

MUSIC WELLNESS & INJURY PREVENTION: Healthy Practice & Performance Measures for the Percussionist

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Introduction:

Musician wellness and injury prevention have long been of interest to musicians and teachers alike. While some schools have developed courses such as *Performance Preparation* at Ohio University, *Health Promotion and Prevention of Injury for Musicians* at the University of Indianapolis, *Keys to Healthy Music* at Eastman and others, most of us are left to our own devices to incorporate this teaching/awareness into the percussion studio, seminars, studio classes and rehearsal venue.

In the fall of 2004, a collaborative effort between the University of North Texas and the Performing Arts Medical Association: Health Promotion in Schools of Music Project (HPSM) held a conference of medical professionals and music educators. Out of this conference came “Declarations” and “Recommendations for Action”. These can be viewed at <http://www.unt.edu/hpsm> as well as Volume 21, Number 3 (September 2006) of *Medical Problems of Performing Artists*.

Today’s presentation/demonstration will provide a simple introduction to help the percussionist/teacher to assimilate the vast array of information into a usable and practical approach to musician wellness and injury prevention.

So, now what do you do?

I. Awareness

- a. Pain vs work – know the difference between a sore/overworked muscle and an actual injury. It is always recommended to stop for an injury. For a sore/overworked muscle you may be able to stretch, rest for a bit and then proceed with caution. It is never wise to continue “through the pain”.
- b. Posture (with and without instruments) – Be aware of your over-all posture while playing and away from the instruments. This includes your stance or how you are seated if applicable. Mirrors and videotaping yourself at different angles can be helpful.
- c. Motion/movement – Pay attention to the motion of your limbs. Is it in general a smooth, flowing motion without tension? Are you moving contrary to what you are trying to do musically? Again, videotaping is very helpful!
- d. “Life” away from the instruments – Be mindful of everyday things such as how you pick up large items, use kitchen utensils, how you sit at the computer desk etc. Do you play a sport that could be adding “insult to injury” such as volleyball?

II. The Plan

- a. Physical condition – A healthy lifestyle includes good nutrition, sleep, cardiovascular work, flexibility, and strength. A four hour drum set gig followed by a tear down and move can be quite strenuous. No need to be an elite athlete but a moderate routine will hopefully keep you out of the Doctor’s office.
- b. Practicing/Performance routine – Write down a plan that includes a warm-up and stretch before, during, and after you practice and perform. Be consistent so you are comfortable when it’s time for the performance.
- c. Habit – Don’t get discouraged or give up! It will take time for your “plan” to become a habit. Physical conditioning can take at least 6 weeks before you feel a difference and make it a part of your lifestyle. If you are injured be patient with the healing. Remember that the goal is to get back to making music!

Common Sense Recommendations for the Percussion Program:

- Assess the acoustical environment of your rehearsal spaces.
- Encourage (or require) the use of hearing protection.
- Invest in stadium stands for marching percussion instruments.
- Educate students in the proper techniques for lifting and moving equipment.
- Create an instrument replacement plan that includes adjustable height keyboard instruments.
- Create a plan of study for each individual that allows for various techniques, styles and tempos to help avoid repetitive motion injuries.
- Include a suggested practice routine guide in your percussion handbook.

Some Thoughts/Questions for Future Consideration and Research:

- A review of research literature shows a prevalence of injury to pianists and violinists. Both of these instruments require repetitive motion. As (if) we move from an area of “generalization” to an area of “specialization”, will the frequency of injury to percussionists increase? If so, education in preventative measures will become increasingly important.
- In our litigious society, should we be concerned about lawsuits against band directors and percussion instructors for student health issues such as back troubles from carrying heavy drums? Should we prepare a handout or handbook of

precautions, physical fitness regime and other suggestions for the student to be fit to carry the instruments? Should we require hearing protection?

Recommended Resources

Books:

Bishop, Dorothy. (1991). *The Musician as Athlete: Alternative Approaches to Healthy Performance*. Kava Publications. ISBN 0-9695590-0-3

Like many books on musician wellness and injury prevention, this book provides ample information about the musculoskeletal system, body mechanics, the mind/body connection, treatment and prevention. What sets this book apart from others written expressly for the musician is the in-depth discussion of treatment and prevention through the use of diet, herbs and alternative health measures. The book is well documented with extensive appendices, glossary and bibliography. Any musician who is interested in alternative health will find this book to be informative and useful.

Bruser, Madeline. (1997). *The Art of Practicing: A Guide to Making Music from the Heart*. Harmony/Bell Tower. ISBN 0609801775

This well-known book is a “must” for every musician’s library.

Chasin, Marshall. (1996). *Musicians and the Prevention of Hearing Loss*. Singular Publishing Group, Inc. ISBN: 1-56593-626-4

In the preface of this book, the author states that it is “as readable by a musician as it is by an audiologist or a sound engineer”. It is very informational and revealing, and should be of interest and helpful to any teacher/performer. Chapter 1 serves as an introduction to hearing and hearing loss, followed by 2) Factors Affecting Hearing Loss, 3) Development of Acoustic Principles, 4) The Physics of Musical Instruments, 5) Hearing Protection, 6) Clinical Assessment of Musicians, 7) Room Acoustics, 8) Clinical and Environmental Strategies to Reduce Music Exposure, 9) The Human Performance Approach to Prevention and appendices on clinical information (various data/charts) and Resources and Service Development: Earphone manufacturers, educational and advocacy organizations and a sample Hearing Health Care Proposal that can be adapted for a band or orchestra.

Conable, Barbara H. (2000). *What Every Musician Needs to Know about the Body: The Practical Application of Body Mapping to Making Music*, (revised edition.) Andover Press. ISBN: 0-9622595-6-X

The main goal of this book is to help the musician recover what F. M. Alexander referred to as “primary control”. This highly-illustrated book is described by the author as a book of fundamental principles that will “protect a musician from injury, promote the physical freedom and sensitivity for technical mastery, and secure the embodied intelligence that grounds musical power and subtlety.” While the book can serve as a great resource for any musician/teacher, it is also the textbook used for a six-hour course offered by Andover Educators. The six main topics are 1) Putting Music Training on a Secure Somatic [mind-body movement coordination] Foundation; 2) Mapping the Core

of the Body and Places of Balance; 3) Mapping the Arm Structure; 4) Breathing; 5) Mapping the Legs; and 6) Practical Application.

Culf, Nicola. (1998). *Musicians' Injuries: a Guide to their Understanding and Prevention*. Parapress Ltd. ISBN 1-898594-62-7

This is a clear and concise little handbook that defines, discusses causes, and preventative and healing measures of overuse injuries in musicians. In his brief discussion about percussionists, the author brings up a point that merits further discussion and research. He states that percussionists that perform a variety of instruments in many different settings are less prone to injury than those that are involved in a repeated activity such as a rock drummer, (or perhaps the student specializing on marimba?)

De Alcantara, Pedro. (1997). *Indirect Procedures: A Musician's Guide to the Alexander Technique*. Oxford University Press. ISBN 0-19-816569-2

This book is intended for use by the musician that is studying (or has studied) with a teacher of the Alexander Technique. The book is in three parts: 1) The Principles; 2) The Procedures; and 3) The Applications. What sets this book apart from general books on the Alexander Technique is the third section with 100 pages devoted to the application for musicians. This book is a somewhat tedious read with 288 pages of text. With an Alexander Technique teacher and an organized schedule of study, it could prove quite beneficial.

Freymuth, Malva. (1999). *Mental Practice and Imagery for Musicians: a practical guide for optimizing practice time, enhancing performance, and preventing injury*. Integrated Musician's Press. ISBN 0-9670027-1-0

This short book provides the musician with strategies for incorporating mental practice and imagery into the practice routine, and provides strategies for all levels of teaching, how to incorporate all of the senses into the mental imagery, how to combine the mental and physical practice and how to help prevent injury as well as to promote healing.

Horvath, Janet. (2000). *Playing (less) Hurt: An Injury Prevention Guide for Musicians*. Morris Publishing. ISBN 0-9713735-0-7 (As of April 2010, PLH is published by Hal Leonard, ISBN: 1423488466)

This guidebook is a great reference for all musicians. Horvath begins with a discussion of her own injury experiences, defines overuse and includes chapters on risk factors, danger signals and the possible causes of overuse injuries. Of particular value are the many "lists" including: 10 Risk Factors for Orchestral Musicians, 10 Potential Contributing Factors to Overuse, 10 Onstage Tricks (to avoid arm and shoulder problems) That Can Be Done Even While Playing, 10 Prevention Tips for Avoidance of Nerve Entrapments and other Overuse Injuries, 10 Shower Stretches, 10 Onstage Stretches, 10 Essential Items: The Musician's Survival Travel Kit and a guide to sensible practicing: 10 Backstage Stretches, 10 Do's for Injury Prevention, and 10 Don'ts for Injury Prevention. The book also contains 11 direct references to percussion playing.

Lieberman, Julie Lyonn. (2004). *You Are Your Instrument: The Definitive Musician's Guide to Practice and Performance*, fifth edition. Huiksi Music. ISBN 1-879730-20-0

This book takes a holistic mind/body approach to music practice, performance, injury prevention and healing. The first section of the book is titled *Your Mind*. The sub-headings in this section include *The Power of the Mind*, *The Brain* and *New Approaches*. The text is very informational regarding an awareness approach to practice and performance. Part Two is titled *Your Body*, with sub-headings *Muscle Signals*, *Breathing*, and *Awareness and Muscle Balance*. The reader will become aware of both signs and causes of injury, common tendencies/causes of stress to particular areas of the body as well as the role of breath in music making. The third section discusses the field of Music Medicine. Part four: *Other Musical Matters* discusses such topics as performance anxiety, warming up and various performance settings and their hazards. A 19 page *Muscle Balance Glossary* provides discussion, photos and illustrations of helpful techniques to achieve and maintain a healthy balance of muscles. The *Directory* provides a brief description/discussion of seventeen types of physical therapy, seven self exercise systems, four mind and spirit therapies and seven healing remedies. Suggested references and resources are also provided in an appendix. This book is very concise, yet thorough in its discussion. It should prove to be a valuable resource for any percussionist/teacher.

Norris, Richard, M.D. (1993). *The Musician's Survival Manual: A Guide to Preventing and Treating Injuries in Instrumentalists*. MMB Music, inc. ISBN 0-918812-74-7

This book was published by the International Conference of Symphony and Opera Musicians. The author, a physician and the director of the National Arts Medicine Center in Bethesda, Maryland provides a great deal of information in the small space of 134 pages. Norris addresses symptoms, causes, treatments and prevention of the numerous common musician injuries as well as advice for performance anxiety issues. He discusses non-musical activities in daily life that may affect performance as well. Each of the fifteen chapters provides a list of suggested readings and the appendices include a self-history form used in his clinic, a listing of names and addresses of performing arts medicine clinics throughout the country, a listing of arts medicine organizations and publications and an extensive bibliography of articles on performing arts medicine topics. Although the author does not specifically address common percussion injuries, it would still serve as a useful guidebook/reference.

Paull, Barbara & Christine Harrison. (1997). *The Athletic Musician: a guide to playing without pain*. The Scarecrow Press, Inc. ISBN 0-8108-3356-5

This book is divided into three main sections: Part I: The Problem, Part II: Anatomy and Applied Anatomy for Musicians and Part 3: The Musician as Athlete. Although the first section has a brief chapter titled "The Psychology of Musicians' Injuries", the book primarily addresses the physical concerns of music performance and practice. The text, illustrations and photographs combine to provide a very clear understanding of the many topics such as posture, muscle balance, pain, ergonomics, exercise, good practice habits, the work environment and what to do if you have an injury. In addition to the valuable information regarding music performance and practice,

the reader becomes aware of the many activities in daily life that can ultimately affect ones ability to have a pain-free and productive career.

Quarrier, Nicholas. (2006). *Prevention of Musician Injuries*. (self-published)

Nicholas Quarrier is the director of the summer workshop: *Healthy Musician* at Ithaca College. A clinical professor in the School of Health Sciences and Human Performance, he has developed a program that works with students in the performing arts at Ithaca. The book discusses the areas of common injuries, treatment, prevention, posture, stretching, strengthening, breathing and others. The manual can be obtained by contacting Quarrier through the Ithaca College Website.

Sataloff, Robert, Brandfonbrener, Alice & Lederman, Richard, editors. (1991). *Textbook of Performing Arts Medicine*. Raven Press. ISBN 0-88167-698-5

This textbook, a first of its kind, is edited by three “pioneers” of Music Medicine. It contains 15 chapters with 19 contributors. Of particular interest to the percussionist might be: Musculoskeletal Problems of Instrumental Musicians, by Richard A. Hoppman and Nicholas A. Patrone, Neurological Problems of Performing Artists by Richard J. Lederman, and Diagnosis and Surgical Treatment of the Hand by Richard G. Eaton and William B. Nolan.

Workman, Dr. Darin “Dutch”. (2006). *The Percussionist’s Guide to Injury Treatment and Prevention*. Routledge. ISBN 0-415-97685-5 (softcover) 0-415-97684-7 (hardcover)

This comprehensive guide to injury treatment and prevention for percussionist is the only one of its kind. Workman first provides an introduction to basic anatomy, how injury occurs, most common types of injury and general avoidance techniques. The bulk of the book is devoted to area specific problems/injuries. Each chapter begins with what Workman refers to as a “regional anatomy” such as hand and wrist problems and is followed by specific injuries in that region. Each injury discussion contains the sub-headings of Signs and Symptoms, Name of Injury, Description, Cause, Treatment, Prevention, If No Relief, Prognosis, Other Possibilities, further information to be found in Appendices and Related Areas. This book is a very valuable reference for any percussionist. As the author points out, it should not serve as a replacement for professional care.

Articles:

Allen, John. (2000). An Experience with Injury. *Percussive Notes*. 38(4): 50-51.

Cunningham, D., Workman, D., Curk, A., Hoffman, J., & Pride, J. (2005). Hearing Loss: New Research on Percussionists. *Percussive Notes*. 43(6): 44-47.

Curk, Ann & Cunningham, D. (2006). A Profile of Percussionists’ Behaviors and Attitudes Toward Hearing Conservation. *Medical Problems of Performing Artists*. 21(2): 59-64.

- Doose, M., Hancock, M., Hewgley, T., Robinson, T., Halle, J., & Greathouse, G. (2005). Median and Ulnar Neuropathies in University Percussionists. *Percussive Notes*. 43(3): 60-66.
- Falvo, Rob. (2008). Performing With Ease, An Introduction to the Alexander Technique. *Percussive Notes*. 46(4): 30-31, 33.
- Greiner, Jim. (2008). Hand Care Fundamentals for Hand Drummers. *Percussive Notes*. 46(3): 42-45.
- Haley, Terri L. (2000). Percussionists' Common Back Injuries. *Percussive Notes*, 38(2): 60-65.
- _____. (2006). The Athletic Percussionist, Conditioning and Injury Prevention. *Percussive Notes*. 44(5): 80-81, 83.
- Hoffman, Jenna, Cunningham, D., & Lorenz, D. (2006). Auditory Thresholds and Factors Contributing to Hearing Loss in a Large Sample of Percussionists. *Medical Problems of Performing Artists*. 21(2): 47-58.
- Manchester, Ralph. (2010). Protecting the Hearing of Performing Artists. *Medical Problems of Performing Artists*. 25(1): 1-2.
- McKinney, John. (2010) The Secret to Injury Prevention. *Percussive Notes*. 48(3): 12-13.
- Mikula, Philip J. (1998). Health Precautions for Percussionists. *Percussive Notes*. 37(6): 51-53.
- Palac, Judy. (2008). Promoting Musical Health, Enhancing Musical Performance: Wellness for Music Students. *Music Educators Journal*. 94(3): 18-22.
- Presley, Doug. (2007). An Analysis of Sound-Level Exposures of Drum and Bugle Corps Percussionists. *Percussive Notes*. 45(4): 70-75.
- Santucci, Michael. (2009). Protecting Musicians from Hearing Damage. *Medical Problems of Performing Artists*. 24(3): 103-107.
- Shaffer, Frank. (2000). Practicing with Mind and Body as you Recover from an Injury. *Percussive Notes*. 38(3): 65-66.
- Steele, Glen. (1991). Pumping Mallets: A Preliminary Investigation into Musicians' Performance-Related Injuries, Injury Prevention and Performance Enhancement. *Percussive Notes*. 29(5): 26-34.
- Workman, Darin. (1998). Injury prevention: What will we do? *Percussive Notes*. 36(5): 33-35.

_____. (2000). Preventing Injury with a Little TLC. *Percussive Notes*. 38(3): 67-68.

_____. (2006). Lower Back Pain, Part 2: Strains and Sprains. *Percussive Notes*. 44(3): 68-71.

_____. (2006). Lower Back Pain, Part 3: Slipped Disc and Other Nerve Impingements. *Percussive Notes*. 44(4): 60-63.

_____. (2006). Lower Back Pain Part 4: Arthritis In The Lower Back, Rheumatoid Arthritis Vs. Degenerative Arthritis. *Percussive Notes*. 44(6): 54-63.

Online Resources:

Andover Educators www.bodymap.org

Health Promotion in Schools of Music www.unt.edu/hpsm

Janet Horvath www.playinglesshurt.org

Musicians and Injuries (comprehensive info. on books/videos, great links

<http://rsi.unl.edu/music.html>

www.musiciansway.com

www.musicianshealth.com

Performing Arts Medicine Association (PAMA) www.artsmed.org

The Alexander Technique www.alexandertechnique.com www.alexandertech.org

The Feldenkrais Technique www.feldenkrais.com

Tinnitus www.ata.org

Sherry D. Rubins directs the UTSA Percussion program. Mrs. Rubins recently and over four years has fulfilled the roles of either Principal Timpanist or Assistant Principal Timpanist/Percussionist with the San Antonio Symphony. Additionally, for the past 25 years Mrs. Rubins has performed as an extra musician with the San Antonio Symphony and she has been the principal percussionist/timpanist with the Mid- Texas Symphony since 1991 and is currently principal percussionist with the San Antonio Opera.

She has been vice-president of the Texas Chapter of the Percussive Arts Society and on the faculty of the Interlochen Arts Camp, the Texas Music Festival at the University of Houston, the Stephen F. Austin University Percussion Symposium, Texas Lutheran University, and the University of Houston. Mrs. Rubins has presented clinics and concerts at the Percussive Arts Society International Convention, Texas Bandmasters

Convention, Texas Music Educators Association Convention, and the Texas Day of Percussion.

Mrs. Rubins is a busy freelance performer throughout the South Texas area and she is also an artist/educational clinician for the Zildjian Company, The Remo Company, as well as the Vic Firth Company.

***Dr. Susan Martin Tariq** is director of percussion studies at West Texas A&M University, which includes applied percussion, percussion ensemble, percussion literature and percussion pedagogy.*

She has been an active members of the Percussive Arts Society (PAS) at both the state and national level. She has served as performer, clinician and panel discussant at numerous PAS International Conventions.

Tariq is currently the principal timpanist of the Amarillo Symphony Orchestra. She is an active performer in such diverse areas as marimba, multiple percussion, jazz drumming, world drumming and timpani.