

SUMMER EDITION 2013

VOL. 27 NO. 3

S O U T H D A K O T A P H A R M A C I S T



In This Issue:

- Director's Comments
- President's Perspective
- SDPhA Convention Information

South Dakota Pharmacists Association

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"The mission of the South Dakota Pharmacists Association is to promote, serve and protect the pharmacy profession."

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SDPhA CALENDAR

Please note: If you are not on our mass e-mail system check our website periodically for district meetings and other upcoming events. They will always be posted at: <http://www.sdpha.org>.

JULY

- 1 Legislative Changes Become Law
- 4 Independence Day
- 12 South Dakota Board of Pharmacy Meeting, Pierre, SD
- 26 SDSHP 12th Annual Gary Van Riper Society Open Golf Classic
Bakker Crossing Golf Course Sioux Falls, SD

AUGUST

- 1 License Renewal Window Opens
- 8-10 NABP District V Meeting
Inn at the Forks, Winnipeg, Manitoba, CA

SEPTEMBER

- 2 Labor Day
- 13-14 SDPhA Annual Convention
Ramkota Hotel & Convention Center, Sioux Falls, SD

OCTOBER
American Pharmacists Month

- 5 SDAPT Fall Meeting
Capital University Center, Pierre, SD
- 12-16 NCPA Annual Convention and Trade Exposition
Walt Disney World Swan and Dolphin, Orlando, FL
- 14 Native American Day
- 20-26 National Hospital and Health-System Pharmacy Week
- 22 National Pharmacy Technician Day
- 26 DEA National Prescription Drug Take-Back Day
Fall District Meetings

Cover: Falls Park, Sioux Falls, SD, by Else Umbreit, Tea, SD

SOUTH DAKOTA PHARMACIST

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FEATURES

- 4 Director's Comments
- 5 President's Perspective
- 10 ASHP Honors South Dakota Pharmacist for Practice Excellence, Leadership
- 11 SDPhA Board Issues American Pharmacists Month Challenge
- 12 **SDPhA Annual Convention Agenda**
- 13 **SDPhA Annual Convention Registration Form**
- 15 Public Response to DEA's National Prescription Drug Take-Back Days Keeps Growing
- 15 Country Singer Brings Music Back Home to South Dakota

PHARMACY TOPICS

- 2 SDPhA Calendar
- 6-7 Board of Pharmacy
- 7 Academy of Student Pharmacists
- 8 SDSU College of Pharmacy
- 9 South Dakota Society of Health-System Pharmacists
- 10 South Dakota Association of Pharmacy Technicians
- 17 Financial Forum: Eight Tips for Planning Your Retirement

CONTINUING EDUCATION

- 20-25 Pharmacist Consult: Athletic Performance, Part 1: Hydration and Electrolytes

ADVERTISERS

- 14 Match Rx
- 16 Dakota Drug, Inc.
- 26 Pharmacists Mutual Insurance Company

- 27 In Memoriam
- 27 Classifieds

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DIRECTOR'S COMMENTS

Sue Schaefer | Executive Director



Happy Summer all!

I hope you're all enjoying a fun-filled, action-packed summer. Seems like it's just zipping by and before we know it, we'll be heading into Convention.

I hope you'll take the time to check out our lineup and secure a seat at our meeting this September in Sioux Falls. Our theme, "GAME

ON!" has some interesting flair, don't you agree? When selecting a theme, the SDPhA Executive Board wanted something that would capture your attention and hoped to incite a veritable gridiron riot of interest in learning some new tricks, visiting with your colleagues, and sharing some wisdom in a relaxed and informal setting. A little laughter, camaraderie, great food, super CE and a football game all make for a great fall weekend. Top off your weekend with the Jacks game on Saturday afternoon!

One important note – ***looks like our CE on CPR recertification on Saturday morning may be limited, so if you're interested, you should register for convention pronto!*** We're hoping to get our out-of-town pharmacists handled, and if the need is there, we may possibly have a second "wave" on Saturday afternoon, or provide some training at a Sioux Falls District Meeting, etc. The limitations have to do with the number of CPR manikins available.

We've had a busy start to our summer and have been working hard to keep track of pharmacy matters that affect your practice. The Department of Social Services' Division of Medicaid recently held a hearing regarding the Medicaid

payment structure for dispensing. We believe the proposal to be more housekeeping than worrisome. You'll see a bit of an increase thanks to Legislative action and the Administration's support. Also the Board of Pharmacy will be meeting in Pierre on July 12th. They also have some rules regarding electronic recordkeeping and technology updates, which the Association supports.

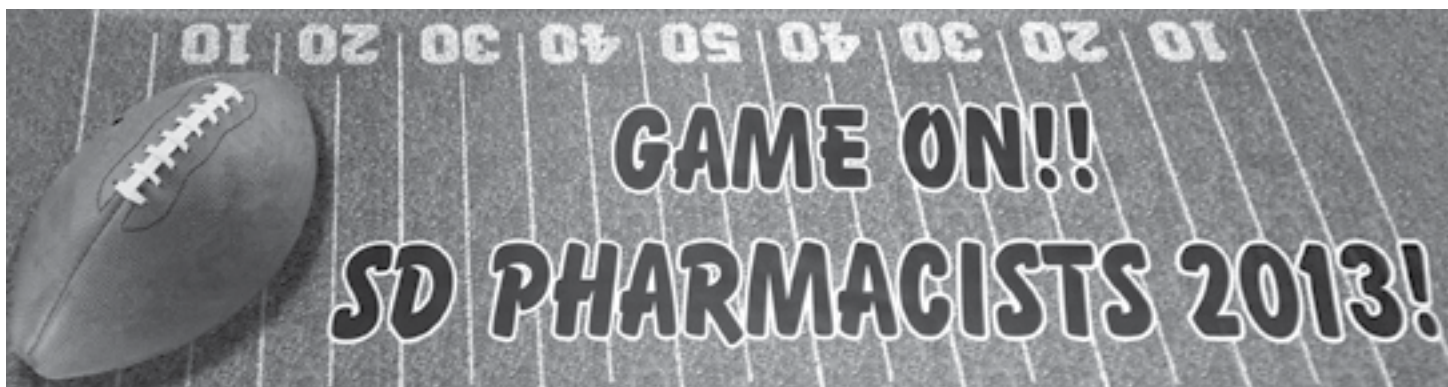
Drug shortages and compounding issues continue to keep everyone hopping as well.

The SDPhA Board recently met and decided to issue a challenge to all pharmacists, students and technicians regarding American Pharmacists Month! This year we've decided to hold a contest to see who can come up with the most creative way to celebrate the profession, while providing excellent patient care. We hope to see many wonderful submissions (due September 1st) and plan to make the announcement of the winner and runners-up at Convention. First prize is \$1000!!!! Runner Up \$300, and the Consolation prize, \$200. Get your ideas into us! We know you're probably already doing something cool, so share it with us!

It's important to remember the legislative changes affecting pharmacy that become law on July 1st, 2013. We hope the statutory changes affecting PBMs assists you and your staff and pharmacies. It's always a good idea to read your contracts closely as you negotiate your agreements.

Please remember our door is always open, and I'll buy the iced tea if you happen to drop by for a visit!

Warm, Sunny Regards,
Sue



SDPhA Annual Convention • Information and Registration on Page 12-13

PRESIDENT'S PERSPECTIVE

Else Umbreit | SDPhA President



It's hard to believe it's July already. Seems like summer was never going to make it here, and now suddenly we're halfway through. I hope you all survived the rollercoaster of weather we had this spring. The ice storm was an unexpected and rather unpleasant event! I never lost power at home, but unfortunately my pharmacy wasn't so lucky. In a new experience for me (and one my staff and I hope never to repeat again),

our location lost power for THREE DAYS. Obviously a busy pharmacy just can't be closed that long, so we packed up all of our prescriptions and moved in temporarily with one of our other locations. It was quite the experience, operating two pharmacies out of one store, but it gave us the opportunity to improvise, work together, and share ideas. At times it seemed we were stepping over each other, but we found a way to work together and minimize the interruptions to patient care. Through it all, I think we found a way to be a better team. This type of experience, while admittedly somewhat painful at the time, can have a silver lining, because what you learn can lead to changes that benefit both you and your patients.

Even with the worst of the ice storm behind us, there was still concern for several days of further power outages from all the ice built up on power lines and trees. I kept thinking at home, if we lose power, how will I charge my phone? What will I do without WiFi?? It can be both a blessing and a curse to be so connected all of the time. A blessing, because family and friends that are thousands of miles away can stay in touch and up to date in our life happenings. A curse, because, well, it wouldn't kill me to have just ONE day where I didn't read or hear something about the Kardashians. But I digress...Recently our executive board met near Spearfish for our annual planning retreat. It was a chance to get together in person (one of the few times throughout the year we can do this, since we have members from all over the state) and discuss the current state of pharmacy. We shared ideas, received updates from Sue regarding some national issues, and made a game plan for the year ahead for SDPhA. At the same time, the lack of a dependable cell signal in that area allowed us to disconnect a little and enjoy some quiet time.

Speaking of game plans, I hope you will be able to join us in Sioux Falls in September for our annual meeting. The theme is

"Game On!" and we have planned a fun weekend with plenty of educational opportunities, as well as some down time to socialize and catch up with colleagues, friends, and students. If you have a favorite football jersey, bring it along. We're hoping to get colorful at our Friday night event, with as many people wearing football jerseys as possible. It certainly would make for a great "team photo." I will be wearing my purple #80 Cris Carter jersey, and hope to see some old school and new school ones there! This will be our second year with the shortened convention format, which seemed to go over very well last year in Deadwood. We have a full Friday, and will be done by noon on Saturday, giving you plenty of time to head up to Brookings for some tailgating before the Jacks game. Register online today at www.SDPhA.org, or use the registration form in the journal. Hope to see many of you there!

Until then, have a great summer, enjoy it when you can!

Regards,
Else Umbreit
President

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SOUTH DAKOTA BOARD OF PHARMACY

Randy Jones | Executive Director



NEW REGISTERED PHARMACISTS

The following candidates recently met licensure requirements and were registered as pharmacists in South Dakota: Mahmoud El-Emawy, Ricki Shaw, Joshua Van Veldhuizen, Stacey Kemmis, Justin Clark, Misuzu Naganuma, Jenna Sloan, Andrea Petrasko, Christina Bober, Tracy Haan, Nichole Keller, Christine Jensen, Caitlin Brannen, Laura Nielsen, Danielle Baird, and William Fugate.

NEW PHARMACIES

Pharmacy licenses have been issued recently to: Regional LTC Pharmacy – Pennington County Jail; Teresa Eastman PIC.

PSEUDOEPHEDRINE LOGS

As you are aware, pseudoephedrine logs need to be submitted to the Attorney General's Office on a monthly basis. Pharmacies are submitting these reports manually or electronically. Please be advised the Attorney General's Office can record this data in a timelier manner if the information is submitted to their office electronically. Law enforcement officers would then have information in a more real-time fashion to assist them with ongoing investigations. If you would like to report your pseudoephedrine sales electronically, please contact the Attorney General's office at 605-773-4624 and they can assist you with information on how to submit electronically.

RANDOM CONTROLLED SUBSTANCE AUDITS

Over the past several months, there have been multiple reports of drug diversions and Loss and Theft Reports filed with the DEA, the SD Department of Health, and our office. It is our board and staffs opinion that random controlled substance audits must be conducted on a routine basis. Once you have your protocols in place, this can be a very easy task to complete. In order to accomplish this, you must have a place to start such as the counts at your last inventory date. (A). You should also be proficient with your wholesale computer in order to establish the amount of the audit drug that you have purchased over the period you are auditing. We understand that NDC numbers for generics

can change frequently, however your wholesaler should be able to assist you to isolate the various NDC's purchased over this time period. Alternatively, you would need to pull invoices for the drug and to ascertain the number of doses purchased (B). Lastly, you would need to run a distribution report from your dispensing platform to capture the doses dispensed over the same time frame. (C). Therefore $A + B - C =$ should reflect what you have remaining on your shelves. If you are having difficulty or have any questions about this process or equation, please contact your inspector or the Board Office at any time.

PHARMACY PERMIT RENEWALS

According to SDCL 36-11-35, Pharmacy Permits expire on June 30th of each year. If you have not renewed or received your updated permit, please contact our office as quickly as possible as you would be in violation of statute.

NEW CONTROLLED SUBSTANCE

Lorcaserin (Belviq) has a currently accepted medical use in treatment in the United States. Lorcaserin HCL was approved for marketing by FDA as an addition to a reduced-calorie diet and exercise, for chronic weight management, and has been placed in the C IV class. The effective date of this ruling is June 7th, and a baseline inventory will need to be completed on this day.

PRESCRIPTION DRUG MONITORING PROGRAM (PDMP) UPDATE

The PDMP is moving forward from the implementation phase and 2012 start up to an "enhancement phase". Several enhancements are scheduled to increase efficiency and ease of use of the system. This summer, we will begin sending alerts to practitioners and pharmacies regarding patients who have breached a threshold of 6 practitioners and 6 pharmacies in a 90 day time period. We are planning survey activities to obtain user feedback on the system. A Grant has been written focusing on integration of PDMP data into the workflow of a SD Health System. The President's Office of Drug Control Policy has set

YTD 2013 Most Prescribed Drugs	RXs	Quantity	Quantity/Rx
Hydrocodone BIT/Acetaminophen	89,144	5,092,648	57
Zolpidem Tartrate	30,409	973,716	32
Lorazepam	26,174	1,265,390	48
Clonazepam	23,657	1,439,491	61
Alprazolam	18,255	1,043,382	57
Methylphenidate HCL	16,991	759,780	45
Amphetamine Salts	15,600	692,412	44
Oxycodone HCL	13,635	1,089,692	80
Oxycodone HCL/Acetaminophen	13,384	828,743	62
Acetaminophen with Codeine	10,665	459,133	43

SOUTH DAKOTA BOARD OF PHARMACY

(continued)

goals for 2013 to boost PDMP interoperability and use to support the fight against prescription drug abuse.

March 2013 marked the beginning of interoperability for South Dakota on NABP's PMP Interconnect program. We are currently data sharing with AZ, CT, IL, IN, KS, LA, MI, NM, ND, SC and VA. Many other states will follow and MN will be sharing data this summer. Practitioners may now run "multi-state" queries to obtain data on their patients who may have ties to other states. Our data shows we have 50% of all pharmacists and 25% of all practitioners who have requested and been granted on-line access. More users equates to better patient care. Please share the word on PDMP.

BOARD MEETING DATES

Please check our website for the time, location and agenda for future Board meetings.

BOARD OF PHARMACY STAFF DIRECTORY

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Board of Pharmacy Website..... www.pharmacy.sd.gov

ACADEMY OF STUDENT PHARMACISTS

Ashley Potter | APhA-ASP SDSU Chapter President



Summer is here! Student pharmacists have started their IPPEs, APPEs, or internships while APhA-ASP is reflecting on an eventful year and preparing for the year to come.

A NATIONAL PRESENCE

This year, our chapter was honored with the 2011-2012 Division AAA Chapter Achievement Award presented at APhA2013 in competition with 37 chapters.

The award recognizes our chapter for providing superior programming that embraces the future of pharmacy focusing on leadership, professionalism, membership, patient care, and advocacy. Additionally, we received the Region 5 APhA-ASP Operation Diabetes Award for our patient outreach in rural South Dakota. The awards were achieved under the leadership of Jared Sogn as president and Sara Wettergreen as president-elect of the chapter.

Sara was one of four students nationally recognized by the APhA-ASP Student Leadership Award for her outstanding academic achievement and leadership on the local, regional, and national levels through her term as the SDSU APhA-ASP Chapter President and member of the APhA-ASP Education Standing Committee. She was also one of 12 students, along with another SDSU student, to receive an APhA-ASP Foundation Scholarship. We are so proud of our chapter members for their hard work and accomplishments!

HIGHLIGHTS OF THE 2012-13 YEAR

Sara Wettergreen, president, and myself, Ashley Potter, president-elect, worked with the executive committee and eighteen chapter committees to design projects related to patient care, education, community, and professionalism, with a new focus on interprofessionalism and increasing collaborative efforts.

The SDSU APhA-ASP Operation Diabetes Committee organized a cultural diabetes education event for healthcare professional students in collaboration with dietetics students. "A Public Health Perspective on Diabetes: Prevention and Management" was presented by Michele Smith, RN, CDE and Judith Raker MPH, RN, CDE who work with the American Indian people of Nebraska's Winnebago Tribe. The presentation showcased a perspective on cultural challenges and opportunities faced in managing diabetes on the reservation. The 160 member audience formed interprofessional groups that discussed ways to overcome the challenges of providing community care in South Dakota.

The SDSU APhA-ASP Operation Heart Committee secured grant through the NACDS Foundation & Million Hearts 2013 Heart to Heart Community Health Fairs grant funds with the goal of screening 150 patients in March. We exceeded this goal by reaching 170 patients through a joint effort between five patient care committees. At each fair there were informational booths for hypertension, high cholesterol, tobacco cessation, immunizations, and aspirin therapy. There were seven events targeting low-income and underprivileged individuals through local churches, soup kitchens, and on-campus events.

(continued on page 18)



SOUTH DAKOTA STATE UNIVERSITY College of Pharmacy



Dennis Hedge | Dean



Greetings from the College of Pharmacy!

The College's academic year came to a successful conclusion with hooding and commencement ceremonies on the weekend of May 3rd and 4th. This year, the College had 69 students graduate with the Doctor of Pharmacy degree. The College also recently had a 13th student graduate from our Ph.D.

in Pharmaceutical Sciences program. As we said goodbye to these graduates, we began looking forward to our next group of students that will join us on the SDSU campus. This summer, we once again have the opportunity to spend time with members of the incoming Freshman Class and their family members during New Student Orientation sessions on the SDSU campus. These sessions are extremely important in helping students understand expectations and establish a connection to the College which has been shown to be critical in regard to student retention.

This summer will also be a time of leadership transition for our Department of Pharmaceutical Sciences due to the retirement of Dr. Chandradhar Dwivedi. Dr. Dwivedi will certainly be missed as he has contributed significantly to the success of the College of Pharmacy throughout his 26 years of service to South Dakota State University. Dr. Dwivedi's career will be forever remembered for his excellence in mentoring faculty and his inspiration of pharmacy students and graduate students to pursue knowledge and scientific discovery. In addition, his noteworthy contributions to the College of Pharmacy include development of a strong Ph.D. in pharmaceutical sciences program and expansion of the research portfolio of the Department of

Pharmaceutical Sciences. Dr. Dwivedi has consistently exemplified professionalism, humanity and citizenship, bringing distinction to him and our university, which is why he will be so greatly missed.

At the same time, all of us at the College of Pharmacy are very pleased that Dr. Omathanu Perumal has accepted the employment offer to become our next Department Head of Pharmaceutical Sciences. Dr. Perumal has been an outstanding member of our faculty during his time at STATE and he has an excellent record of developing collaborative partnerships. He also brings a strong background in intellectual property commercialization to the Department Head position.

In closing, I would like to publicly express my sincere appreciation for the great work of our faculty and staff over the course of this past academic year. They are a very talented and dedicated group, and they are often recognized for their excellence. In fact, within the past couple of weeks, Dr. Hemachand Tummala received the 2013 American Association of Pharmaceutical Scientists Innovation in Biotechnology Award, Dr. Eric Kutscher was honored with the title of "Fellow" by the American Society of Health-System Pharmacists, and Dr. Jayarama Gunaje was selected by our students as SDSU Students' Association College of Pharmacy Teacher of the Year.

Remember that summer is a great time for you to visit campus. We would enjoy giving you a tour of our facilities, telling you about our programs, and treating you to some SDSU ice cream.

Have a wonderful summer!

Warm regards,
Dennis D. Hedge, Dean of Pharmacy

SD SOCIETY OF HEALTH-SYSTEM PHARMACISTS

Kelley Oehlke, Pharm.D., BCACP | SDSHP President

Greetings from the South Dakota Society of Health-System Pharmacists!

37th ANNUAL SDSHP CONFERENCE

The 37th Annual Conference was held at the Rushmore Plaza Holiday Inn in Rapid City on April 12th and 13th. Despite the unseasonable weather conditions that left many unable to travel, 47 Pharmacists, 12 Pharmacy Technicians, 14 Pharmacy Residents, and 6 Pharmacy Students braved the elements to attend the conference. The conference also hosted 23 exhibit participants and 23 poster presentations. The 11 hours of continuing education were well received with overwhelmingly positive evaluations for all speakers and a new Clinical Pearls program was added. During the business meeting, new board members were inducted including Past President: John Kappes, President: Kelley Oehlke, President-Elect: Andrea Carder, Secretary: Gary Van Riper, Treasurer: Kathryn Schartz, Technician Board Member: Ann Oberg, Board Members: Tadd Hellwig and Rhonda Hammerquist, Resident Board Member: Joel Van Heukelom, and Student Board Members: Kirre Wold and Amanda Nelson. On behalf of the members, I would also like to thank the out-going board members: Erin Christensen, Katie Hayes, Debborah Cummings, and Kaitlyn Jude for all of their contributions to SDSHP and the profession of Pharmacy.

RECOGNITION

In addition to the excellent educational programming, several awards were presented at the annual conference. Brian Kaatz was awarded the Gary W. Karel lifetime achievement award which recognizes an individual of high moral character, good citizenship and high professional ideals who has made significant contributions to health-system pharmacy practice in South Dakota. Veronica Lesselyoung from Rapid City Regional was awarded the SDSHP Pharmacist of the Year and Megan Oltman from the Sioux Falls VA Health Care System was recognized as the SDSHP Pharmacy Technician of the Year. On behalf of the SDSHP board, members, and all pharmacists in the state of South Dakota, congratulations to our award recipients!

UPCOMING EVENT

Mark your calendars for the 12th annual Gary Van Riper Society Open Golf Classic at Bakker Crossing Golf Course on July 26, 2013. This 4-person scramble is a fundraising event to support our student pharmacists with scholarships and funding for the Clinical Skills Competition. Please visit our website at www.sdsdp.com or email Tyler Turek at tyler.turek@sanfordhealth.org for more information.



Society Open Golf Classic

**A Fund-Raising Golf Event
Supporting SDSHP's Student
Initiatives, Scholarships and the
ASHP Clinical Skills Competition**

July 26th, 2013

4-Person Scramble

Bakker Crossing Golf Course

47172 Clubhouse Rd., Sioux Falls, SD 57106

(605) 368-9700

**Registration / Driving Range / Putting Contest 8:30-9:45 AM
Shotgun Start at 10:00 AM**

Registration Fees:

Foursome: \$400.00 Individual: \$100.00 Student: \$50.00

Sponsors: Gold Sponsor: \$250 (includes 2 rounds of golf)

Platinum Sponsor: \$500 (includes 4 rounds of golf)

All sponsors receive special recognition as an event sponsor.

Registration fee includes range balls, 18 holes of golf, a shared cart, lunch, and a whole lot of FUN!!!

More Information and Registration Form Available

Online: www.sdsdp.com

Email: tyler.turek@sanfordhealth.org

SD ASSOCIATION OF PHARMACY TECHNICIANS

Twila Vavra | President

Greetings from the SDAPT.

I would like to remind all technicians that the Fall meeting for the SDAPT will be October 5th 2013 at the CUC building in Pierre. If you would like to register you may go on the website www.sdapt.org and get a form and send it to Diane Feiner. The fee is \$20.00 for non-members and free for members.

Remember July 1st will be a new year for members to renew their membership for the SDAPT and the cost is \$35.00. I will be sending letters and renewal forms out to the present members.

We are still looking for suggestions and comments on CE Topics and events for our Fall Meeting. We will be looking for new officers for the next year, so if you have anybody in mind or yourself please contact one of us.

Take care and enjoy your summer and fall.

Contact Information:

Twila Vavra, President..... tvavra@hotmail.com

Bonnie Small, President Elect bnnsmall@yahoo.com

Melanie Angelos, Secretary..... moniejo@msn.com

Diane Feiner, Treasurer dianefeiner@sanfordhealth.org

ASHP Honors South Dakota Pharmacist for Practice Excellence, Leadership

Kutscher Designated Fellow of the Society of Health-System Pharmacists



Eric C. Kutscher, Pharm.D., BCPP, South Dakota State University and Avera Behavioral Health Center, Sioux Falls, SD, was honored during the ASHP Summer Meeting and Exhibition held on June 4 in Minneapolis.

Fifty-one health-system pharmacists have been given the title "Fellow" by the American Society of Health-System Pharmacists (ASHP) in recognition of the excellence they have achieved in pharmacy practice. The 2013 Fellows were honored on Tuesday, June 4, 2013, during the ASHP Summer Meeting & Exhibition in Minneapolis.

The ASHP Practitioner Recognition Program rewards excellence in pharmacy practice by granting recognition and promoting public awareness of pharmacists who have distinguished

themselves in hospital and health-system pharmacy. Members who have achieved FASHP status have successfully demonstrated sustained commitment or contributions to excellence in practice for at least 10 years, contributed to the total body of knowledge in the field, demonstrated active involvement and leadership in ASHP and other professional organizations, and have been actively involved in and committed to educating practitioners and others. The program has recognized 771 Fellows since it began in 1988.

Attention!!

Pharmacists, Student Pharmacists and Technicians!



American Pharmacists Month will be celebrated in October. This month-long observance is a time to recognize the significant contributions to health care and the commitment to patient care by pharmacists in ALL practice settings from around the country. "Know Your MEDICINE, Know Your PHARMACIST" will serve as the theme and core message of the month.

The South Dakota Pharmacists Association Executive Board has issued a challenge to all of our Pharmacists, Students and Technicians this year!

We've developed a friendly competition to encourage you to develop/design some excellent ways to celebrate the profession. Interested parties should provide their vision, and detailed description regarding implementation. First prize: \$1,000; Second prize: \$300; Third prize \$200.

Some ideas include hosting an event in your practice setting, promoting your patient care services, participating in community activities or health fairs, and getting the attention of your local media to show folks what pharmacists can do as important members of the healthcare team!

Have a great idea? It could be worth \$1,000! Ideas/plans must be submitted by September 1, 2013, to Sue Schaefer at sue@sdpha.org, or mailed to P.O. Box 518, Pierre, SD, 57501. Our winners will be announced during the SDPhA Annual Meeting, September 13, 2013 at the Ramkota Hotel and Conference Center, Sioux Falls, SD.



127th Annual South Dakota Pharmacists Association Convention

Ramkota Hotel & Convention Center • Sioux Falls, SD

September 13-14, 2013

Line-up

Thursday Evening, September 12

6:00 p.m. – 8:00 p.m. “Pre-Game” Light Mixer • Ramkota

Friday, September 13

(Continental Breakfast Available 7:00 a.m. - 8:30 a.m.)

8:00 a.m. – 9:30 a.m. The Meaning of “Never-Always”
(toward greatness in healthcare delivery)
Dr. Wendell Hoffman

9:30 a.m. – 10:30 a.m. Ethics and Responsibilities of the Pharmacist-in-Charge
Randy Jones, RPh, Executive Director and Board of Pharmacy Staff

10:30 a.m. – 11:30 a.m. Business Meeting

11:30 a.m. – 1:30 p.m. Vendor Time/Luncheon/Awards Presentations

1:30 p.m. - 3:00 p.m. NASPA NMA Student Self-Care Challenge (Preceptor Training)
Dr. Teresa Seefeldt/SDSU Students

3:00 p.m. – 3:30 p.m. SDSU Ice Cream Social

3:30 p.m. – 5:00 p.m. New Drug Update
Dr. Joe Strain

6:00 p.m. – 9:00 p.m. Tailgating Time with “Mogen’s Heroes” • Ramkota

Saturday, September 14

8:00 a.m. – 9:00 a.m. Continental Breakfast/Second Business Meeting

9:00 a.m. – 10:00 a.m. Prescription Drug Monitoring Program Update
Kari Shanard-Koenders, PharmD

10:00 a.m. – 12:00 p.m. Immunization CE - CPR Refresher ****LIMITED AVAILABILITY****
Sioux Falls Metro EMS



127th Annual South Dakota Pharmacists Association Convention

Registration Form

Ramkota Hotel & Convention Center | Sioux Falls, SD | September 13-14, 2013

All SDSU Student Registrations are FREE!
(Hotel not included)
Registrations must be submitted prior to Aug. 13, 2013

Name: _____
 Address: _____
 City: _____ State: _____ Zip: _____
 Business Name: _____
 Business Address: _____
 City: _____ State: _____ Zip: _____
 Business Phone: _____
 Home Phone: _____
 Email Address: _____
 Spouse/Guest Name: _____

eProfile ID: _____

For Hotel Reservations Call:
 Ramkota Hotel & Convention Center
 3200 West Maple Street - Sioux Falls, SD 57107
 (605) 336-0656

Cancellation Policy:

Cancellations will be accepted without penalty prior to September 2, 2013.
 A \$25 cancellation fee will be applied to all cancellations after September 2, 2013.

Refunds will be issued after October 1, 2013.

*Full Registration includes all educational sessions, exhibits, meals and evening events.

**One-day Registration includes educational sessions, exhibits, meals and evening event, if applicable.

	SDPhA Member	Spouse or Guest	Children	SDAPT Member	Pharmacy Technician	Pharmacy Student	Non SDPhA Member
Full Registration* Before August 13, 2013	\$150	\$75	\$20	\$75	\$125	Free	\$225
After August 13, 2013	\$175	\$100	\$20	\$100	\$140	Free	\$250
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Public Response to DEA's National Prescription Drug Take-Back Days Keeps Growing

October 26, 2013 Next DEA Prescription Drug Take-Back Day

The United States Drug Enforcement Administration's (DEA's) Sixth National Prescription Drug Take-Back Day this past April collected 50 percent more pills than the previous one, demonstrating the American public's continued appreciation and need for the opportunity to discard unwanted, unused and expired prescription drugs from medicine cabinets, bedside tables, and kitchen drawers.

On April 27, 742,497 pounds (371 tons) of prescription medications were collected from members of the public at

more than 5,829 locations manned by 4,312 state, local, and tribal law enforcement agencies that partnered with DEA on the event. When added to the collections from DEA's previous five Take-Back events, more than 2.8 million pounds (1,409 tons) of prescription medications have been removed from circulation.

The National Prescription Drug Take-Back Day aims to provide a safe, convenient, and responsible means of disposing of prescription drugs, while also educating the general public about the potential for abuse of medications.

Country Singer Brings Music Back Home to South Dakota

David Rookhuyzen | Capital Journal

Originally Published May 14, 2013

A South Dakota artist trying to make it big on the Texas country scene is bringing her music back home.

Rehme Sutton will play at the Casey Tibbs South Dakota Rodeo Center at 8 p.m. on May 22 as part of a promotional tour for her debut album, "Long Road Home." In addition to Fort Pierre, she has scheduled stops in Sturgis, Deadwood, Yankton and her hometown of Burke, a community of about 600 people in Gregory County.



Photo courtesy of RPR Media

But after earning her degree she decided to chase her dream of recording an album rather than concentrating on pharmacy.

"I felt like that was a career I could do all my life, and this was something I could miss out on," she said.

The degree has come in handy, as she works for an independent pharmacy in Stephenville, Texas, to help pay for her music career.

Sutton said she moved to Texas because, unlike some other

areas, an up-and-coming artist can have a place to play every night. The experience has also helped her become a better musician and guitar player, she said.

Sutton spent much of the time between February and October last year working on her album, which was released last week. The response has been encouraging. "Long Road Home" was in the top 50 album downloads on iTunes after being released, and was still in the top 200 when she checked it a couple days ago. Sutton said she attributes that to backing from home.

"I know 99 percent of the support came from South Dakota," she said.

Sutton, who wrote or co-wrote all the songs on the album, said the inspiration for her music comes from everyday things, especially the interactions people have with each other. One track on the album is also about her brother, Billie, who was paralyzed from the waist down in a rodeo accident and now serves as a state senator.

Musically, she gets her inspiration from the older country artists she listened to growing up, such as Keith Whitley, George Jones and Loretta Lynn, mixed with some of current mainstream music.

Sutton said she's excited to tour through South Dakota. It's good to be getting back to her home state, especially to Burke, and reconnect with friends and family she hasn't seen in a while, she said.

"Burke's always been a really cool community because everyone supports everyone," Sutton said.

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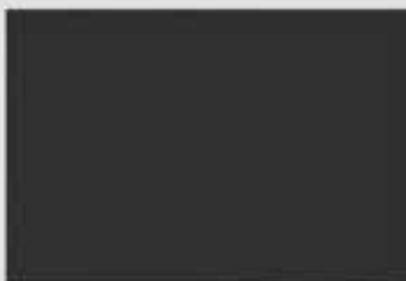
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FINANCIAL FORUM

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Eight Tips for Planning Your Retirement

A few simple steps to help you get started on the right foot

Planning financially for retirement may feel overwhelming. For some, that feeling is what keeps them from really focusing on and implementing a plan. If you haven't started planning for your retirement – do yourself a favor and make TODAY the day you begin.

1. The earlier the better.

Time is definitely one of your greatest allies. A person who begins contributing a modest amount to a retirement plan in their early twenties could end up on par with someone who contributes much more aggressively but does not start until their mid-thirties. Even if you have to start small, start now. Whatever amount you can afford to set aside for later, do it – and let it grow. If you don't have the luxury of starting young, don't waste time worrying about it. Start now. You'll never again be younger than you are today.

2. Be smart about what you'll need.

Yes, it's true – the senior discount is alive and well, and the general cost of living may be less for those who have retired. But don't forget, there are other costs to consider. Your healthcare costs, for example, may be greater in retirement simply because you're not as healthy as you were in your youth. Additionally, you'll want to take inflation into account. If you plan your retirement based on the cost of living and income of your 30s, by the time you hit your retirement years, you may find you greatly underestimated your needs.

3. Be smart about how long you'll need it.

When Social Security was being developed, in the 1930s, a male retiring in the United States was really only expected to live about 12 years past his date of retirement.¹ However, the average life expectancy of a United States citizen has risen fairly steadily throughout the last fifty years.² Depending on when you retire, you may need to plan for 20 or more years of income.

4. Take advantage of tax-deferred contributions.

It sounds like a no-brainer, but sometimes people determine

how much they can afford to contribute to a retirement account based on their net income, rather than their gross income. You may decide you can only afford \$50 less per paycheck, net. But remember that some contributions, like those to your 401(k) for example, may be made with pre-tax dollars. That means you can afford to contribute a bit more from your gross income and still only "miss" \$50 from your net income. This is an important consideration.

5. Take advantage of matching contributions.

If your employer offers a 401(k) match – consider scrimping here and there in order to take maximum advantage of it. It's a very positive domino effect. The more you contribute, the more you earn in matching contributions (up to the maximum allowable amount). Think of it this way – if your employer offers a 50% match, then for every \$100 you don't contribute, you're missing out on \$50 in "free money". You're also missing out on the growth potential of that money as well.

6. Do the math.

This might be the most important retirement tip of all. Block off some time to sit down and do some calculations. Consider the different levels of contributions you could make and calculate how far those could take you by the time you reach retirement. Once you see what you COULD achieve, you may be more motivated to increase your contributions.

7. Trim the fat.

Keep careful track of your spending for one month (if you bank online, you may have access to tools that help you do this). After one full month, sit down and take a careful look at what you spent money on. Did it all make sense? Was some of it frivolous? Any regrets? Taking a close look at exactly where your money is going is often the best way to discover areas that need improvement, and ways you could adjust your spending habits. Add up all the money you feel you spent unnecessarily, then add that amount to the contribution math you did previously ... how much further might that extra monthly contribution have taken you?

(continued on page 19)

ACADEMY OF STUDENT PHARMACISTS

(continued from page 7)

The SDSU APhA-ASP Operation Immunization Committee partnered with the students from the SDSU College of Nursing and with the SDSU Health Clinic to coordinate mass immunizations for student pharmacists. Nursing students administered flu vaccinations, hepatitis B vaccinations, and TB screenings to 100 first- and second-year student pharmacists.

This year we participated in the Script Your Future Medication Adherence Campaign with the goal of educating rural and elderly populations in South Dakota. A letter to the editor was written and distributed to 31 city newspapers, while eight radio stations aired public service announcements across the state. Social media was used and, with the help of SDPhA, the chapter emailed 1,041 South Dakota pharmacists asking for their help in promoting the medication adherence.

Finally, we participated in the APhA-ASP/International Pharmaceutical Students' Federation (IPSF) Student Exchange Program for the first time by hosting student pharmacist, Asta Rauma, from Finland. In May, she spent three weeks in South Dakota, where she gained U.S. pharmacy experience in the SDSU Pharmaceutical Sciences Labs, the Brookings Hy-Vee Pharmacy, and the Sioux Fall V.A. Health Care System. Additionally, she spent time getting to know SDSU students after hours and on weekends. We are excited to host more international students in the future!

All of our projects were made possible by members who have gone above and beyond to contribute to the chapter. We have recognized six students with our member of the year awards as follows: Maria Confina Labao (Pre-Pharmacy), Brittany Williams (P1), Joe Berendse (P2), Miranda Mercer and Amber Burke (P3), Lee Cordell (P4). Finally, our senior recognition award was presented to Jared Sogn for his overall contribution and dedication to APhA-ASP throughout his college career.

INCREASING INVOLVEMENT WITH STATE ASSOCIATIONS

The year's collaborative efforts with SDPhA began with their support in helping 43 student pharmacists attend the SDPhA Annual Convention in Deadwood. This was a great experience for student and professionals alike to come together on behalf of pharmacy in the state of South Dakota.

In January, 55 students traveled to Pierre in collaboration with SDPhA to participate in Legislative Days by screening and providing healthcare education to state legislators, lobbyists, and employees. This was a very special year for SDPhA and APhA-

ASP as the South Dakota PBM Audit Fairness Bill was moving through the Senate, and our chapter's SDPhA Liaison, Eric Grocott, had an active role in writing the bill. Students had the opportunity to speak for the bill on their own behalf, and later participate in a letter writing campaign while the bill was passing through the House.

We would like to thank Eric and other student leaders who work closely with SDPhA to continue developing projects that benefit us both! Eric has also been working on growing our relationship by agreeing to spend another term as the APhA-ASP SDPhA Liaison in order to mentor a second liaison, second-year student pharmacist, Amber Olson. His idea is to make this a transitional office promoting continuity in the future.

We also had two student liaisons appointed to SDSHP Board last year. They secured a grant over the past year to work on health system related leadership programming and projects. Some of their events include residency showcases for student pharmacists, a mentor-mentee program connecting student pharmacists with health system pharmacists in South Dakota, and hosting various speaking events throughout the year.

THE YEAR TO COME

With successful years behind us, we are looking forward to the 2013-2014 year including maintaining a presence on the national level. For the next year, our immediate past president, Sara Wettergreen, sits as vice chair of the APhA-ASP Education Standing Committee where she will lead the committee in further developing patient care initiatives for chapters across the nation. I also have an exciting opportunity to represent SDSU nationally and internationally with my appointment as the APhA-ASP/IPSF Student Exchange Officer-elect position with a spot on the APhA-ASP International Standing Committee. I will work over the next two years to host students like Asta in the U.S. and to send American students abroad for similar experiences. With the generous support of the SDSU College of Pharmacy, I will be attending the IPSF World Congress in Utrecht, The Netherlands, this summer as an official U.S. delegate representing APhA-ASP internationally.

Over the summer months, our executive committee will work to make a plan for the upcoming year. We are excited to host more innovative events, continue community outreach and patient care, work interprofessionally, and to continue to collaborate with our college of pharmacy and state associations. Thank you, SDPhA, for your continued support and let it be another great year to come!

Financial Forum: Eight Tips for Planning Your Retirement

(continued from page 17)

8. Get help.

These retirement tips are intended to help you get started down a path toward, potentially, a more successful retirement. But they're just that – a starting point. While it's definitely important to educate yourself and understand your finances, seeking the assistance of a financial professional may be one of the best moves you could make.

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PHARMACY TIME CAPSULES

Dennis B. Worthen Lloyd Scholar, Lloyd Library and Museum, Cincinnati, OH

1988 TWENTY-FIVE YEARS AGO

- Average prescription cost was \$16.60 according to the Lilly Digest
- 40% of prescriptions were covered to some extent by third party programs, an increase of 10% over the previous year.

1963 FIFTY YEARS AGO

- Laetrile, a purported anti-cancer drug, derived of amygdalin, an extract of apricot pits was banned by the FDA as non-effective.
- Ampicillin (Polycillin) first marketed by Bristol Labs in the U.S. under license from Beecham.

1938 SEVENTY-FIVE YEARS AGO

- APhA laboratory opens in Washington, DC-devoted to the establishment and improvement of standards for the official drugs and medicines contained in the National Formulary and the United States Pharmacopoeia.
- The March of Dimes was established by President Franklin Delano Roosevelt. The organization was originally called the National Foundation for Infantile Paralysis.

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Continuing Education for Pharmacists

“Pharmacist Consult: Athletic Performance, Part 1: Hydration and Electrolytes”

—Knowledge-based CPE

Pharmacist Learning Objectives

1. Evaluate the significance of sweat-loss rates among athletes.
2. Identify various levels of hypohydration, and evaluate the potential impact on athletic performance.
3. Explain variations in fluid and electrolyte loss among athletes.
4. Recommend a common sense fluid and electrolyte replacement strategy for athletes.

Pharmacy Technician Learning Objectives

1. Describe the significance of sweat-loss rates among athletes.
2. Identify several key levels of hypohydration, and describe the potential impact on athletic performance.
3. Denote variations in fluid and electrolyte loss among athletes.
4. Outline a common sense fluid/electrolyte replacement strategy.

Hydration and electrolytes

Overview—One of the most important factors in peak athletic performance is maintaining optimal hydration and electrolyte



Bernie Hendricks, RPh
Continuing Education Coordinator
South Dakota State University
College of Pharmacy

levels. This is particularly true for endurance events, but may be a performance factor in shorter, more intense training and competition events as well.

For athletes, “a decrease in body water from normal levels (often referred to as dehydration or hypohydration) provokes changes in cardiovascular, thermoregulatory, metabolic, and central nervous function that become increasingly greater as dehydration worsens.”¹ The effects of this on athletic performance may be significant, with dehydration effects on performance in hot, humid conditions even more pronounced than the same relative dehydration during cooler conditions.

Water and salt loss during physical activity - Sweating rates can vary quite markedly among athletes, even under the

same conditions (temperature, humidity, physical output).

Sweating rates for many athletes may be as little as 100 ml (3 oz) per hour during moderate exercise in cool environments, ranging up to as high as “3,000 ml/h (roughly 100 oz)” among athletes engaged in “vigorous exercise in a hot environment.”¹

Large amounts of salt (sodium chloride) may be lost during episodes of intense sweating. Under normal conditions “human sweat contains 40-50 mmol of sodium per liter (920 to 1,150 mg/L).” A large sweat loss over the course of a day by a given athlete could therefore lead to sodium depletion in the range of “4,600 to 6,750 mg (the equivalent of 11.5 to 14.4 g of salt).”¹

At the same time, highly trained athletes who are “fit and acclimated to the heat typically benefit from enhanced sodium reabsorption in the sweat-gland tubule, an adaptive response that helps protect plasma volume by lowering sodium loss.”¹ These athletes may consequently be “capable producing sweat with less than 20mmol of sodium per liter. Salt loss in itself does not have

a direct impact on physical performance, but adequate replacement of sodium chloride during physical activity (food/supplements) can help encourage voluntary fluid intake, protect plasma volume, and reduce urine production—all responses that promote hydration.”¹

Dehydration: physiologic effects

- The effects of even moderate dehydration start to become “measurable early in exercise.” Losing fluid equal to as little as 1-2% of body mass may show some early signs of compromising thermoregulatory and cardiovascular functions, and these effects may be noticed within as little as 30 minutes. A loss of 2% of body mass through sweating, particularly when accompanied by heat stress, may begin to trigger noticeable declines in physical performance. And as dehydration progresses in an athlete, the deterioration in physiologic functions accel-

erates.¹

A study of fit cyclists verified that, “progressive dehydration [up to] 4.9% of body mass during two hours of cycling in the heat (65% VO₂max; 95°F) caused heart rate, core temperature, and perceived exertion ratings to continually increase over time, while blood volume, stroke volume, cardiac output, and skin blood flow all decreased.”¹

Dehydration during periods of sustained exercise generates increased “thermoregulatory stress, cardiovascular strain, negative changes in muscle metabolism (e.g., accelerated rate of glycogen depletion), and alterations in central nervous system function (e.g., reduced motivation and effort).”¹ The overall outcome results in premature muscle fatigue and performance limitations - versus what would have otherwise

have been possible in a fully hydrated (euhydrated) state.

Athletic performance - In one 2007 study (Ebert, et al) testing rehydration benefits in uphill cycling, a low fluid intake protocol during 2 hours of submaximal cycling resulted in a 2.5% reduction in body mass, while a high fluid intake protocol resulted in a 0.3% gain in body mass.

A “performance task” was then initiated – intense cycling to exhaustion. At the conclusion of the performance task, dehydration status in the low fluid intake group resulted in a loss of 3.6% of body mass, while the high fluid intake trial generated a loss of only 1.3% of body mass. “Every subject performed worse on the low-intake trial. Average time to exhaustion was 5.6 min shorter, a relative performance impairment of 28.6%.”¹

General conclusions on sweat-loss dehydration (as a percent of body mass)

1-2% - Normally little, if any, degradation of athletic performance while exercising for less than 90 minutes in moderate temperatures.²

2-3% - No significant compromise in “sprint running performance.”²

Several studies have determined that sweat loss equivalent to 2-3% of body mass has been “associated with a deterioration in the ability to execute sport-specific skills.”² One study reported that basketball players attempted fewer shots and shot a lower percentage of shots ‘on the move’ when their dehydration reached a level of 3% of body mass. And a 4% deficit triggered additional shooting impairment.

Above the 2% level—consistent degradation in aerobic performance, particularly in warm-hot conditions. In addition, the warmer the conditions, the greater aerobic performance degradation.

When heat stress is not a factor, “mild-moderate dehydration (up to 3% body mass loss) is unlikely to be associated with reductions in cognitive function, psychomotor function, mood, mental readiness.”²

>3% - Cognitive function (“psychomotor function, mood, mental readiness”) may be influenced by hypohydration greater than 3% of body mass or even with more moderate hypohydration when combined with heat stress (versus what is typically experienced in cooler conditions).²

3-4%- Degradation in performance is generally significant in “high intensity endurance” exercise. However, there appears to be little compromise in “muscle strength, jumping ability or anaerobic performance.”²

Pre-exercise hypohydration

It is important for athletes to maintain hydration prior to engaging in training or competition events. One meta-analysis review found that athletes who happened to be hypohydrated prior to beginning exercise experienced a reduction of "mean power output by 3.2% relative to control trials where hydration was maintained."² The review also noted that when pre-exercise hypohydration reached 3% or more of body mass, endurance performance was also impaired.²

Variation in dehydration rates between sports - swimmers, due to the fact that they train in water, may not display the same sweating adaption as those who train on dry land. In one study, 10 swimmers were compared to 10 runners in a cycling exercise "in the heat (90°F and 40% relative humidity) for 30 min at a similar intensity relative to their maximal cycle test."³ The swimmers on average lost 0.9 liters of sweat, while the runners each lost approximately 1.5 liters of sweat.

The swimmers, however, experienced a greater loss of sodium (about 65 mmols) and chloride (61 mmols), in comparison to the runners who lost only 45 mmols of Na and 39 mmols of Cl.

Variation in electrolyte loss among athletes - Certain athletes may also lose electrolytes like sodium at greater rates through sweating than others under similar conditions. One study of Division I college football players found that those players with a history of

cramping (C) lost significantly more sodium during "two-a-day" practices than those with no history of cramping (NC).

"When averaged across two practices within the day, fluid intake was similar between groups" (2.6 to 2.8 liters), and gross sweat loss was similar (C: 4.0 liters vs NC: 3.5 liters). The concentration of "sweat potassium was similar between groups, but sweat sodium was two times higher in C versus NC (54.6 +/- 16.2 vs 25.3 +/- 10.0 mmols/L)."⁵

The study concluded that even though both groups "consumed sodium-containing fluids (on field) and food (off-field), both appeared to experience acute sodium losses." The larger losses of sodium by certain players during acute sweating, however, appear to be "characteristic of football players with a history of heat cramping."⁵

As athletes become acclimated to strenuous training in hot conditions ("heat-exercise acclimation"), sweat loss may actually increase - to more efficiently maintain a lower core body temperature for longer periods of time. At the same time, "heat-exercise acclimation" has also been shown to help athletes better conserve sodium, along with certain minerals like calcium, copper and magnesium.⁴

Maintaining hydration and electrolytes - How should athletes estimate their fluid and electrolyte needs during training and competition? According to the International Olympic Committee (2004 Consensus Conference), "Sufficient fluid should be consumed during exercise to limit dehydration to less than about 2%

of body mass. Sodium Should be included when sweat losses are high, especially if exercise lasts more than about 2 hours. Athletes should not drink so much that they gain weight during exercise. During recovery from exercise, rehydration should include replacement of water and salts lost in sweat."²

As previously noted, electrolyte loss during profuse sweating episodes can be significant, with the potential to considerably impair performance. Sodium loss may be acute, with the ability to retain fluids during rehydration thereby compromised.

Potassium, magnesium and calcium are also key factors in maintaining peak athletic performance. They support efficient muscle function, ATP reloading, and recovery time during periods of intense exercise, and they also need to be replaced. Additional information on the athletic performance impact of magnesium and potassium will be coming later in this series.

Athletes may also experience acute iodine loss during heat-stress. Thirteen male soccer players and 100 sedentary students were evaluated during the same eight-hour period during which the soccer players were training.. The loss of iodine through profuse sweating among the soccer players was significant versus the controls. Further evaluation found that "Forty-six percent of the players had Grade I goiter, compared with a mere 1% of the sedentary students ($p < 0.01$). The results of the study suggest that loss of iodine through profuse sweating may lead to iodine deficiency."⁶

Replenishment formulations

While it is not within the scope of this report to review or specifically recommend any of the various fluid/electrolyte replacement drinks currently on the market, a brief evaluation of chocolate milk will be provided, since it is a noncommercial post-exercise recovery drink that is currently gaining in popularity.

Chocolate milk replenishes several of the key electrolytes lost during heat-stress, such as potassium, magnesium and calcium. It also provides protein for muscle repair and glycogen to refuel muscles.

One study on runners revealed that “ingesting chocolate milk after a

run supported skeletal muscle protein synthesis during recovery.” Muscle biopsies from those drinking 16 oz of fat-free chocolate milk for their post-exercise recovery drink showed “heightened markers of muscle protein repair compared to the carbohydrate drink.”⁷

It was also discovered in testing the same eight runners, that chocolate milk replenishes “glycogen stores in muscles, a source of fuel during prolonged exercise,” more efficiently than the carbohydrate beverage.⁷

Conclusion

Fluid and electrolyte losses during athletic training and competition

events can be significant. As those losses accelerate, particularly in hot conditions, athletic performance will be degraded.

Fluid and electrolyte losses may vary appreciably between athletes and between sports. And training/heat acclimation may help athletes to more efficiently maintain lower core body temperatures and at the same time conserve important electrolytes.

Maintaining normal fluid and electrolyte levels during training and competition plays a major role in supporting peak athletic performance.

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Declaration: The author developed the material for this article independently and has never had a financial relationship with any commercial party having a vested interest in the material presented.

“Pharmacist Consult: Athletic Performance, Part 1: Hydration and Electrolytes”

Continuing Education Quiz

1. Sweating rates among athletes normally range from as little as 100mL per hour up to as high as:
a. 3,000mL/h b. 3,000 L/h c. 30,000 L/h d. Rates don't vary
2. A large sweat loss over the course of a day by a given athlete could lead to a sodium depletion in the range of:
a. 4,600 to 6,750 grams b. 4,600 to 6,750 mg c. very little loss d. Sodium loss is not important
3. Highly trained athletes who are fit and acclimated to the heat may adapt sufficiently (through reabsorption of sodium in the sweat gland tubule) to lower their sodium loss to as little as 20mmol/L .
a. True b. False
4. Adequate sodium chloride (NaCl) replacement provides these benefits for athletes (**select all that apply**):
a. Protects plasma volume b. Decreases urinary output c. Discourages fluid intake d. No benefit
5. Dehydration during periods of sustained exercise may trigger these effects (**select all that apply**):
a. Negative changes in muscle metabolism c. Increases thermoregulatory stress
b. Alterations in CNS function d. Cardiovascular strain
6. Select the body mass sweat loss level that best matches this effect: **“No significant compromise in sprint running performance, but certain sport specific skills may begin to be affected.”**
a. 1-2% b. 2-3% c. 3-4% d. 4-5%
7. Select the body mass sweat loss that best matches this effect: **“Degradation in performance is generally significant in high intensity endurance exercise.”**
a. 1-2% b. 2-3% c. < 1% d. 3-4%
8. Sweating rate adaptations have **NOT** been shown to vary between trained swimmers and trained athletes in dry-land sports.
a. True b. False
9. For fluid replacement, the International Olympic Committee recommends that athletes drink sufficient quantities of water to actually “gain weight” during the training or competition event.
a. True b. False
10. It is possible for athletes may experience acute iodine loss during heat-stress.
a. True b. False
11. As a sports replenishment beverage, chocolate milk may provide certain benefits for athletes superior to those with typical carbohydrate beverages.
a. True b. False
12. Under intense training and heat acclimation, athletes often adapt to more efficiently maintain lower core body temperatures and conserve important electrolytes.
a. True b. False

"Pharmacist Consult: Athletic Performance, Part 1: Hydration and Electrolytes"

—Knowledge-based CPE (Knowledge-based CPE)

To receive 1.5 Contact Hours (0.15 CEUs of continuing education credit, read the attached article and answer the 12 questions by circling the appropriate letter on the answer form below and completing the evaluation.. A test score of 75% or better is required to earn credit for this course. If a score of 75% (9/12) is not achieved on the first attempt, another answer sheet will be sent for one retest at no additional charge.



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Learning Objectives - Pharmacists: 1. Evaluate the significance of sweat-loss rates among athletes; 2. Identify various levels of hypohydration, and evaluate the potential impact on athletic performance; 3. Explain the variations in fluid and electrolyte loss among athletes; 4. Recommend a common sense fluid and electrolyte replacement strategy for athletes.

Pharmacy Technician Learning Objectives: 1. Describe the significance of sweat-loss rates among athletes; 2. Identify several levels of hypohydration, and explain the potential impact on athletic performance; 3. Denote key variations in fluid and electrolyte loss among athletes; 4. Outline a common sense fluid/electrolyte replacement strategy for athletes.

Circle the correct answer:

- | | | |
|------------|------------|-------------|
| 1. A B C D | 5. A B C D | 9. A B C D |
| 2. A B C D | 6. A B C D | 10. A B C D |
| 3. A B C D | 7. A B C D | 11. A B C D |
| 4. A B C D | 8. A B C D | 12. A B C D |

Course Evaluation – must be completed for credit.

	Disagree					Agree	
Material was effectively organized for learning:	1	2	3	4	5	6	7
Content was applicable for re-licensing :	1	2	3	4	5	6	7
Each of the stated learning objectives was satisfied:	1	2	3	4	5	6	7

List any learning objectives above not met in this course: _____

List any important points that you believe remain unanswered: _____

Course material was balanced, noncommercial:	1	2	3	4	5	6	7
Learning assessment questions appropriately measured comprehension	1	2	3	4	5	6	7
Length of time to complete course was reasonable for credit assigned	1	2	3	4	5	6	7

(Approximate amount of time to preview, study, complete and review this 1.0 hour CE course: _____)

Comments:

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IN MEMORIAM

Robert Nelson



Robert Emmett Nelson died unexpectedly on Saturday evening May 25th, following a brief illness and complications from Pulmonary Fibrosis.

Bob, as he was known to family and friends, was born April 29, 1939, in Garretson, SD, to George Emmett and Gertrude Nelson.

He was raised with his family and brother Rolly in Garretson, SD, where he excelled in various activities at Garretson High School graduating in 1957. He attended Drake University where he completed his Degree in Pharmacy and ultimately returned to Garretson where he purchased and continued to manage the family business, Johnson Drug Co.

Later in life he was married to Barbara Emery of Luverne, MN, and they continued their lives together in Sioux Falls, SD.

Having enjoyed his life and his heartfelt laughter were his wife, Barbara; children, daughters-in-law and grandchildren: Christopher and Robbin and their children Alexandra, Keeghan, Kailey and Mason, of Sioux Falls; Matthew and Carrie and their children Ashby, Ainsley, Abrielle and Alijah of Wausa, NE; Jonathan and Jackie and their daughter Anika, of Sioux Falls; Step-children Timothy and Janet Emery and their children Adam, Alexander, Brooke and Sydney, of Burnsville, MN; Christina and Ousman Jobe and their children Samba and Saloum, Brooklyn Park, MN; and Daniel Emery of Oregon.

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