many steps are taken in a day and in a week before starting a program. To begin, one should put the pedometer on in the morning, reset it to 0 and forget about it for the entire day. When retiring for the evening, the user should remove the pedometer and record the number of steps accumulated during the course of the day. This should be repeated for five to seven days to determine a daily average.

2. One can begin a walking program by adding from 2,000 to 3,000 step counts (from 1 to 1.5 walking miles) to the daily average from No. 1 above. Those people who are in a very low state of fitness can begin by adding from 1,000 to 1,500 steps a day (from 0.5 to 0.75 mile).

For example, a person who averaged 4,500 step counts a day before starting a walking program and then added 2,000 step counts a day to this average for the next several weeks will end up averaging from 6,500 to 7,500 step counts a day. For most people, around 2,000 step counts (± 200 step counts) equal 1 mile. One should make every effort to stay above the "sedentary lifestyle index" of < 5,000 steps.³

3. After two to four weeks, one can add another 2,000 to 3,000 step counts to the daily average, until the average is 10,000 or more steps a day on most days of the week. These 10,000 or more steps will include all daily step count activities, including the walking program. This total step count should be adjusted to each patient's fitness level, health status and age. It is important to note that some patients who are less ambulatory may have difficulty reaching 10,000 steps a day, in which case the change in daily step count

is a more appropriate outcome measure. For example, a patient whose baseline step count was 3,800 a day and after six weeks is averaging 7,500 steps a day has shown a significantly positive improvement in both walking endurance and insulin sensitization.

4. When using pedometers to monitor physical activity for weight loss purposes, the overall goal is to eventually record from 70,000 to 90,000 step counts a week or at least 10,000 steps a day. Several recent studies have recommended $\geq 12,000$ steps a day for significant weight loss. This step count includes all daily activity, not just a walking program. The majority of studies indicate that significant weight loss requires $\geq 2,000$ kcal a week of physical activity, which is equivalent to between 18 and 20 miles of walking, though actual kcal expenditure depends on body weight. One also should understand that, even if attaining these relatively high weekly step counts is not possible, one still can accrue

significant cardiometabolic health benefits, including an improved glucose tolerance, an improved lipoprotein profile and blood pressure reduction. Several large diabetes prevention studies have demonstrated from 40% to 60% reductions in diabetes risk with an average of less than 10,000 walking steps a day and only modest weight loss. One recent Australian study of 458 normal glycemic adults estimated that every increment of 1,000 daily steps resulted in 13% lower odds of a five-year incident dysglycemia.⁴

5. Patients should record their daily and/or weekly step count. Many pedometer models have long-term memories with the capacity to store step totals over a 12- to 24-week period or longer.

6. Creative pedometer walking programs such as pedometer trekking are helpful in instilling longer-term use of pedometers. Pedometer trekking programs are designed and measured over a series of local foot

trails or courses that meet the age and fitness levels of the community involved. Course distances ranging from a half-mile to 10 miles (from 1,000 to 20,000 steps) are validated by standard pedometer assessment. Activities along the trek can be added, especially if they are specific to cultural heritage. ■

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Lipid Luminations:

Using Text Messages to Improve Adherence



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Technology, when used appropriately, can help in every area of human life. Given current technology, we can improve patient adherence to medications and lifestyle changes.¹

Adherence not only saves lives but also decreases the cost burden to our unsustainable healthcare system. If we do not come up with innovative,

creative ways of improving overall health, then we will leave a huge burden to our future generations. Scientists have done expensive clinical trials and developed life-saving medications such as statins, angiotensin-converting enzyme inhibitors (ACE I), beta blockers (BB), acetylsalicylic acid (ASA), etc. What good is our research if our patients do not adhere to the medications and lifestyle prescribed for them? Medications and lifestyle recommendations do not work in those who are noncompliant.² The use of texting was studied in areas of diabetes self-management³, smoking cessation⁴, behavioral measures for congestive heart failure (CHF) and obesity^{4,5} with positive results. The big question is, who takes ownership of this problem? The NLA is

making a commitment in offering some solutions to the problem of non-adherence.

After being charged to develop options that would aid in patient compliance, a patient adherence subcommittee was formed within the NLA. The subcommittee searched for resources to increase patient compliance in the realm of healthy lifestyles and lipid management. As per recent studies cited in Nash's guest editorial in the Fall 2011 *Lipid Spin*, less than half the members of any given population maintain adherence to their prescribed regimen after one to two years.

According to the International Association for the Wireless Telecommunications Industry, more than 196.8 billion text

messages were sent in the United States during the first six months of 2010. People use text messages to remind themselves to keep appointments and pay bills, among other alerts. As a subcommittee, we have developed a list of text messages that might increase patient compliance with medicine and lifestyle prescriptions. We are asking you to try some of the messages noted below and let the committee know about their use and effectiveness. Please e-mail your feedback to David Nash, MD, at davidtnash@aol.com.

DIET

- Put olive oil and canola oil on your shopping list.
- Cut the salt; add lemon or vinegar instead.
- 4 ounces = 1 juice serving
- A Whopper has a whopping 670 calories!
- When is the last time you ate Brussels sprouts? Pears?
- “Orange” you hungry today?
- Don’t eat away your boredom.
- Skip meals; fuel your hunger.
- Eat to satisfy, not to stuff.
- You are what you eat and how much you eat!
- Eat a rainbow of vegetables and fruits.
- Snack on nuts.
- Steer clear of bacon, pepperoni, hot dogs, sausage and other processed meats.
- Cheese is not your friend. Choose it in small amounts.
- Go fish.
- Track your food and fitness regularly.
- Fuel-up with energy-packed, nutritious foods.
- Add one more fruit and vegetable daily.
- Pour one more low-fat dairy serving every day.
- Quit smoking. Your doctor can help.

EXERCISE

- Rainy day? March in place during TV commercials.
- Playing with your grandkids = exercise!
- Turn on loud music and dance for 20 minutes!
- Walk with friends ... make time fly!
- Exercise energizes your metabolism.
- Exercise feels great.
- Did you get in your 30 minutes of exercise today?
- Wear comfortable walking shoes.
- Walk with a friend for at least 15 minutes.
- Park away from where you work and walk both ways (if it is safe).
- Choose the stairs over the elevator.
- Gradually increase your exercise as you are able.
- Step to it! Walk 10,000 or more steps daily.

LIPID DRUG THERAPY

- A statin a day keeps the cardiologist away!
- Put fish oil in the refrigerator to avoid stomach upset.
- Keep your statin with your toothbrush so you don’t forget to take it.
- Ask your health provider if you can take your statin every other day if you are experiencing side effects.
- If you fail one statin, try another. No two statins are the same!
- Did you pick up your new prescription?
- Medicine is prescribed to help you reach your goals.
- Keep your pills where you will notice them easily.
- Don’t be afraid to ask for help if you have trouble getting your medication.
- Ask for help if you are confused about your medicine.
- Place your pills in a small cup in front of your bathroom mirror.
- Did you take your pill today?

- Check to be sure you have enough pills to last until your next clinic visit.
- If you miss your pill today, take it as soon as possible.
- Do you have follow-up appointments? Set up reminders for your appointments.

MOTIVATION

- This is a true partnership and we want to prevent or control your disease.
- You can do this and take care of yourself.
- Prevention is better than cure.
- Live a longer, healthier and more functional life. ■

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Member Spotlight: Connie Grantham

CONNIE GRANTHAM, RN, BSN, CLS, FNLA
Lipid Clinic Director
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Diplomate, Accreditation Council for Clinical Lipidology



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Go to "Topics/Lipid Spin Spring 2012"
and look for "Member Spotlight."

Few NLA members can picture what the association was like in its infancy. Connie Grantham, RN, BSN, FNLA, does. She was among the founding members to join the fledgling association when it officially became established as a national organization in 2002, and remembers attending meetings as one of the first SELA members in the late 1990s.



Gene Hutcheson, MD, who worked with Connie Grantham, was featured in the first *Lipid Spin* Member Spotlight in 2000.

"The very first meeting I went to was in Homestead, Virginia," she said. "We flew in, rented a car, and then drove an hour up a mountain to get to this resort. That was back when

the meetings did not require quick in-and-out access for travelers. I remember it was a great place to be, and I remember learning a lot."

Grantham remembers the SELA meetings as smaller in scale than the current-day NLA conferences, but said the educational programs have always been top quality. Knowledge she picked up at the early meetings quickly transferred to her clinical practice at Jackson Heart Clinic in Jackson, Miss., where she has worked as a lipid nurse for 13 years.

"I knew very little about lipids at the time, but applied for the job because I was interested in making a change. I not only learned from the SELA and NLA meetings, but also began to enjoy the challenges of lipid management," said Grantham.

A decade ago, her clinical education focused on HDL, LDL and triglycerides. One improvement since then, Grantham said, is the now ubiquitous terminology used to describe the metabolic syndrome, which now makes it easier to identify high-risk patients. In addition, a larger variety of therapeutic options has improved

patient care, as there are more statins and other medications to choose from to give patients the most personalized care possible.

Today, Grantham serves as Lipid Clinic Director at Jackson Heart Clinic, where she works closely with physicians and patients to manage lipid levels. Despite advances in practitioner education, many patients still suffer from a lack of awareness about their cardiovascular health.

"Most patients don't understand what lipids are, so that is the first thing I teach them: what a lipid is and how that relates to their heart health," she said.

Grantham continues to enjoy her career in Clinical Lipidology and credits SELA and the NLA with much of her professional training.

"Very much of my professional life has been connected to these organizations," she said. "It has been such a great experience to participate and keep up with the important aspects of patient care." ■

2012 Nominating Committee Results

The Nominating Committee for the NLA and the chapter Boards of Directors have prepared a slate of candidates for election by the membership at the NLA Annual Scientific Sessions. To view candidates, visit the NLA homepage at www.lipid.org.

NLA-Endorsed Grand Rounds on Reducing Residual Risk and Managing Complex Dyslipidemia

Select medical institutions are eligible to host an exciting new CME-certified in-hospital grand rounds program endorsed by the NLA. This new program examines the importance of lipoprotein management for secondary prevention of major adverse cardiac events in post-ACS patients.

Participants will learn to recognize residual risk associated with statin therapy to lower

LDL, as well as the limitations of current therapies to increase HDL. Participants also will increase awareness of novel therapies to increase HDL and reduce CVD. For more information, please e-mail **Rachon Cottman** at rcottman@potomacme.org.

Pocket Guide on Familial Hypercholesterolemia

The NLA partnered with the International Guidelines Center to product a pocket guide on familial hypercholesterolemia (FH) based on the recommendations paper authored by the NLA's FH Expert Panel. Published in May 2012, the guide is available at www.guidelinecentral.com.

Lipid Spin Support

Special thanks go to **Wayne Warren, MD, FNLA**, for reviewing articles for this issue.

NLA Staff Corner



Ashish Bajaj, MBA, recently joined the NLA as Director of Practice Management. He earned

his bachelor's degree from the University of Chicago and his MBA from Emory University. Ashish has more than 15 years of practice management experience and previously worked for the American Medical Association.



Judi Spann, APR, CPRC, recently joined the NLA as Sr. Director of Communications and Foundation

Relations. She earned her bachelor's degree from Washington College. Judi has more than 20 years of communications, public affairs and marketing experience. She previously worked in the administration of Florida Governor Charlie Crist as Deputy Chief of Staff for the Florida Department of Children and Families, and as Communications Director for both the Florida Department of Health and the Florida Department of State.

The NLA congratulates the following individuals, who will be honored during the 2012 Annual Scientific Sessions for their commitment to medicine, research, and the highest standards of patient care:



Distinguished Achievement Award
Avedis Khachadurian, MD, FNLA



Honorary Lifetime Membership Award
William Boden, MD



President's Service Award
Anne Goldberg, MD, FNLA



President's Service Award
Ralph La Forge, MSc, FNLA

Events Calendar

2012 NLA Meetings

NLA Clinical Lipid Update—Fall

Hosted by the Southeast Lipid Association and the Northeast Lipid Association

September 14–16, 2012

Charlotte Westin

Charlotte, NC



2012 NLA Professional Development Courses

HDL Master Class

Masters in Lipidology Course

Lipid Academy

September 13–14, 2012

Charlotte Westin

Charlotte, NC

2012 Meetings

1st International Conference on FH in Children & Adolescents

June 8, 2012

Athenaeum Intercontinental Hotel

Athens, Greece

Lipid Forum 2012

June 9, 2012

The Westin Michigan Avenue

Chicago, IL

PriMed Integrated Approaches to Cardiometabolic Care

June 15, 2012

Anaheim Convention Center

Anaheim, CA

Lipid Forum 2012

June 16, 2012

Renaissance Boston Waterfront

Boston, MA

Metabolic Syndrome, Obesity and Pre-Diabetes

June 27, 2012

Newcastle Civic Centre

Newcastle upon Tyne, England

2013 Meetings

2013 National Lipid Association Clinical Lipid Update—Spring

Hosted by the Southwest Lipid Association and the Midwest Lipid Association

February 22–24, 2013

The Roosevelt Hotel

New Orleans, LA

2013 National Lipid Association Scientific Sessions



Hosted by the Pacific Lipid Association

May 31–June 2, 2013

Red Rock Hotel

Las Vegas, NV

2013 NLA Clinical Lipid Update—Fall

Hosted by the Southeast Lipid Association and the Northeast Lipid Association

September 20–22, 2013

Hyatt Regency Baltimore Hotel

Baltimore, MD

Foundation Update



ANNE C. GOLDBERG, MD, FNLA
President, Foundation of the National Lipid Association

Associate Professor of Medicine
Washington University School of Medicine
St. Louis, MO

Diplomate, American Board of Clinical Lipidology



The Foundation of the National Lipid Association continues to move ahead to fulfill our mission to serve professional, community and public health interests. We are continuing with our campaign, *FH: It's Relative—Know Your Family Cholesterol History*, that began in 2011. In January 2012, our FH public service announcement was redistributed on cable networks through One Source. This national distribution plan reaches 600 cable systems and channels including CNN, ESPN, and Lifetime with a guaranteed minimum of 800 airings, greatly expanding the already successful release. One Source estimates that four million viewers will view the Public Service Announcement. The NLA's patient-friendly website, **LearnYourLipids.com**, continues to receive close to 100 hits per day.

We partnered with the International Guidelines Center to produce a Familial Hypercholesterolemia (FH) Pocket Guide that will be useful to practitioners at many levels, with all proceeds to benefit the Foundation. With the help of many people in making improvements and changes, the

Pocket Guide recently went to press and will soon be available for distribution.

I would like to thank you for your continuing support of the *100 Questions & Answers About Managing Your Cholesterol*, which was published in August 2011. It is available on the Jones & Bartlett Learning, Amazon, and Barnes & Noble websites. In addition, anyone who donates \$100 or more to the Foundation may elect to receive a complimentary copy of the book. It continues to do well. More than 1,200 books were sold in 2011, generating \$14,364 in sales. All net royalties from sales of the book will benefit the Foundation's charitable and educational efforts.

Our Foundation event at the Spring Clinical Lipid Update in San Diego was a rousing evening of live band karaoke. Everyone had a great time and there were numerous additional donations to the Foundation. We are looking forward to the 10-Year Anniversary Gala, which will be a formal dinner event honoring the NLA's past presidents as a fundraiser

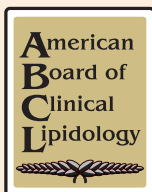


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and look for "Foundation Update."

for the Foundation. Both the NLA and the Foundation have come a long way in a short period of time. I think we can be pleased with our accomplishments so far and look forward to doing even more in the future.

There is a lot to do. We want to involve as many NLA members as possible in the charitable work and the educational, research, community and professional development work of the Foundation. Please think about ways in which you would like to get involved and support the Foundation by volunteering, attending a benefit event or making a donation. As always, your support is very much so appreciated. Together, we are doing great things. ■

The NLA congratulates the following Diplomates who passed the American Board of Clinical Lipidology (ABCL) or Accreditation Council for Clinical Lipidology (ACCL) exams in 2011, demonstrating competence in Clinical Lipidology and dedication to professional excellence.



2011 Diplomates

Nasreen Al-Sayed, MD; *Manama, Bahrain*
Hal Applebaum, MD; *Tampa, FL*
Eric Auerbach, MD; *Tulsa, OK*
Alexis Baass, MD, MSc, FRCPPC; *Montreal, QC, Canada*
Ajay Bali, MD; *Murfreesboro, TN*
Harold Bays, MD; *Louisville, KY*
Sayeeda Bilgis, MD; *Pecos, TX*
Piers Blackett, MD; *Oklahoma City, OK*
Richard Blum, MD; *Wilkes-Barre, PA*
Craig Brett, MD; *Cape Elizabeth, ME*
Chris Caraang, MD; *Las Vegas, NV*
Charles Dahl, MD; *Provo, UT*
Lee Dilworth, MD; *Knoxville, TN*
Brad Friedman, MD; *Charleston, SC*
Carmella Gismondi-Eagan, MD; *Concord, NC*
Lourdes Gonzalez Santos, MD; *West Covina, CA*
Ingrid Hogberg, MD; *Portland, OR*
Ishwarlal Jialal, MD, PhD, FNLA; *Davis, CA*
Theodore Lau, MD; *Tacoma, WA*
Andrea Lawless, MD; *Addison, IL*
Luis Martinez, MD; *Ponce, PR*
Michael McIvor, MD; *Key West, FL*
Philip O'Donnell, MD; *Winchester, VA*
James O'Keefe, MD; *Mission Hills, KS*
Dharmesh Patel, MD; *Memphis, TN*
Harsha Rudrappa, MD; *Ft. Smith, AR*
Richard Safeer, MD; *Columbia, MD*
Sanjay Sarin, MD, FACC; *Peachtree City, GA*
Michelle Scanlan, MD; *San Antonio, TX*
Aditya Sharma, MD; *Cleveland Heights, OH*
Vinu Shrestha, MD; *Colorado Springs, CO*
A.J. Vinaya Simha, MD; *Odessa, TX*
Mihail Subtirelu, MD; *Chattanooga, TN*
Melish Thompson, MD; *Mequon, WI*



2011 Clinical Lipid Specialists

Colleen Astles, NP; *Woodstock, GA*
Jenny Cleary, NP, RN; *Winnetka, IL*
Judith Collins, MSN; *Conifer, CO*
Linda Daniels, RD, BS; *Littleton, CO*
Susan Halli-Demeter, DNP, CFNP; *Scottsdale, AZ*
Krista Havlin, ANP; *Saint Louis, MO*
Shannon Hemenway, APRN; *Brunswick, GA*
Vanessa Milne, NP, MS; *Brooklyn, NY*
Maria Pruchnicki, PharmD; *Columbus, OH*
Lynn Scott, ARNP; *Bedford, NH*
Suzanne Shugg, DNP; *Summit, NJ*
Suzana Zamecnik, NP; *Racine, WI*
Kristine Ziemba, APNP; *Merrimack, NH*

For a complete list of Diplomates and more information,
visit www.lipidboard.org (ABCL) and www.lipidspecialist.org (ACCL)

Congratulations to the following individuals who passed the Accreditation Council for Clinical Lipidology's Basic Competency in Clinical Lipidology exam in 2011, earning recognition for outstanding achievement in Clinical Lipidology.



Basic Competency in Clinical Lipidology

Basic Competency in Clinical Lipidology

Laurence Abramson; <i>Baltimore, MD</i>	Lauren Cecil; <i>Abbott Park, IL</i>	Sergio Garcia-Quiros; <i>Wellington, FL</i>
Lisa Adams; <i>Olathe, KS</i>	Regina Chapman; <i>Jacksboro, TN</i>	Brian Garlock; <i>Abbott Park, IL</i>
Timothy Aguglia; <i>Sewickley, PA</i>	Marie Chrisco; <i>Newark, DE</i>	Sandra Gates; <i>Bath, PA</i>
Jason Albright; <i>Zieglerville, PA</i>	Ann Christensen; <i>Arlington, TX</i>	Matthew German; <i>Cumming, GA</i>
Todd Allington; <i>Auburn, CA</i>	Elizabeth Conn; <i>Winchester, KY</i>	Kim Giannone; <i>Wall, NJ</i>
Bryan Allison; <i>Glasgow, KY</i>	Michael Coogan; <i>Rolling Hills Estates, CA</i>	James Gillen; <i>Toms River, NJ</i>
Kenneth Alt; <i>Bew Hartford, NY</i>	Robert Coulter; <i>Portage, MI</i>	William Gray; <i>Springfield, MO</i>
Michael Alterio; <i>Reading, PA</i>	Francesca Coven; <i>MA; Cuyahoga Falls, OH</i>	Karin Green; <i>Dallas, TX</i>
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Lisa Anderson; <i>Parker, CO</i>	Ted Cruz; <i>Miami, FL</i>	Anthony Grippo; <i>Arlington Heights, IL</i>
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Catherine Armstrong; <i>Lindenhurst, IL</i>	Lori Diehl; <i>Westbrook, CT</i>	Ginger Hamilton; <i>Seattle, WA</i>
Elizabeth Atkins; <i>Sharpsburg, GA</i>	Dwayne Dodd; <i>Woodhaven, MI</i>	Jean Harvey; <i>San Ramon, CA</i>
Christine Attanucci; <i>Perryopolis, PA</i>	Patty Dorian; <i>MA; Raleigh, NC</i>	Robyn Hayes; <i>BS; Greensboro, NC</i>
John Attaway; <i>Germantown, IL</i>	Christopher Dorion; <i>New Orleans, LA</i>	Bryan Heckman; <i>Fort Myers, FL</i>
Angela Bal; <i>De Pere, WI</i>	Kurt Doss; <i>Daphne, AL</i>	Kenneth Heller; <i>Livingston, NJ</i>
Lauren Bardowski; <i>New Brunswick, NJ</i>	Stephen Douglas; <i>PhD; Clinton, LA</i>	Scott Helms; <i>San Diego, CA</i>
Donald Battle; <i>Trussville, AL</i>	Jennifer Douglass; <i>Lubbock, TX</i>	Stacey Henning; <i>Dove Canyon, CA</i>
Jaime Beaver; <i>Knoxville, TN</i>	Michele Dubbs; <i>Palisades, NY</i>	Sean Hill; <i>Charleston, SC</i>
Candace Benson; <i>Marietta, GA</i>	Eric Dubbs; <i>Palisades, NY</i>	Cynthia Hoffman; <i>Langhorne, PA</i>
David Berger; <i>MD; Downey, CA</i>	Jennifer Dukofsky; <i>Hauppauge, NY</i>	Mary Holland; <i>Boulder, CO</i>
Amy Biven; <i>Crestwood, KY</i>	Harvey Dunbar; <i>Sacramento, CA</i>	Kimberly Hollis; <i>Indianapolis, IN</i>
Candice Bloom; <i>Abbott Park, IL</i>	Christine Duncan; <i>Bristol, IL</i>	Eduardo Hondal; <i>Miami, FL</i>
Joyce Boakes; <i>New York, NY</i>	Leslie Dunn; <i>PharmD; Meridian, MS</i>	John Hooper; <i>Perrysburg, OH</i>
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Continued on next page.

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NLA Update: USAGE—Largest Survey of Statin Users in the United States

The NLA recently acted as a partner on *USAGE: Understanding Statin use in America and Gaps in Education*—the largest survey of statin users conducted in the United States. USAGE will be presented at the 2012 Annual Scientific Sessions in Scottsdale, Arizona, and a manuscript about the survey will be published in the May/June issue of the *Journal of Clinical Lipidology*. A project of the Consumer Affairs Committee, NLA faculty for the USAGE project included Chair **Jerome Cohen, MD, FNLA**, **Eliot Brinton, MD, FNLA**, **Matthew Ito, PharmD, FNLA**, and **Terry Jacobson, MD, FNLA**.

From June 18-19, the NLA will participate in a satellite media tour in New York City to share the survey results with consumer news outlets. Spokespeople for the press conference will include **Eliot Brinton, MD, FNLA**, and actor **John O'Hurley** (*Seinfeld*, *Dancing with the Stars*, *Family Feud*, and *The Young and the Restless*).

Goals of the Survey

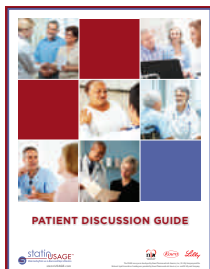
The USAGE survey, conducted in 2011, is the largest known cholesterol survey in the U.S. Of the 10,138 respondents, 88% were current statin users and 12% were former users. The USAGE survey provided a picture of patient attitudes regarding high cholesterol and various treatment approaches, including lifestyle changes and medications—statins, specifically. The survey also explored patient perspectives about their relationships with their healthcare providers, including the

amount, type and value of information provided about cholesterol management.

Partners in the Survey

The USAGE survey was conducted via an Internet-based, self-administered questionnaire developed by Kantar Health. The NLA was a partner in conducting the survey, which was funded by Kowa Pharmaceuticals America and Eli Lilly and Company. None of the NLA authors received compensation for study design, study analysis, or manuscript preparation.

Discussion Guides



Included with the Summer 2012 mailing of *Lipid Spin* are patient and healthcare provider discussion guides based on the USAGE survey. For more resources and information, please visit www.StatinUSAGE.com.

Key Findings

- Survey participants reported being highly satisfied with the information that their physicians provide to them about high cholesterol and its treatment, particularly with statins.
- More than half of USAGE participants use their physician as their sole source for information on statin therapy.
- Only about half of USAGE participants remember receiving recommendations on diet and exercise at every doctor's visit.
- Side effects were the leading reason that USAGE participants discontinued their statin medication, and one out of three participants did so without first discussing the issue with their physician.
- Nearly one-half of USAGE participants indicated they had switched statins at least once. Costs were the most common reason that participants switched their statin medication.
- On average, USAGE participants use three medications/supplements from the list of potentially interacting drugs that was provided to them.
- More than 40% of USAGE participants believe that their pharmacy will alert them to potential drug interactions with their statins.



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NLA Is Raising the Stakes...

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