



Naval Health Research Center Update

Summer/Fall 2010

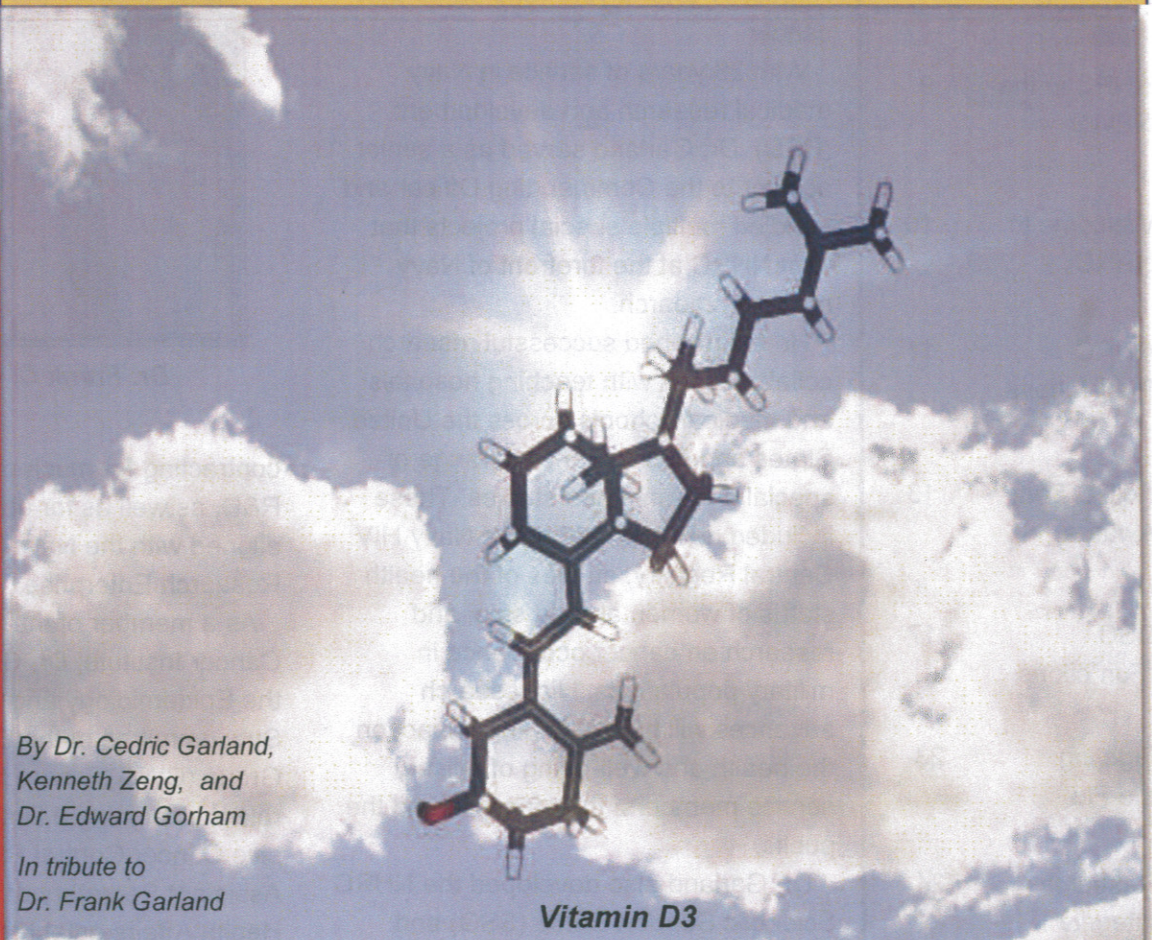
NHRC Explores Vitamin D: The New Horizon for Disease Prevention

Research Integrity Corner

*"If I review
this article
for you,
would you list
me as third
author?"*

HOW WOULD
YOU
RESPOND?

- Page 24



*By Dr. Cedric Garland,
Kenneth Zeng, and
Dr. Edward Gorham*

*In tribute to
Dr. Frank Garland*

Vitamin D3

New research has found many emerging benefits of vitamin D for human health of all ages. Recent discoveries illustrating the wide range of health benefits of vitamin D include beneficial effects on fracture risks, bone disease, muscle strength, cognition, respiratory diseases, and depression.

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Readiness Through Research and Development

50 Years of Excellence

1959 ~ 2009

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Dr. Frank Garland

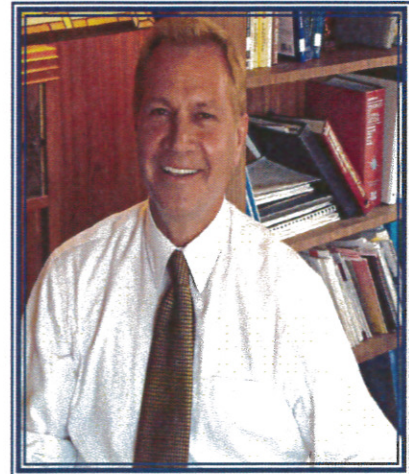
1950—2010

Dr. Frank C. Garland, Technical Director at Naval Health Research Center (NHRC) passed away on August 17 after a year-long battle with cancer.

With 28 years of service in Navy medical research and development (R&D), Dr. Garland served as a senior advisor to the Commanding Officer and handled multiple special projects that kept NHRC at the forefront of Navy medical research.

He established successful research collaborations with teaching hospitals and medical schools across the United States and oversaw a wide range of special programs and studies. These included development of the Navy HIV Central Registry, studies of the health status of women aboard ship, and research on cancer occurrence in military populations. His research advances will have a lasting impact on the health and well-being of military service members, their families and the public.

Dr. Garland also developed the NHRC Scientific Support Office (SSO) and served as its director. In this capacity, he managed a large portfolio of Congressional Special Interest Programs for the Navy Bureau of Medicine and Surgery that were directed toward medical research projects within and outside the Department of Defense (DoD). Under his stewardship, the SSO grew to support



Dr. Frank C. Garland

contracting for much of Navy Medical R&D, as well as for other agencies aligned with the Naval Medical Research Enterprise.

As a member of the US Military Cancer Institute, Dr. Garland chaired the Epidemiology and Surveillance Subcommittee of the Cancer Working Group (CWG), where he had a major role in designing a DoD Comprehensive Cancer Control Plan. The Assistant Secretary of Defense for Health Affairs established the CWG to address cancer in military service members and their families, who comprise one of the largest defined populations in the world with standardized access to health care and centralized sources for routinely collected medical and demographic information.

Continued on Page 3—FRANK GARLAND

FRANK GARLAND—Continued from Page 2

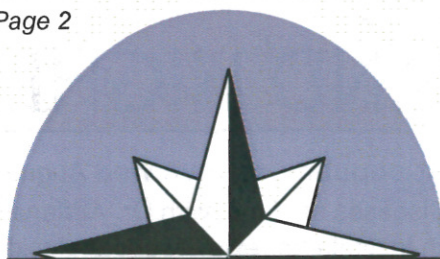
VITAMIN D RESEARCH

Dr. Garland was a world-recognized leader in the field of vitamin D and disease prevention. He conducted ground-breaking research on vitamin D and risk of cancer, diabetes, and other chronic diseases.

In 2006, the International Journal of Epidemiology reprinted, in its original form, an article originally published in 1980 by Dr. Garland concerning sunlight, vitamin D, calcium, and colon cancer mortality. This was followed by a set of commentaries by scientists from several countries on the importance of this seminal paper in the history of preventive medicine. The reprinting of his article recognized the 25th anniversary of its original publication.

In 1989, Dr. Garland extended this area of research to include development of the theory on epidemiological grounds that vitamin D and calcium help prevent cancer of the ducts and lobules of the female breast. These two disorders constitute the most common form of breast cancer in the United States.

Dr. Garland later co-authored



“Although well-known outside of NHRC for his sentinel work on vitamin D and cancer, we knew Frank Garland as our technical director, founder of the SSO and its capabilities, a strategic leader, senior epidemiologist, and friend to many.”

*– CAPT Gregory Utz,
Commanding Officer*

several respected publications marshalling the evidence for this theory, including chapters in medical texts.

As an adviser to the National Academy of Sciences, Dr. Garland co-authored an invited presentation to the National Academy of Sciences-Institute of

Medicine, Committee on Dietary Reference Intakes for Calcium and Vitamin D. This committee is expected to update the recommended intake of vitamin D in the United States in response to this briefing and other supporting evidence.

AFFILIATIONS

Dr. Garland also served as professor in the Department of Family and Preventive Medicine at the University of California, San Diego (UCSD) School of Medicine, and as a participating member of the Moores Cancer Center at UCSD and of the US Military Cancer Institute.

He was elected a Fellow of the American College of Epidemiology.

Dr. Garland was born in San Diego, and was knowledgeable about his native region and its natural history. He received his bachelor's degree in history from the University of California Los Angeles and doctor of philosophy in epidemiology from The Johns Hopkins University in Baltimore.

COMMAND HIGHLIGHTS

Adenoviruses in military recruit populations reviewed August 2010

The Department of Respiratory Diseases staff met with Dr. Adriana Kajon, Associate Scientist, from Lovelace Respiratory Research Institute, to review work to elucidate emerging and re-emerging adenoviruses in military recruit populations. Adenoviruses have historically imparted great morbidity among US military recruit populations. Since the vaccine was phased out 10 years ago, investigators have documented a steady increase in cases with a range of disease severity. NHRC and Lovelace collaborate on a project to determine and characterize adenoviruses and have together published many of the sentinel journal articles. This collaborative work will allow the Department of Defense to determine whether a new vaccine soon to be administered in recruits will protect against the prevailing adenovirus subtypes.

Behavioral Health Concerns Among Substance Abuse Clients training facilitated

August 2010

Researchers in the Behavioral Sciences and Epidemiology Program facilitated training titled "Practical Guidelines for Addressing Behavioral Health Concerns Among Substance Abuse Clients" for Marine Corps substance abuse counselors at the Center for Substance Abuse Prevention and Treatment Center, Marine Corps Air Station, Miramar. This training is part of a research project to train and assess the feasibility of implementing enhanced screening and referral practices for mental health concerns for substance abuse counselors. The overall goal of this project is to make implementation recommendations to the study sponsor, Headquarters Marine Corps, that will lead to the optimal treatment of substance abuse clients suffering from Post-traumatic stress disorder and other military-related behavioral health conditions.

Validation and Verification Study Proposal accepted August 2010

Office of the Secretary of Defense/Health Affairs (OSD/HA) accepted the Medical Modeling, Simulation and Mission Support Department's proposal to perform a validation and verification study on the operating room throughput algorithm for the Joint Medical Analysis Tool. This is a compliment to the success of NHRC's past analysis efforts on behalf of OSD/HA.

National Child Traumatic Stress Network (NCTSN) webinar August 2010

Dr. Tyler Smith participated in the National Child Traumatic Stress Network (NCTSN) live webinar hosted by Military Families Learning Community. The title was "Understanding Deployment Related Stressors and Long-Term Health in Military Service Members and Veterans: the Millennium Cohort Study." Dr. John Fairbank, Co-Director, National Center for Child Traumatic Stress, Duke University, moderated.

Resupply recommendations provided to Air Force medical planners August 2010

Air Force modelers delivered resupply recommendations for the Expeditionary Medical Support (EMEDS) +10 and EMEDS +25 to the Air Combat Command, Manpower and Equipment Force Packaging Manager. Determining resupply requirements for the Air Force is a new product provided to medical planners. NHRC now performs validation studies, allowance standard reviews, and provides resupply recommendations for a broad range of Air Force medical Unit Type Codes.

Continued on Page 5—HIGHLIGHTS

HIGHLIGHTS—Continued from Page 4

Task-Organized Resuscitative Platforms studied August 2010

Mr. Vern Wing and Mr. Martin Hill met with the Forward Resuscitative Capabilities working group, and Captains LaBanc, Jehue, Sawyers, and Bohman via telephone conference from Afghanistan. The task of the group per the Health Services Advisory Group is to develop scalable forward resuscitative platforms that can be task organized across the full spectrum of warfare and maintain the capability of the current Medical Battalion (Med Bn) Table of Organization and Equipment (T/O & E). The study will examine the Med Bn and develop both smaller and larger forward resuscitative platforms that can be flexibly combined in response to operational needs using the current T/O & E Authorized Medical Allowance Lists to the maximum extent possible.

NHRC hosts Research Project Manager requirements meeting July 2010

NHRC hosted a requirements meeting to determine optimal design of an enhanced Research Project Management tool that could be designed for research management across the Navy Medicine R&D enterprise and Clinical Investigation Program. Requirements include easy accessibility by principal investigators and program managers, as well as the ability of commands or their delegates to query research progress, milestones, scope of activities, products, and key indicators to inform policy and the chain of command. Representatives of the Navy Bureau of Medicine and Surgery, Navy Medicine Support Command, and Naval Medical Research Center attended.

Joint Patient Condition Occurrence Frequencies Process presented June 2010

Mr. James Zouris presented the process that was used in estimating Joint Patient Condition Occurrence Frequencies at the Force Health Protection & Readiness megacomunity workshop in Herndon, Virginia, hosted by Office of the Secretary of Defense.

Behavioral Health Needs Assessment Survey results submitted to the Navy Bureau of Medicine and Surgery (BUMED) June 2010

The Behavioral Sciences and Epidemiology Department submitted a summary of preliminary results of Behavioral Health Needs Assessment Survey (BHNAS) data to CAPT Kass (BUMED). Results focused on 562 sailors in Afghanistan between January and May 2010. Findings included both improved mental health indices and improved organizational climate indicators compared with earlier (2007 through 2009) BHNAS respondents. Researchers speculated that results may relate to the more recent cohort's lower level of subjective perceptions of intense fear, helplessness or horror, lower rate of negative deployment-related (noncombat) stressors, and higher level of positive deployment experiences.

Major General James Gilman tours NHRC June 2010

Major General James Gilman, Commanding General of the US Army Medical Research and Materiel Command at Fort Detrick, requested a brief and tour of NHRC. He was given command and programmatic briefs from the Commanding Officer, Scientific Director, and senior scientific leaders, as well as a tour of the respiratory laboratory spaces and the Human Performance Laboratory. He expressed interest in and appreciation of the informative briefs, tour, and contract assistance with the hyperbaric oxygen therapy program.

Millennium Cohort Study presented June 2010

Dr. Tyler Smith presented an invited brief to the Institute of Medicine, Committee on a National Surveillance System for Cardiovascular and Select Chronic Diseases, regarding the Millennium Cohort Study, deployment health-related studies, and military databases.

Respiratory Disease Research: US–Mexico Border Study Goals Established

NHRC Collaborates in Border Study

Regions spanning national borders are conducive for the migration of infectious diseases due to the ebb and flow of commerce, produce, and travelers.

Since 2004, Naval Health Research Center (NHRC) has collaborated with the Mexican Secretariat of Health and the United States Centers for Disease Control and Prevention (CDC) in a study supported by the Armed Forces Health Surveillance Center to conduct population-based respiratory disease surveillance on the US/Mexico border.

Demographic and symptom information and respiratory swabs are collected from patients at local clinics who meet the case definition for an influenza-like illness. NHRC then identifies and characterizes isolated respiratory pathogens. In April 2009, a young female enrollee from Imperial County, California, was determined to be the second confirmed case of pandemic influenza A/H1N1.

During the Binational conference on Infectious Disease meeting in San Antonio, Texas, representatives from local and federal public health



Dr. Celia Alpuche Aranda, Director General, Diagnostic and Epidemiological Reference Institute provides opening remarks during United States-Mexico Binational Infectious Disease Conference in San Antonio, Texas.

The mutual trust developed in this partnership... will continue to serve as an avenue of cooperation for public health between the two nations.

laboratories discussed collaborative efforts with their Mexican counterparts.

While attending the conference, CDR Patrick J. Blair met with US CDC and Mexican officials from the Institute of Epidemiological Diagnosis and Reference Institute (InDRE) to review results and develop future plans.

Through a grant from the US State Department, NHRC and InDRE also cooperate in training scientists in diagnostic and biological laboratory safety.

Dr. Celia Alpuche Aranda, Director General, plans to visit NHRC to provide follow up from the San Antonio meeting.

The mutual trust developed in this partnership was conducive to allowing the sharing of samples and information during the early days of the pandemic. It will continue to serve as an avenue of cooperation for public health between the two nations.

Developers Convene to Assess Vehicle Performance



The National Ground Intelligence Center (NGIC) held its annual technical information exchange conference with vehicle developers from across the Department of Defense.

The goal of the meeting was to provide vehicle program managers with tactical injury and vehicle damage assessments so that vehicle performance against the insurgency threat could be assessed and improvements to those vehicles developed.

The Navy's Combat Trauma Registry Expeditionary Medical Encounter Database (CTR EMED) program at Naval Health Research Center (NHRC) provides the majority of casualty

medical data for each insurgency attack. NHRC sends the clinical details and injury severity assessments for every casualty in each event to the Joint Trauma Analysis and Prevention of Injury in Combat program which then forwards the data to NGIC. NGIC then incorporates that medical data into its event reports so that vehicle performance can be directly related to the number and injury severity of the casualties that occurred in the event.

The CTR EMED data are directly affecting the development of new vehicle variants as well as incrementally improving existing designs.



Dr. Troy Holbrook

NHRC Epidemiologist Discusses Research at Committee on Veterans' Affairs, US House of Representatives Meeting

Dr. Troy Holbrook, a senior epidemiologist in the Medical Modeling, Simulation and Mission Support Department at NHRC was invited to participate in a stakeholders meeting by the Committee on Veterans' Affairs, US House of Representatives, titled "Innovative Treatments for TBI and PTSD."

Dr. Holbrook discussed the recently published NHRC research article "*Morphine Use After Combat Injury in Iraq and Post-Traumatic Stress Disorder*" (Holbrook TL, Galarnau MR, Dye JL, Quinn K,

Dougherty AL. *New England Journal of Medicine* 2010;362:110-117).

The meeting was held in Washington, DC on July 21. The honorable Bob Filner, Chairman of the House of Representatives Veterans' Affairs Committee, extended the invitation to Dr. Holbrook. Her discussion included a brief on NHRC and its longstanding reputation within the Department of Defense for groundbreaking and innovative research. She also spoke on Post-Traumatic Stress Disorder as an adverse mental health outcome in seriously injured civilians and military trauma survivors.

Dr. Holbrook's testimony can be viewed at:

<http://veterans.house.gov/hearings/hearing.aspx?NewsID=605>

NHRC Receives PLEX-ID Comprehensive Rapid Bioidentification System

The emergence of the pandemic influenza A virus has exposed gaps in the diagnosis, characterization, and treatment of emerging viruses, and it points to the need to develop and test rapid genomic screening methods to identify and characterize newly emerging pathogens.

Ideally, such platforms will provide information to assist in the prediction of strain or subtype, pathogenicity, and drug resistance. Toward this goal, NHRC recently partnered with the Defense Advanced Research Projects Agency to install the first commercially available Abbott Ibis PLEX-ID Biosensor system at its laboratory in San Diego.

The PLEX-ID was developed by Abbott/Ibis and is a high-throughput technology based on a combination of molecular technologies, including polymerase chain reaction (PCR) and mass spectrometry analysis. The system is designed to address a significant unmet need by providing test results in six to seven hours instead of three or more days as required with current culturing.

Theoretically, all bacterial or viral pathogens can be detected by the platform because of the nature of the PCR amplification and detection. Primers that identify specific viral or bacterial targets are designed around conserved genetic motifs.

Targets are sorted based upon base composition (BC) of RT-PCR

amplicons. For influenza, BC is a function of six targets from the influenza "core" genes.

High throughput screening allows for complete analysis from original patient specimens in less than 6 hours. Ibis has developed a number of plates to assist with bacterial and/or viral diagnoses.

The PLEX-ID can be used to assist in the diagnosis of pathogens from

fatal and/or complex clinical cases. An earlier version of the PLEX-ID, the Ibis T5000, provided the first molecular evidence of the pandemic A/H1N1 virus at NHRC in April 2009.

In their current work, investigators hope to assess risk of reassorted or newly emerged viruses from samples collected in Department of Defense surveillance activities conducted around the globe.



Abbott/Ibis PLEX-ID

NHRC in the News

NHRC Researchers Analyze Effects of Heavy Packs

By Gidget Fuentes - Staff writer Military Times



As the Marine Corps looks to replace the cumbersome rucksack Marines and Sailors carry into combat, Navy researchers prepare to launch a study aimed at preventing injuries that can be caused by such heavy equipment.

"The intent is to see if we can identify indicators of imminent

injury...or the fact that you have reached the tolerance point for load carriage," said James Hodgdon, a research physiologist at Naval Health Research Center in San Diego.

Navy medical officials and researchers are finalizing details of the two-year study, Hodgdon said. The study will likely include two groups of Marines: students at the School of Infantry-West at Camp Pendleton, California, and members of an infantry company preparing for deployment. Some troops carry packs and weapons in combat that weigh 135 pounds or more. That weight can injure even the most physically fit warfighter. Back strains, stress fractures, muscle sprains and herniated discs occur with some frequency.

By following several groups of infantrymen, researchers hope to track any physiological changes to their bodies, such as inflammation or a breakdown of connective tissues. Once they identify any "useful indicators," Hodgdon said, research teams will conduct lab experiments to determine safe and tolerable weights. "If we can show what the load carriage limits are, to establish points of strain, then we can use that to guide any physical

training programs that are developed" to address the issue, he said. Preventing these injuries may be as simple as introducing new conditioning programs.

The Corps' quest to replace its Individual Load Bearing Equipment (ILBE) pack began late last year. Before the proliferation of roadside bombs prompted the development of beefier body armor, ILBE was criticized for its many shortcomings. Marines surveyed by the Corps in 2009 said the pack does not work well with their armor, also noting it causes chafing and pain in their knees, backs, and shoulders. Ultimately, the Marines surveyed graded it "completely unacceptable."

Key to the Navy study's data collection efforts will be a vertical MRI machine. Unlike standard MRI machines, which take images while the person lies on his back, vertical machines provide images of the spine as it is aligned under the effects of gravity. That will show researchers how a combat load affects compression on the spinal discs, Hodgdon said.

Researchers hope to capture these MRI images while the Marines are wearing combat packs. But that may be tricky because some packs may contain metal, which cannot be placed in an MRI machine. Packs that use aluminum frames could be a viable alternative, Hodgdon said.

The study will likely include two groups of Marines:

- **students at the School of Infantry-West at Camp Pendleton, California, and**
- **members of an infantry company preparing for deployment.**

Continued on page 10-IN THE NEWS

IN THE NEWS —continued from page 9

More NHRC in the News

Prior assault boosts PTSD risk after combat

National Post Jun 23, 2010

Custom running shoes might not prevent injuries

Reuters UK Jul 7, 2010

Combat veterans risk high blood pressure: US study

National Post Jul 28, 2010

Alcohol abuse rises among combat veterans: study

CHICAGO (Reuters) August 2010

Dr. Frank Garland, who co-discovered vitamin D shortfalls are part of cancer, dies at 60

Washington Post - Thomas H. Maugh II Sep 1, 2010

Study tracks stress disorder in US troops

National Post Sep 5, 2010

Reuters UK Aug 31, 2010

Morphine helps wounded avoid post-combat stress

Reuters UK Jul 27, 2010

Iraq/Afghanistan deployment tied to respiratory woes

National Post Aug 8, 2010

NHRC Welcomes

ADMINISTRATION

LCDR Marla McClellan, MSC, Dir. for Administration

FINANCE

Liliana Sanchez, Acquisition Administrator

INFORMATION SERVICES

James Cohn, Librarian

SCIENTIFIC SUPPORT OFFICE/SPECIAL

PROGRAMS

Joel Sandoval, Operations Analyst

SCIENTIFIC SUPPORT OFFICE/

OUTSOURCING AND COMPLIANCE

Jason Borja, Acquisition Associate

DEPT 161

Robert Mulvanny, Database Analyst
Robert Hunt, Senior Research Analyst
Lisa O'Mara, Administrative Assistant

DEPT 162

Katherine Wilson, Exercise Physiologist

DEPT 164

Dr. Timothy Wells, Senior Epidemiologist
Dr. Marleen Welsh, Data Analyst

DEPT 165

Djeneba Audrey Djibo, Research Assistant

DEPT 166

Molly Smith, Molecular Lab Tech
Hien Nguyen, Molecular Lab Tech
Ernest Mejia, Molecular Lab Tech

NHRC Publications

Injury reduction effectiveness of assigning running shoes based on plantar shape in Marine Corps basic training

Knapik JJ, Trone DW, Swedler DI, Villasenor A, Bullock SH, Schmied E, Bockelman T, Han P, Jones BH. Am J Sports Med. 2010 Sep;38(9):1759-67.

Factors associated with antisocial behavior in combat veterans

Booth-Kewley S, Larson GE, Highfill-McRoy RM, Garland CF, Gaskin TA. Aggress Behav. 2010 Sep;36(5):330-7.

Risk of diabetes in U.S. military service members in relation to combat deployment and mental health

Boyko EJ, Jacobson IG, Smith B, Ryan MA, Hooper TI, Amoroso PJ, Gackstetter GD, Barrett-Connor E, Smith TC; Millennium Cohort Study Team. Diabetes Care. 2010 Aug;33(8):1771-7.

Injury-specific correlates of combat-related traumatic brain injury in Operation Iraqi Freedom

Macgregor AJ, Dougherty AL, Galarneau MR. J Head Trauma Rehabil. 2010 Aug 30.

Power development through complex training for the division I collegiate athlete

May CA, Cipriani D, Lorenz KA. Strength & Conditioning Journal. 2010 Aug; 32(4): 30-43.

Determining How Functional Characteristics of a Dedicated Casualty Evacuation Aircraft Affect Patient Movement and Outcomes

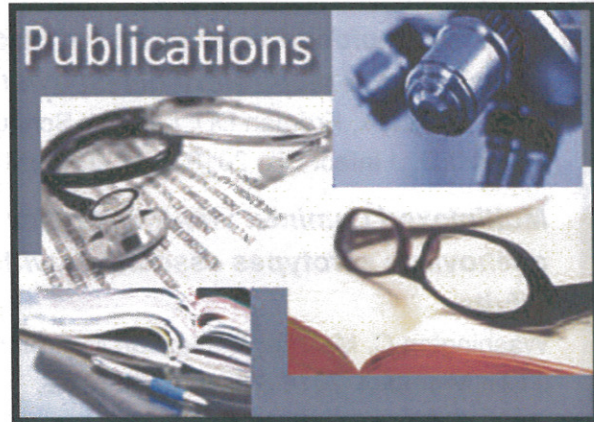
Anderson C, Konoske P, Davis J, Mitchell R. Journal of Defense Modeling and Simulation. 2010 July; 7(3):167-177.

Do adverse childhood experiences increase the risk of post-deployment posttraumatic stress disorder in US Marines?

LeardMann CA, Smith B, Ryan MA. BMC Public Health. 2010 Jul 26;10:437.

Ultraviolet B irradiance and vitamin D status are inversely associated with incidence rates of pancreatic cancer worldwide

Mohr SB, Garland CF, Gorham ED, Grant WB, Garland FC. Pancreas. 2010 Jul;39(5):669-74.



Continued on Page 12—PUBLICATIONS

PUBLICATIONS—continued from Page 11

Molecular epidemiology and brief history of emerging adenovirus 14-associated respiratory disease in the United States

Kajon AE, Lu X, Erdman DD, Louie J, Schnurr D, George KS, Koopmans MP, Allibhai T, Metzgar D. *J Infect Dis.* 2010 Jul 1;202(1):93-103.

Multiplexed Luminex xMAP assay for detection and identification of five adenovirus serotypes associated with epidemics of respiratory disease in adults

Washington C, Metzgar D, Hazbón MH, Binn L, Lyons A, Coward C, Kuschner R. *J Clin Microbiol.* 2010 Jun;48(6):2217-22.

Risk factors for posttraumatic stress disorder among deployed US male Marines

Phillips CJ, Leardmann CA, Gumbs GR, Smith B. *BMC Psychiatry.* 2010 Jun 25;10:52.

Evaluation of a sexual assault education/prevention program for male U.S. Navy personnel

Rau TJ, Merrill LL, McWhorter SK, Stander VA, Thomsen CJ, Dyslin CW, Crouch JL, Rabenhorst MM, Milner JS *Military Medicine.* 2010 June;175(6):429-434.

Smallpox vaccination is not associated with infertility in a healthy young adult population

Jacobson IG, Gumbs GR, Sevick CJ, Smith TC, Ryan MA. *Hum Vaccin.* 2008 May-Jun;4(3):224-8.

Selected static anatomic measures predict overuse injuries in female recruits

Rauh MJ, Macera CA, Trone DW, Reis JP, Shaffer RA. *Mil Med.* 2010 May;175(5):329-35.

Racial differences in prostate cancer risk remain among US servicemen with equal access to care

Wells TS, Bukowinski AT, Smith TC, Smith B, Dennis LK, Chu LK, Gray GC, Ryan MA. *Prostate.* 2010 May 15;70(7):727-34.

Initial validation of the Military Operational Risk Taking Scale (MORTS)

Momen N, Taylor MK, Pietrobon R, Gandhi M, Markham AE, Padilla GA, Miller PW, Evans KE, Sander TC. *Mil Psych.* 2010;22(2):128-142.

NHRC Staff Awards



CAPT Lanny Boswell receiving the Bronze Star Medal from CAPT Gregory Utz

BRONZE STAR MEDAL

CAPT Lanny L. Boswell was awarded the Bronze Star Medal for displaying exceptional foresight and initiative in planning and implementing the first-ever forward-deployed musculoskeletal medical response clinic in the Navy in connection with combat operations against the enemy while attached to SEAL Team FIVE as Physical Therapy Officer for Special Operations Task Force-West.

NAVY AND MARINE CORPS ACHIEVEMENT MEDAL

LT Jaime Bartlett received the Navy and Marine Corps Achievement Medal for spearheading the Computer Assisted Rehabilitation Environment system contributing to advanced research abilities that optimize warfighter operational performance and rehabilitation strategies.

WILKINS AWARD

Dr. John Plag, representing the Wilkins Foundation, was present while CAPT Utz announced the Wilkins Award to the 2009 winners Cynthia LeardMann, Dr. Tyler C. Smith, Dr. Besa Smith, Timothy S. Wells, and Margaret A. K. Ryan, on behalf of the Millennium Cohort Study Team, for the publication *Baseline self reported functional health and vulnerability to post-traumatic stress disorder after combat deployment: prospective US military cohort study* published in BMJ.
(See story on page 15)

Excellence in Public Health Response Award

In recognition of NHRC Respiratory Diseases Research Laboratory for the pH1N1 work.



Excellence in Public Health Response Award Winners

Awarded by the Laboratory Response Network to Ms. Melinda Balansy, Ms. Daisy Cabrera, Mr. Robert Booth, Ms. Melody Ellorin, CDR Dennis Faix, Mr. Tony Hawksworth, Dr. Pete Kammerer, Dr. Chris Myers, and CDR Patrick Blair

Continued on Page 14—AWARDS

AWARDS—continued from Page 13



**LCDR Andrew MacGregor and
CAPT Gregory Utz**

LENGTH OF SERVICE (CIVILIAN)

Gerald Pang—35 years of service

SPECIAL ACHIEVEMENT AWARD

Loi Dungca and Christopher Shaw

**COMMANDING OFFICER'S
SAFETY AWARD**

LT Jaime Bartlett

SAFETY AWARD

Mr. Eric Duckworth

**LETTER OF APPRECIATION
(MILITARY)**

CAPT Emory Fry

**CERTIFICATE OF APPRECIATION
(CONTRACTOR)**

Jessica Anunwah, Henry Jackson Fndn
Sonya Davis, SAIC

Command On-The Spot Award

Carter Sevick and Martin White

**49th Navy and Marine Corps Public Health
Conference Theme "Supporting Public Health Around
the World"**

**Winners in the Occupational Health Abstract
Competition:**

MAJ Nisara Granado, First place winner, Supplement Use in
Relation to Deployment and Physical Activity in a Large
Military Cohort

Jaime Horton, First place winner, Supplement Use in Relation
to Deployment and Physical Activity In A Large Military Cohort

**49th Navy & Marine Corps Public Health
Conference Poster**

1st Place Winners

Peggy Han, Isabel Jacobson, Kelly Jones,
LCDR Andrew MacGregor, Jonathan Mayo,
Dr. Besa Smith, and Dr. Tyler Smith

Conference Participation

Appreciation Letters

Eileen Cristobal, Peggy Han, Anthony Hawksworth,
Kelly Jones, Jonathan Mayo, Christopher Myers,
Dr. Besa Smith, Dr. Tyler Smith, and Charlene Wong

Certificates of Appreciation

NHRC Coin Recipients

Daisy Cabrera, Eileen Cristobal, Melody Ellorin,
Jomelynne Fontecha, Julianne Nielsen,
Ryan Ortiguerra, Khanh Pham, Charisse Santiago,
Carrie Sitz, Sarah Vu, and Kari Sausedo

NHRC Summer Picnic

Horseshoe Winners:
Marty Lebedda and Trevor Elkins

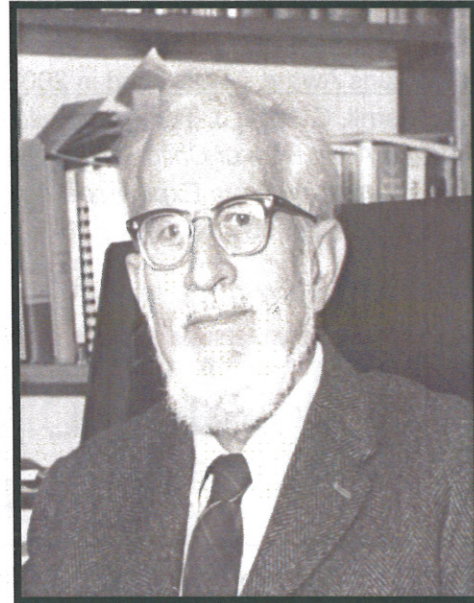
1st Place Volleyball Team:

Francis DeJesus, Elizabeth Lavelle, Gina Randazzo,
Rueben Smith, Jason Brown, and Charisse Santiago

2010 Wilkins Award Winner Announced

The 5th Annual Wilkins Award was presented at the NHRC staff awards ceremony to Cynthia LeardMann, Dr. Tyler C. Smith, Dr. Besa Smith, Timothy S. Wells, and Margaret A. K. Ryan, on behalf of the Millennium Cohort Study Team, for the publication *Baseline self reported functional health and vulnerability to post-traumatic stress disorder after combat deployment: prospective US military cohort study* published in the British Medical Journal.

The award, honoring Dr. Walter L. Wilkins, the first NHRC Scientific Director, characterizes the paper published in 2009 judged to be the most outstanding by a distinguished panel of reviewers. Dr. Wilkins was known for his skills as a leader and mentor. He had high goals and aspirations for NHRC and helped many young scientists develop their full potential. Wilkins considered publication in refereed journals a true test of the quality of the work. During and immediately after his tenure as Scientific Director, the percentage of papers published was more than 80%.



Dr. Walter L. Wilkins

2010 Finalists

- Larson G, Booth-Kewley S, Highfill-McRoy R, Young S. *Prospective Analysis of Psychiatric Risk Factors in Marines Sent to War*. *Military Medicine*, July 2009, Vol. 174, No. 7, pp. 737-744(8).
- MacGregor A, Corson K, Larson G, Shaffer R, Dougherty A, Galarneau M, Raman R, Baker D, Lindsay S, Golumb B. *Injury-Specific Predictors of Posttraumatic Stress Disorder*. *Injury, Int. J Care Injured* 40 (2009), 1004-1010.

Previous Winners

2009 Wilkins Award – Published in 2008

Michael P. Broderick, Christian J. Hansen, and Kevin L. Russell. *Exploration of the Effectiveness of Social Distancing on Respiratory Pathogen Transmission Implicates Environmental Contributions*. *Journal of Infectious Diseases*, 2008, 198, pp. 1420-1426.

2008 Wilkins Award – Published in 2007

Marcus K. Taylor, Kenneth P. Sausen, Eric G. Potterat, Lilianne R. Muija-Parodi, Jared P. Reis, Amanda E. Markham, Genie Leah A. Padilla, and Deborah L. Taylor. *Stressful Military Training: Endocrine Reactivity, Performance, and Psychological Impact* *Aviation, Space, and Environmental Medicine*, Vol. 28, No. 12, Dec 2007.

WILKINS AWARD—Continued from Page 15

Christian J. Hansen, Gregory C. Gray, and Joel C. Gaydos. *Vaccine-preventable Adenoviral Respiratory Illness in US Military Recruits, 1999-2004*. *Vaccine*, 2006, Vol. 24, pp. 2835-2842.

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Lex L. Merrill, Cynthia J. Thomsen, Julie L. Crouch, Patricia May, Steven R. Gold, and Joel Milner. *Predicting Adult Risk of Child Physical Abuse From Childhood Exposure to Violence: Can Interpersonal Schemata Explain the Association?* *Journal of Social and Clinical Psychology*, 2005, Vol. 24, No. 7, pp. 981-1002.

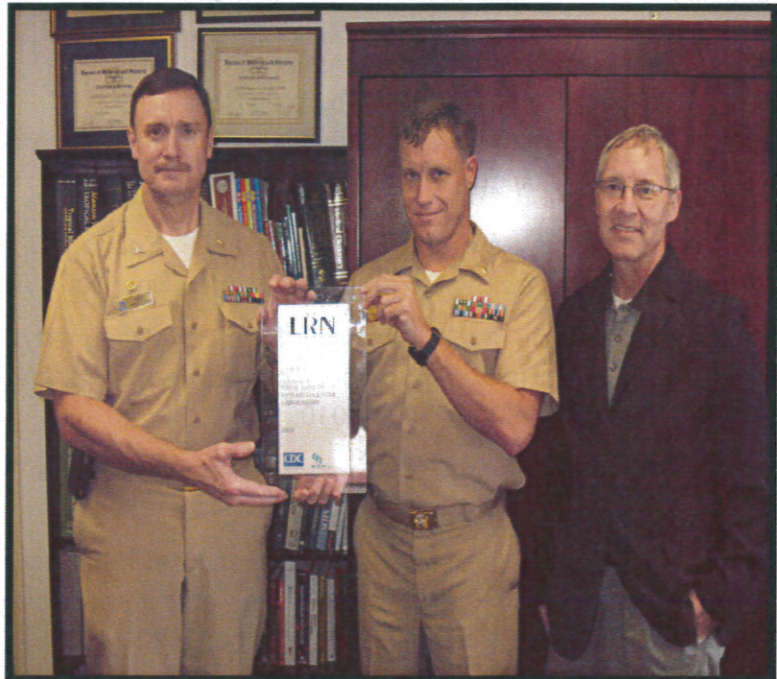
Respiratory Diseases Department Wins “Excellence” Award

The Centers for Disease Control and Prevention Laboratory Response Network (LRN) awarded NHRC’s Respiratory Diseases Research Department the *2010 Excellence in Public Health Response Award* for their early detection and global response during the pandemic A/H1N1 outbreak.

The NHRC team competed against more than 140 federal, state, regional, and national/international labs, including labs in Canada and Australia, for the award.

The LRN and its partners maintain an integrated national and international network of laboratories that are equipped to respond to acts of chemical or biological terrorism, emerging infectious diseases, and other public health threats and emergencies.

NHRC has been a member of the LRN since 2004.



**L to R. CAPT Gregory Utz MC, USN Commanding Officer, Naval Health Research Center;
CDR Patrick Blair, Director, Department of Respiratory Diseases Research, NHRC;
Anthony Hawksworth, Research Analyst, Department of Respiratory Diseases Research, NHRC.**

Photo Courtesy of NHRC Public Affairs

Command Social Committee "Fun"-ctions:

Butterscotch Pudding/Talk-Like-A-Pirate Day



Pirate Ship of Terror

The NHRC Command Social Committee held its first official presidentially appointed National Butterscotch Pudding and Talk-Like-A-Pirate Day Bake Sale.

Event participants baked an array of pirate grub using butterscotch pudding. Grub included:

- "Splice the Main Brace" cupcakes
- "Shiver Me Butterscotch Timbers"
- "Bucket o' Booty"
- "Tortuga Rum Butterscotch Golden Doubloons"

Pirate Kate Dagger (AKA CDR Deborah White) made a butterscotch pudding marbling "Ship of Terror" Cake to raffle off. The lucky winner of the Pirate Ship of Terror Cake was Rob Coon. No word yet if there was a mutiny on the ship.

Annual Chili Cook-Off, Brownie Bake, and Costume Contest

The much anticipated Annual Chili Cook-off, Brownie Bake, and Costume Contest was held on Friday, October 29. The judges definitely had their work cut out for them and it was a tough decision. Thank you to everyone who participated in each of the contests.

Chili Contest winners:

1st Place: "Hot Rainbow" Chili by Brenda Niederberger

2nd Place: "Witches Brew" Chili by CDR Deborah White

3rd Place: "Spanky" Chili by Mary Abuja



***Chili Contest Winner,
Brenda Niederberger and
CAPT Forcino***

Continued on Page 18 — "Fun"ctions

"Fun"ctions—Continued from Page 17

Brownie Contest Winners

1st Place: "Bat Dropping" Brownies
by Betty Croft

2nd Place: "Heaven and Hell" Brownies
by CDR Deborah White



CAPT Forcino (XO)
bravely risks presenting
the 2nd Place Costume
Award to Pac-Man.



SUSHI—Costume Contest Winners

Costume Contest Winners

1st Place: "Sushi"

Lesley Henry, Kathy Snell, Melissa Bagnell, Kelly Jones,
James Davies, Jennifer Walstrom, Beverly Sheppard,
Hope McMaster, Teresa Powell, Steven Speigle, Amber Seelig,
Nisara and Athena Granado

2nd Place: "Pac-Man"

Francis de Jesus, Larivhie Delacruz, Jennifer Riddle

3rd Place: "Rock/paper/scissors"

Elizabeth LaVelle, Amanda Cowhick, Megan Sadakane



A BIG

"THANK YOU"

to all of the judges

Chili Contest Judges:

Dr. Karl Van Orden, CAPT Boswell,
Teresa Powell

Brownie Contest Judges:

Martin Lebedda, Sarah Arend, Nathan Edwards

Costume Contest Judges:

LT Jamie Bartlett, Robert Hunt, Katherine Wilson



LT Jacob Norris
and his rendition
of Chuck Norris

VITAMIN D—continued from Page 1

Unique Aspects of Vitamin D

- Vitamin D is the only known vitamin that is the immediate precursor of a hormone.
- Although humans convert retinol from carotenoids, vitamin D is the only known vitamin that we can completely synthesize. Biochemically, this is rather hard to do, and it cannot be done without ultraviolet B (UVB) photons acting on a type of cholesterol that is common in skin.
- Adequate synthesis of vitamin D from the sun requires a little near-noon sunlight daily. Three to ten minutes is usually enough. Exposure time when in the sun should be well below the amount that would turn the skin pink.
- About 40% of skin surface area is usually needed to make adequate amounts of vitamin D.
- No vitamin D can be made from November through March in northeastern urban areas of the United States, such as Boston, due to a form of air pollution known as acid haze, which absorbs and scatters UVB skyward, and can make it almost impossible for people to synthesize vitamin D when it is present.
- The first known scientific suggestion that lack of sunlight might be associated with a disease came from a pediatrician named Jędrzej Sniadecki, who suggested in 1880 that an epidemic of rickets in children of urban Warsaw, Poland, was due to lack of sunlight exposure.
- Thirty years later, Dr. Elmer V. McCollum, of Johns Hopkins University, discovered the compound in cod liver oil that prevented rickets. He applied heat and oxygen to cod liver oil, destroying a factor in it that prevented night blindness but keeping intact a compound that prevented bone fractures, naming the latter vitamin D. The compound that prevents night

blindness was allowed to keep the name vitamin A. Eventually a Nobel Prize was awarded for the isolation of the vitamin.

- Vitamin D is the precursor of 25-hydroxyvitamin D [25(OH)D] which is synthesized from vitamin D with the help of an enzyme in the liver, and is the main form in which vitamin D is stored in the body. It can be converted to the most potent vitamin D metabolite, 1,25-dihydroxyvitamin D [1,25(OH)D] rapidly in the kidney, and recently, it has been discovered the conversion occurs in most tissues.



Dr. Elmer V. McCollum (1879 - 1967)
Discoverer of Vitamin D

Vitamin D Basics

About Vitamin D Metabolites

- They substantially influence the action of 200 known genes of which many are important in the pathogenesis of cancer, Type 1 diabetes, and multiple sclerosis.
- They stimulate genes that synthesize an intercellular "glue," known as E-cadherin, that helps prevent cancer in its earliest phases.
- They down-regulate oncogenes that increase cancer risk.

Continued on Page 20—VITAMIN D

VITAMIN D—continued from Page 19

Major Vitamin D-Related Findings

Bone Disease Prevention

In the era preceding 1980, vitamin D was identified solely as a compound needed to prevent bone fractures, promote normal tooth development, and to prevent rickets in children and osteomalacia, a common precursor of osteoporosis in adults. This research on the positive bone health aspects of vitamin D continues.

Dr. Joan Lappe, with colleagues including CAPT Kerry Thompson, a former NHRC commanding officer, recruited 5,201 female Navy recruit study subjects to determine if calcium and vitamin D supplementation could decrease the incidence of stress fractures. Lappe and her associates did conclude that vitamin D and calcium supplementation could decrease attrition of recruits and reduce financial costs to the Navy, and that a higher dose of vitamin D might be worth considering for future research.

A study of stress fractures of the tibia and fibula and vitamin D serum levels by Alina Burgi and her colleagues at NHRC suggests that keeping the serum 25(OH)D level at or above 40 ng/ml may help prevent stress fractures. Women in the top one fifth of serum 25(OH)D concentration (≥ 40 ng/ml) had a 50% lower risk of stress fractures than those in the lowest quintile (≤ 20 ng/ml).

Optimizing Muscle Strength

Recently, a study was conducted on the influence of serum 25(OH)D levels on the muscle strength in 301 adolescent girls. The girls were categorized into three groups:

1. severely vitamin D deficient (< 10 ng/ml),
2. deficient (10-20 ng/ml), and
3. vitamin D "sufficient" (> 20 ng/ml). **

Forearm and handgrip strength were significantly higher in girls whose 25(OH)D was above 20 ng/ml (Foo et al., 2009).

Gupta et al. used 40 volunteers, mean age 31.5 years old, and gave them either an oral cholecalciferol supplement or a placebo. Different handgrip tests were performed, and serum vitamin D levels were measured at baseline, 2 months, and 6 months. An increase in skeletal muscle strength was recorded with the increase in vitamin D intake.

Gilsanz found that women with lower serum 25(OH)D had much more body fat than women with normal serum 25(OH)D levels.

Cognition

Several groups are investigating the association of vitamin D with cognition, and a promising area of research indicates that the catalytic properties of vitamin D in the central nervous system influences the planning processes.

In 2009, David Lee performed a population-based cross-sectional study on 3,133 middle-aged to older European men. Individuals with a serum 25(OH)D concentration of 14 ng/ml or less had significantly lower performance on the Digit Symbol Substitution Test than those with a high serum 25(OH)D concentration.

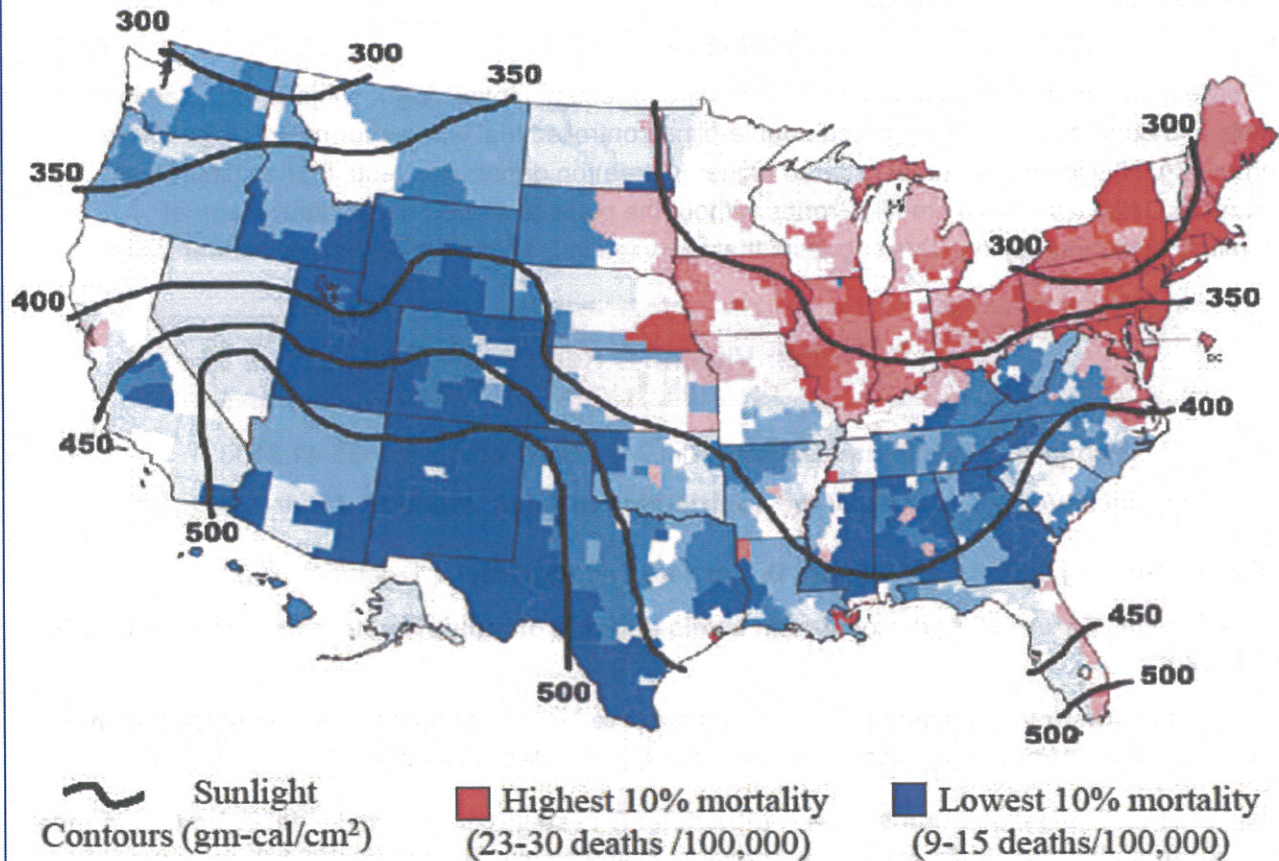
Prevention of Respiratory Diseases

Brehm and colleagues measured the 25(OH)D concentration of 616 Costa Rican children, ages 6 through 14 years, and its relationship to asthma. They found that a higher serum 25(OH)D concentration was associated with a significantly lower incidence of hospital admissions for asthma and all causes. The authors suggested

** Recent guidelines indicate that 25(OH)D serum levels below 32 ng/ml should be considered insufficient.

Continued on Page 22 —VITAMIN D

Sunlight and Colon Cancer Mortality Rates, USA



The roles of vitamin D and calcium deficiency in colon cancer arose from analysis of an earlier version of this map.

The base map was created for use in the US war on cancer.

The contour lines for solar radiation were superimposed on this and previous maps by Drs. F. and C. Garland who argued that the geographic pattern showed vitamin D with calcium could potentially prevent many deaths from the disease, since death rates were lower below 37 degrees north latitude than above 37 degrees.

(Sources: Garland C, Garland F. International Journal of Epidemiology 1980, reprinted in this journal on its 25th anniversary of publication, 2005; Atlas of cancer mortality in the US, 1950—94, National Cancer Institute Publ. No. 99-4564, 1999; National Oceanic and Atmospheric Administration, Annual mean daily solar radiation for the United States, GPO, 1974.)

VITAMIN D—continued from Page 20

that low 25(OH)D concentrations were associated with more severe asthma in children.

Saadi et al. led a case-control study on the vitamin D receptor (VDR) gene and its association with asthma. The study showed an adverse polymorphism of the VDR gene was significantly positively associated with incidence of asthma.

Depression

Jorde et al. conducted a cross-sectional study of obese and overweight subjects on Vitamin D levels and depression. A randomized double-blind controlled trial was performed. Subjects with serum 25(OH)D levels ≤ 40 nmol/l scored higher (worse) on depression tests than subjects with serum 25(OH)D levels ≥ 40 nmol/l. Groups without the placebo scored better after a year of vitamin D supplementation. This suggests that low vitamin D levels are correlated to depression.

Further Vitamin D Reading

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Park A. **The Vitamin-D Debate. We are not getting enough of it, but how much is O.K.?** Time. August 30, 2010.

Lappe JM, et al. **Vitamin D and calcium supplementation reduces cancer risk: results of a randomized trial.** Am J Clin Nutr. 2007 Jun;85(6):1586-91.

The Centers for Disease Control and Prevention (CDC) urges you to take the following steps to protect yourself and others from influenza (the flu):

CDC SAYS:

“TAKE 3” ACTIONS TO FIGHT THE FLU

CDC URGES YOU TO TAKE 3 ACTIONS TO PROTECT AGAINST THE FLU.

#1 Vaccinate

- CDC recommends a yearly flu vaccine as the first and most important step in protecting against flu viruses.
- While there are many different flu viruses, the flu vaccine protects against the three viruses that research suggests will be most common.
- The 2010–2011 flu vaccine will protect against an influenza A H3N2 virus, an influenza B virus and the 2009 H1N1 virus that caused so much illness last season.
- Everyone 6 months of age and older should get vaccinated against the flu as soon as the 2010–2011 season’s vaccine is available.
- People at high risk of serious flu complications include young children, pregnant women, people with chronic health conditions like asthma, diabetes or heart and lung disease and people 65 years and older.
- Vaccination of high risk persons is especially important to decrease their risk of severe flu illness.
- Vaccination is also important for health care workers, and other people who live with or care for high risk people to keep from spreading flu to high risk people.
- Children younger than 6 months are at high risk of serious flu illness, but are too young to be vaccinated. People who care for them should be vaccinated instead.

#2 Stop Germs

- Cover your nose and mouth with a tissue when you cough or sneeze. Throw the tissue in the trash after you use it.
- Wash your hands often with soap and water. If soap and water are not available, use an alcohol-based hand rub.
- Avoid touching your eyes, nose and mouth. Germs spread this way.
- Try to avoid close contact with sick people.
- If you are sick with flu-like illness, CDC recommends that you stay home for at least 24 hours after your fever is gone except to get medical care or for other necessities. (Your fever should be gone without the use of a fever-reducing medicine.)
- While sick, limit contact with others as much as possible to keep from infecting them.

#3 Antiviral Drugs

- If you get the flu, antiviral drugs can treat your illness.
- Antiviral drugs are different from antibiotics. They are prescription medicines (pills, liquid or an inhaled powder) and are not available over-the-counter.
- Antiviral drugs can make illness milder and shorten the time you are sick. They may also prevent serious flu complications.
- It’s very important that antiviral drugs be used early (within the first 2 days of symptoms) to treat people who are very sick (such as those who are hospitalized) or people who are sick with flu symptoms and who are at increased risk of severe flu illness, such as pregnant women, young children, people 65 and older and people with certain chronic health conditions.
- Flu-like symptoms include fever, cough, sore throat, runny or stuffy nose, body aches, headache, chills and fatigue. Some people may also have vomiting and diarrhea. People may be infected with the flu, and have respiratory symptoms without a fever.

FLU-LIKE SYMPTOMS INCLUDE:

fever	cough	sore throat	runny or stuffy nose
body aches	headache	chills	fatigue

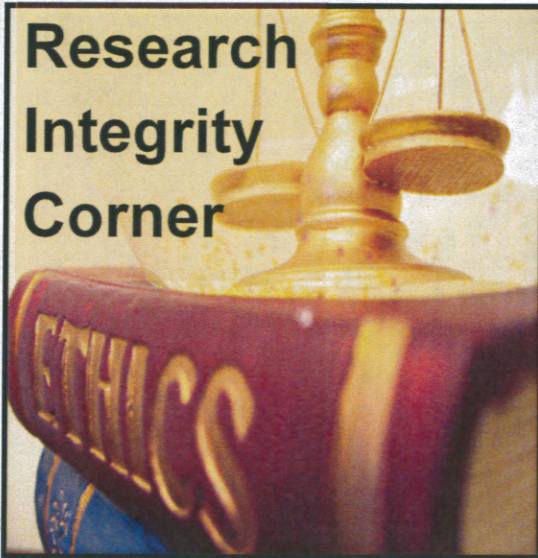
Some people may also have vomiting and diarrhea. People may be infected with the flu, and have respiratory symptoms without fever.



U.S. Department of Health and Human Services
Centers for Disease Control and Prevention

For more information, visit [HTTP://WWW.FLU.GOV](http://www.flu.gov) or call 800-CDC-INFO

Research Integrity Corner



*"IF I review this article
for you,
would you list me as
third author?"*

Have you ever asked yourself, "Does it really matter who is listed as an author on a paper?" According to the International Committee of Medical Journal Editors (ICMJE), "An author must take responsibility for at least one component of the work, should be able to identify who is responsible for each other component, and should ideally be confident in their co-authors' ability and integrity." (http://www.icmje.org/ethical_1author.html).

Who should be listed as an author?

When considering who should be listed as an author, the ICMJE recommends the following criteria be considered:

- Did the person make substantial contributions to conception and design, acquisition of data, or analysis and interpretation of data?
- Did the person draft the article or revise it critically for important intellectual content?
- Did the person give final approval of the version to be published?

Why does it matter who is listed as an author?

Ultimately each author is expected to have made a sufficient contribution to the project that he/she is prepared to take public responsibility for the content and integrity of the article.

*****For more information on Research Integrity, contact CDR Deborah White.*****



CAPT Gregory Utz,
Commanding Officer

Commanding Officer's Corner

Necessity is the mother of invention.

In 2007, Naval Health Research Center found itself in an unenviable predicament when it lost its primary contracting servicer. Faced with an immediate halt in contract-supported mission research, Dr. Frank Garland, late Technical Director at NHRC, Dr. Edward Gorham, Scientific Support Office Director, and the NHRC Command looked for alternatives to support research for the Bureau of Medicine and Surgery's (BUMED) Congressional Special Interest Projects and projects managed by NHRC staffs and their collaborators.

Leveraging the unique talents of Ms. Ilka DeLeon and her team of contract specialists, and the US Army Research, Development and Engineering Command-Natick (RDECOM-Natick), led by Ms. Cheryl DeLuca and Mr. Tom Bouchard, the group was able to develop two large precompeted omnibus contract vehicles that allowed rapid posting of awards within 4 to 8 weeks, in contrast to the 6 to 18 month process by other contracting organizations.

During the last 2 years, two large omnibus vehicles, titled "NHRC Omnibus I" and "NHRC Omnibus II," have carried the bulk of research contract support. Additionally, due to the success of NHRC's contract assistance and precompeted contract vehicles, NHRC was assigned the mission to assist with provision of those same services to the nine Naval Medical Research Center (NMRC)

enterprise Research and Development (R&D) laboratories, Navy Medicine Support Command (NMSC), BUMED, Office of the Assistant Secretary of Defense for Health Affairs (OASD/HA), and most recently, the 42 Navy medical treatment facilities (MTFs) and laboratories that are participating in the Navy Surgeon General's Clinical Investigations Program (CIP).

NHRC and RDECOM-Natick are now crafting a \$499 million capacity 5-year precompeted research contract, the "NHRC Omnibus III." It will be completed in the second quarter of Fiscal Year 2011 (FY11) to meet the future needs of the NMRC enterprise labs, NMSC, BUMED, OASD/HA, and other collaborating DoD organizations.

Ms. Valerie Deangelis, Ms. Felicia Morales, Ms. Darlene Rideout, Mr. Peter Tuttle, Mr. Matthew Buchannan, and, for Omnibus III, Mr. Brian Murphy (RDECOM-Orlando) are now working to complete the many actions required for the three omnibus contracts.

As FY11 begins, it is appropriate to not only look back at contracting requirements but also to look ahead toward new opportunities for Navy Medical R&D contracting support. Historically, Navy R&D requirements were supported indirectly by the US Army Medical Research Acquisition Activity (USAMRAA) with augmentation by the warranted contracting authority of the Office of Naval Research. However, as the Navy Surgeon General's Medical R&D requirements

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COMMANDING OFFICER'S CORNER—continued from Page 25

increased, direct mechanisms to contractually support these requirements on behalf of BUMED became necessary and have grown to the point where the Navy requires in-house rapid contractual support.

Contracting Directive

In 2007, the Naval Supply Systems Command had the foresight to promulgate a directive, NAVSUPINST 4200.81e, pertaining to contracting in support of Navy Medical R&D, giving the Naval Medical Logistics Command (NMLC) "unlimited authority to contract research and development (R&D) requirements in support of the NMRC mission."

In consonance with this directive, NHRC, as a significant partner of the NMRC enterprise, has been working with NMLC to develop capabilities to contractually support Navy Medical R&D on behalf of NMRC, NMSC, and BUMED.

Under the leadership of CAPT James B. Poindexter III, MSC, USN, Commanding Officer of Naval Medical Logistics Command, and the research contract team led by Mr. Bert Hovermale, Ms. Rebecca Tama, Mr. James Watkins, Mr. Thomas Hood, and Ms. Thea Hofgesang, NMLC has responded to the changing needs of the Navy Medical Research community.

NHRC, in conjunction with NMLC colleagues, developed plans to support the growing R&D requirement for Navy medicine with three essential strategies.

Essential Strategies

1. Develop high-capacity, flexible, precompeted "omnibus" type R&D contracts;
2. Develop assistance agreements to include grants and cooperative agreements; and
3. Develop a Broad Agency Announcement authority for the Naval Medical Logistics Command for award of contracts and grants.

Clinical Investigations Program

NHRC and NMLC meet weekly to build these acquisition capabilities to support the Navy Medical R&D requirement.

At the forefront of this requirement is the Surgeon General's Clinical Investigations Program (CIP) designed to support clinical research investigations at Navy MTF's. This program will be supported contractually by the omnibus contract known as the Investigational Research Omnibus Contract (IROC).

Investigational Research Omnibus Contract

IROC is an example of a precompeted omnibus type R&D contract. These contracts characteristically have the speed and flexibility to meet Navy Medical R&D requirements with a greatly reduced lead time from the posting for proposals to award of a research contract.

The current IROC contracting vehicle under development is known as an indefinite delivery/indefinite quantity contract vehicle and can

COMMANDING OFFICER'S CORNER—continued from Page 26

As FY11 begins, it is appropriate to not only look back at contracting requirements but also to look ahead toward new opportunities

support either cost plus fixed fee or firm fixed price task orders. The time from the proposal posting to an award at the task order level is generally 6 to 8 weeks, rather than the several months commonly encountered with an individually competed contract. The expectation is that IROC will become available to Navy Medical R&D sometime within the first half of FY11. IROC will represent a great advance in support of CIP.

As we look toward the future, NHRC will expand its contract and scientific support services for Navy medical research. In order to meet the future requirements, NHRC has developed a firm foundation with the oversight of the Commanding Officer; Executive Officer; NHRC's Board of Directors; Dr. Edward Gorham, SSO Director; CDR Deborah White, SSO Assistant Director; and Mr. Jim Mackiewicz.

The strong, collegial relationships NHRC has developed with US Army RDECOM-Natick, NMLC, US Army RDECOM-Orlando, Fleet and Industrial Supply Center and other organizations have become the pillar of medical research in support of the warfighters, their families and all of the beneficiaries that we serve.

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<http://www.med.navy.mil/sites/nhrc>

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Mission: To conduct health and medical research, development, testing, evaluation, and surveillance to enhance deployment readiness of DoD personnel worldwide.

Vision: World-class health and medical research solutions anytime, anywhere

NAVAL HEALTH RESEARCH CENTER
SAN DIEGO

