Notes:

In 1988, Martin Fishbein conducted a study among 2212 symphony orchestra musicians and found that a staggering 82% of them experienced performance related injuries; similar studies show that the number is on the rise. Students in performing arts programs are at particularly high risk of developing an injury due to the sudden increase in practice time, change in repertoire difficulty level, and performance-related stress. This presentation introduces some of the most helpful health resources for performers and demonstrates ways to incorporate them into a music library collection.
Common Health Issues

Physical:
• Musculoskeletal pain and Overuse Injuries
• Entrapment and Peripheral Neuropathies
• Focal dystonia

Mental:
• Performance Anxiety/Stress

Notes:
Musculoskeletal pain and Overuse Injuries: usually caused by excessive repetition
Entrapment and Peripheral Neuropathies: nerve entrapments manifest, for example, as one of the –tunnel syndromes (e.g. carpal tunnel)
Focal dystonia: career ending injury with no known cause or treatment (though cognitive behavior therapy can help); affects the primary body part used for performance (such as the hand for pianists, e.g. Leon Fleischer)
Providing Health Information to Musicians

Why Seek Health Information in the Music Library?

Prevention
Response
Recovery

Notes:
Prevention: Gathering of information on how to avoid an injury.
Response: Gathering of information on a medical problem or diagnosed injury, including general information and treatment options.
Recovery: Gathering of information on how to avoid injuries in the future.
Providing Health Information to Musicians

Why Seek Health Information in the Music Library?

Prevention
Response
Recovery

Reference Interview Aspects:

Performer Level
Instrument

Notes:

A successful reference interview will take into account:
The performer level of the student: undergraduate/graduate; major/minor/amateur; length and intensity of study; practice time; etc.
The instrument: what instrument does the student play; changes in the instrument (e.g. has the student recently upgraded to a differently sized violin); changes in the approach to the instrument (e.g. beginning Alexander Technique); etc.
Types of Health Resources

Websites
Websites

Performing Arts Medicine Association (PAMA): [http://www.artsmed.org](http://www.artsmed.org)

- Extensive Bibliography of Resources related to Medical Injuries in Performers (Updated 2013)
- Articles published in *Medical Problems of Performing Artists* Journal are free to members
- Doctor Finder and Referral Service
- Extensive list of links/resources to other sites
Notes:

PAMA features an extensive bibliographic database searchable by Author, Title, Publication, and Keyword. Its emphasis is clinical problems and scientific research related to performing arts medicine. Articles from both music and non-music oriented publications are indexed if they fit within the scope of the organization.
### Search the PAMA Bibliography

To search the Bibliography, fill in desired boxes, enter text string to search for, then click the Search button. Not all boxes need to be filled in; only completed rows, in order from top to bottom, will be searched. For more assistance, please read our [Bibliography Search Tips](#) and view the list of journals and the list of keywords.

<table>
<thead>
<tr>
<th>Mens en Melodie</th>
<th>Michigan Medicine</th>
<th>Military Med</th>
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<tbody>
<tr>
<td>Mind</td>
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<td>Missouri J Res Mus Educ</td>
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<td>MMW Fortschr Med (Ger)</td>
<td>Modern Drummer</td>
<td>Molec Psychiatr</td>
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<td>Monatsshr Ohrenhelld Laryngorhinol (Ger)</td>
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<td>Mount Sinai J Med</td>
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<td>Mov Discord</td>
<td>MTNA e-journal</td>
<td>Münch Med Wochenschr (Ger)</td>
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<td>Mus America</td>
<td>Mus Clubs Magazine</td>
<td>Mus Educ J</td>
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<td>Mus Educ Res</td>
<td>Mus Forum (Aust)</td>
<td>Mus in Educ</td>
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<td>Mus J</td>
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<table>
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<tr>
<th>pathogenesis</th>
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<th>pathophysiology</th>
<th>pedagogy</th>
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<td>performing arts</td>
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<td>Pilates</td>
<td>pointe</td>
<td>popular music</td>
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<td>presbyopia</td>
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<tr>
<td>reed</td>
<td>rehabilitation</td>
<td>relaxation</td>
<td>renal</td>
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</table>
Notes:
PAMA maintains an extensive list of links to performer-health related websites organized by general area of interest (e.g. Performing arts organizations) and by subject (e.g. Hearing).
The patient referral service allows performers to search for medical professionals active in the treatment of performing artists.
Websites

International Association for Music & Medicine (IAMM): http://www.iammonline.com/
  • Founded in 2009
  • Journal: *Music and Medicine*

National Organizations
  • British Association for Performing Arts Medicine, Deutsche Gesellschaft für Musikphysiologie und Musikermedizin, Médecine des Arts

Instrument Specific Organizations
  • National Flute Association, Percussive Arts Society, American Guild of Organists

Injury Specific Organizations and Resources
  • Association of Adult Musicians with Hearing Loss, Musician’s Focal Dystonia
Types of Health Resources

Databases
Music Databases

Resource Databases:

• RILM (Répertoire International de Littérature Musicale):
  • Includes Music and Medicine as a minor area of interest
  • E.g. Music and Medicine, MPPA, Medical Problems of Performing Artists, Médecine des arts: Approche médicale et scientifique des pratiques artistiques, Music Performance Research
  • Search strategy: Music Subject (e.g. piano playing) and broader Medical Term (e.g. medicine or therapy) gives best results

• CAIRSS for Music(Computer-Assisted Information Retrieval System): [http://ucairss.utsa.edu](http://ucairss.utsa.edu)
  • Bibliographic database developed by University of Texas and SMU
  • Indexes and cites articles from 18 primary journals in music education, music psychology, music therapy, and music medicine

Notes:
The last update for CAIRSS seems to have been in 2004.
Health Resources

Resource:

• Medline/PubMed and MedlinePlus
  • Database of the National Center for Biotechnology and U.S. National Library of Medicine
  • Available online for free
  • Includes in-depth citations to journal articles, books, reviews, newspapers, etc. on topics of biomedicine and health, life sciences, behavioral sciences, chemical sciences, and bioengineering; abstracts and full text when available
MedlinePlus: Consumer Health Information

Notes:

MedlinePlus is NIH/NLM’s consumer health resource. It contains accessible and quality (that is verified and accurate) health information and should be the first stop for performers seeking advice on injuries and treatment methods. It uses patient friendly vocabulary (heart attack instead of myocardial infarction). The search results will provide links to information resources, treatment information, clinical trials, and other material of interest, as well as pre-formulated search strategies for use in the PubMed/Medline database.
NIH/NLM’s PubMed/Medline database is oriented towards the information specialist. It requires a search strategy to produce the best results, but gives access to a wealth of medical literature in the form of indexed and abstracted article citations.
Notes:

Medline uses MeSH headings (medical subject headings) to index articles. These provide a convenient entry point into the database and can be searched by selecting “MeSH” from the dropdown menu of the search bar. The above example shows a sample MeSH search result for the heading “carpal tunnel syndrome.” It gives a definition of the heading, shows the various subheadings that may be attached to it, and situates it within the MeSH tree structure.
Notes:

Using the PubMed Search builder on the right allows for easy combination of the heading with a subheading. Checking the box next to the desired subheading (in this case “rehabilitation”) and clicking the “Add to search builder” button constructs a useable search strategy. Clicking the button “Search PubMed” will run the search in PubMed/Medline and display the results.
PubMed: Sample Search Result

Results: 1 to 20 of 36

1. Effect of carpal tunnel syndrome on grip and pinch strength compared with sex- and age-matched normative data.
   Baker NA, Moehling KK, Desai AR, Gustafson NP.
   PMID: 23925936 [PubMed - indexed for MEDLINE]
   Related citations

2. Massage therapy as an effective treatment for carpal tunnel syndrome.
   Elliott R, Burkett B.
   PMID: 23768278 [PubMed - indexed for MEDLINE]
   Related citations

3. Randomized controlled trial comparing acupuncture with placebo acupuncture for the treatment of carpal tunnel syndrome.
   Yao E, Gerritzen PK, Henicson E, Abresch T, Kim J, Han J, Wang K, Zhao H.
   PMID: 22395583 [PubMed - indexed for MEDLINE]
   Related citations
**Sample Query:** I am looking for resources for prevention of performance or practice injuries.

**Suggested MeSH Topics:**
- General: Music [MeSH Major Topic]
- Occupational Injuries or Occupational Diseases
- Prevention and Control

**Sample Search:** "music"[MeSH Major Topic] AND ("occupational injuries/prevention and control"[MeSH Terms] OR "occupational diseases/prevention and control"[majr])

**Notes:**
PubMed/Medline includes “Music” as a MeSH major topic but not heading. If the emphasis is on retrieving specifically music related materials, the major topic can be combined with a more specific clinical subject heading to retrieve applicable results. Individual instruments are not available as headings or topics, but can be searched as free text.
Sample Results

PubMed displays the strategy it used to search in the box to the right of the screen. From it, useful search terms can be extracted; for example, if heart attack was the initial search term, it would display the actual MeSH heading (myocardial infarction) there.

Notes:
Sample Results

Strategies to promote health and prevent musculoskeletal injuries in students from the high conservatory of music of Salamanca, Spain.

Martin López T, Farias Martinez J

Abstract

OBJECTIVES: The present investigation was intended to evaluate the effectiveness of a course on health and the prevention of musculoskeletal injuries in future professional musicians, specifically designed for superior-grade students at the High Conservatory of Music of Salamanca, Spain.

METHODS: Students were taught how to evaluate the possible risks associated with the practice of their instruments. They were provided with information about the most frequent medical problems of musicians, warm-up habits, postural hygiene, effective prevention strategies, and different treatment options for these pathologies. The students were randomly divided into two groups: a control group (n=56) who did not take the course and was evaluated with a questionnaire at the beginning of the academic year and 1 year later, and an experimental group (n=90) who did take the course and was evaluated with three questionnaires (at the beginning of the course, 6 months later, and 12 months after the start of the course).

RESULTS: While the students in the experimental group improved their body awareness by 91% and the frequency of their injuries decreased by 78%, there was no improvement in the students from the control group at the end of the experiment.

CONCLUSIONS: The results of our study have demonstrated the effectiveness of this type of course and show that such courses should be included in the academic curriculum of superior conservatories.

Publication Types, MeSH Terms

Notes:

A sample record contains the bibliographic information for the article and, when available, an abstract and full text link.
Sample Results

Strategies to promote health and prevent musculoskeletal injuries in students from the high conservatory of music of Salamanca, Spain.

Abstract

OBJECTIVES: The present investigation was intended to evaluate the effectiveness of a course on health and the prevention of musculoskeletal injuries in future professional musicians, specifically designed for superior-grade students at the High Conservatory of Music of Salamanca, Spain.

METHODS: Students were taught how to evaluate the possible risks associated with the practice of their instruments. They were provided with information about the most frequent medical problems of musicians, warm-up habits, postural hygiene, effective prevention strategies, and different treatment options for these pathologies. The students were randomly divided into two groups: a control group (n=35) who did not take the course and was evaluated with a questionnaire at the beginning of the academic year and 1 year later, and an experimental group (n=50) who did take the course and was evaluated with three questionnaires (at the beginning of the course, 6 months later, and 12 months after the start of the course).

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CONCLUSIONS: The results of our study have demonstrated the effectiveness of this type of course and show that such courses should be included in the academic curriculum of superior conservatories.

PMID: 23752085 [PubMed - indexed for MEDLINE]

Notes:

A “related citation” box to the right displays citations for articles similar to the one selected.
Health Databases

May also be useful:

- CINAHL Database or ProQuest Nursing and Allied Health Source; ProQuest Health & Safety Science Abstracts; Science Direct Databases
- ERIC (US Department of Education)

EXAMPLE

CINAHL (Cumulative Index for Nursing and Allied Health Information)

- SEARCH STRATEGY:
  - combine “performing arts” or “performing artists” with medical or occupational subject headings, e.g. “sprains and strains” and “therapy”
Organizing Health Resources

The Physical Collection
Organization of the Special Collection

• Barriers to a Collection of Health Resources for Performers:
  • Music and Medical Resources classed separately: scatters resources and confuses patrons
  • Conventional Subject Headings (LC and MeSH headings) not conducive to natural language searching

• Goals for such a Collection:
  • simplifies complex health information searching and item retrieval
  • easy-to-use
  • utility and functionality based shelving and classification system
  • layperson accessible subject headings, controlled vocabulary, and simplified medical terminology

Notes:
Performers love physical resources and being able to browse the shelves to find the information they need. But only a small portion of health related items is housed in music libraries, because most health related resources are classified differently and shelved elsewhere. The following slides explore how these resources may be brought into the music library using various classification systems, and offer a real world solution in the form of a local, provisional, series trace.
Library of Congress Classification

- Standard for most academic institutions
- Music Resources with Health Emphasis cataloged in various classes, e.g. ML 3820 and 3830 (Physiological and Psychological Aspects), MT 820 (singing and vocal technique)
- Medical Resources cataloged in Class R

<table>
<thead>
<tr>
<th>Pros</th>
<th>Cons</th>
</tr>
</thead>
<tbody>
<tr>
<td>Easy to integrate; familiar to patrons</td>
<td>R classification may deter patrons who are used to M classifications only</td>
</tr>
<tr>
<td>Works with LC subject headings</td>
<td>lack of subject specificity</td>
</tr>
<tr>
<td>Cataloging information easily available through OCLC; limited staff training needed</td>
<td>Materials will be scattered across various sections of the library</td>
</tr>
</tbody>
</table>

Notes:
Using a strict LC classification system for the collection has the benefit of being familiar to users, but it will divide the music from the health resources either across various shelves, or even floors, of the library.
User: I want to find treatment options for my carpal tunnel syndrome.

ML 8820.098:
Dawson. Fit as a Fiddle. 2006.

ML 223.84:
Bonnie. Hand Culture for Pianists. 1923.

RG 422 .C26:
National Library of Medicine Classification

• standard for most academic health sciences libraries
• Coverage: Field of medicine and related sciences
• Uses two schedules not part of LC (QS-QZ and W-WZ):
  • QS-QZ = Preclinical Sciences (e.g. QS Human Anatomy)
  • W-WZ = Medicine and Related Subjects (e.g. WA Public Health)

<table>
<thead>
<tr>
<th>Pros</th>
<th>Cons</th>
</tr>
</thead>
<tbody>
<tr>
<td>• Could potentially supplement LC system</td>
<td>• Schematic organization scatters materials rather than groups them</td>
</tr>
<tr>
<td>• MeSH headings staple of medical research and information retrieval</td>
<td>• Not intended for cataloging of consumer health collection (very technical)</td>
</tr>
<tr>
<td>• Schedules available online; yearly update</td>
<td>• Staff training necessary; patrons will need health-information literacy to use</td>
</tr>
</tbody>
</table>

Notes:
Using NLM for the collection gives two options: converting M and MT classes into NLM classification (as shown here) or maintaining the M and MT LC classes and adding other items according to NLM schedules. Either way, materials would be even more spread out.
User: I want to find treatment options for my carpal tunnel syndrome.
Planetree Classification Scheme

- Developed for consumer health libraries by medical librarians
- Similar topics are grouped under major subdivisions that mirror common areas of inquiry
- Alphanumeric classification system: FE Cancer; FE 200 Cancer Guide

<table>
<thead>
<tr>
<th>PROS</th>
<th>CONS</th>
</tr>
</thead>
<tbody>
<tr>
<td>• Supports browse-ability of information on a given subject</td>
<td>• Potential barrier for patrons not used to non-academic classification systems</td>
</tr>
<tr>
<td>• Patient-driven vocabulary (herniated disc instead of intervertebral disk replacement)</td>
<td>• Cost and staff training ($225 for system)</td>
</tr>
<tr>
<td>• Can be paired with either LC or MeSH headings</td>
<td>• requires re-classifying resources, current &amp; future</td>
</tr>
</tbody>
</table>
Planetree Subject Categories

• Subjects Categories encompass the most frequent types of user inquiries:
  • AB – AC: Medical Reference
  • BA – BE: Health Promotion/Disease Prevention
  • CA – CF: Mental Health/Mental Disorders
  • DA – DD: Medical Treatment and Therapies
  • EA: Complementary and Alternative Medicine
  • FA – FP: Body Systems/Diseases
  • GA – GL: Life Stages
  • HA – HC: Health Care Rights and Responsibilities
  • IA – IB: Health Care Field
  • [JA: Animal Health (not included in collection)]

Notes:
The Planetree classification scheme is compact enough to be displayed next to the collection and can be adapted or changed based on its needs and purpose. It groups items (regardless of whether they are health or music items) by major focus, such as treatment and therapies, making it easy for users to find exactly the information they need in one spot.
Planetree Sample User Analysis

Medical Treatment/Therapies

DB 840 P: (Pascale), Complete Guide to Repetitive Strain Injuries, 2004
DB 840 MCC: McCabe, 101 Questions and Answers About Carpal Tunnel Syndrome, 2002
DB 840 R: Rosenbaum, Carpal Tunnel Syndrome, 2002

User: I want to find treatment options for my carpal tunnel syndrome.
It also allows for easy identification of other helpful resources based on their general focus (like disease prevention).
Searching and Access
Searching the Collection

• Subject headings (LC) do not offer convenient enough access points
  • Too broad or technical to be helpful
  • User unfamiliarity with using them in searches

• Recommendation:
  • Offer health-information literacy instruction
  • Promote resources through collaboration with music studios and library-liaison work
  • Design and implement health-resource specific search tree and vocabulary
Sample Search Tree for Health Resources

- String Players

  - Conditions
    - Hand Injuries
    - Back Injuries
    - Performance Anxiety

  - Treatment
    - Therapy
    - Rehabilitation
    - Exercise

  - Medication
    - Pain Relief
    - Alternative Medicine
Search Tree continued

• Clicking on a specific branch of the search tree will lead the user to either the MeSH or LC headings without having to have specific medical knowledge:

Example: String Players – Conditions – Hand Injuries:

<table>
<thead>
<tr>
<th>Applicable MeSH headings</th>
<th>Applicable LC Headings</th>
</tr>
</thead>
<tbody>
<tr>
<td>• Neuromuscular Diseases • Peripheral Nervous System Diseases • Nerve Compression Syndromes • Carpal Tunnel Syndrome • Cubital Tunnel Syndrome • Ulnar Nerve Compression Syndrome</td>
<td>• Stringed Instrument Players • Wounds and Injuries • Overuse injuries • Entrapment Neuropathies • Carpal Tunnel Syndrome</td>
</tr>
</tbody>
</table>
A Real World Solution
Notes:

One solution that easily allows collocation of materials that may be of interest to performers, is the addition of a local, provisional series authority to the cataloging record (490/830 fields) of applicable items. In this case, I have created a local, provisional series authority entitled Health Resources for Performers. I then went into the catalog record of various resources that fit within the scope of this topic (items I thought might be of interest to performers looking for health information) and added a local 490/830 field.
As a result, the catalog can now be searched by the series title, regardless of their actual classification. It allows easy collocation of health materials even if they are not specifically music related.
Notes:

Students are able to use the series as a search term, and thus can easily retrieve a full list of health resources available to them. Such a project would require collaboration between music librarian and cataloger to identify appropriate resources within the library that may be of interest to performers. Of course, the users have to be made aware that the series exists in the library’s catalog (since it is not an official series), perhaps either through a subject guide or instruction sessions.
Sources used in Preparation of this Presentation


Sources used in Preparation of this Presentation


