

# Senza Sordino

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## A Healthier Environment for the St. Louis Symphony Orchestra

In the spring of 1986, the St. Louis Symphony became the first orchestra to utilize an Employee Assistance Program (EAP). Starting in the 1940's, large corporations such as Dupont and Kodak began programs to help employees having trouble with alcoholism. In the late 1960's, the programs expanded to treat any personal problem that affected job performance: substance abuse (drugs), marital, financial, emotional and legal. Since then, EAPs have become an integral part of the workplace for groups such as municipalities, banks, the Army Corps of Engineers, school districts, automobile dealers, and now a symphony orchestra!

Joan Briccetti, SLSO General Manager, said the primary reasons for initiating the program were concern for the well-being of talented persons and the desire to have a positive atmosphere in the organization. The EAP tailored for the St. Louis Symphony is furnished at no cost to the musicians and staff. The SLSO plan includes all employees of the organization and their immediate families.

As confidentiality and privacy are essential to the success of any EAP, counseling occurs away from Powell Symphony Hall. Any employee or immediate family member may arrange a private appointment to discuss a personal problem. 90% of the people who have used our EAP have made the initial contact by self-referral. The other method for arranging to see an EAP counselor is through management referral. A personnel manager or other designated administrator who notices a decline in an employee's work performance or specific on-the-job incidents indicating a personal problem may suggest that the employee see an EAP counselor. The manager's job is to recognize and document, not to try to diagnose or cure a personal problem. Once an employee takes advantage of the EAP through management referral, management gets only general information about whether the employee is accepting the recommendations of the counselor and making a genuine effort to try to solve the problem. If someone refuses help under management referral, management uses its standard means of dealing with the problem.

Under self-referral, the contact as well as any discussion is strictly confidential. Management gets only generic information: percentages of men/women using the service, types of services provided, etc. A specific person or circumstance is divulged only if an employee indicates an obvious and genuine desire to harm someone, in which case the counselor would be under legal obligation to notify the threatened person.

After the initial counseling session, the total number of sessions may be limited in the specific agreement between an organization and the EAP provider. The SLSO's plan has no such limit, although one of the prime objectives of any EAP is to arrest the individual's problem as quickly as possible. Counselors in the SLSO's EAP have master's degrees in psychological counseling, and in addition, receive state

## Update on the Medical Care of Musicians

by Alice Brandfonbrener, M.D.

ICSOM and *Senza Sordino* have been in the forefront of defining the medical needs of their membership. Such organizational incentive is the most effective way of pinpointing problems in order to seek their solution from the musicians' view. We in medicine want to continue to help you, not only in providing the best care we are equipped to render but also by assisting in an advisory role.

The level of awareness of these unique, although not new, medical situations is becoming more routine by the day, and ICSOM can take a large share of the credit for this. We in medicine are likewise dedicated to increasing education about the hazards of instrumental playing both within and outside the orchestra, and trying to interrupt past patterns of dealing with the threat of injuries. Progress may seem slow until you consider the state of medicine for musicians just five years ago. I am certain that in the next five years we will see so much meaningful progress that it will eclipse that of the previous years. Medical care will be both more readily available and more expert, research will yield some long-sought answers, we will be better able to prevent rather than to band-aid, and there will be a range of treatment modalities from which to choose. On the organizational side, I would hope that groups such as ICSOM will have been able to enlist managerial support of programs, facilities, and labor policies that will protect and preserve musicians' careers.

Today there are an increasing number of clinical centers across the country for musicians and other performing artists, whereas a few years ago there were none. The present facilities all differ, and efforts must be made to ensure that they continue to offer what is advertised, i.e. special care that comes from experience with these patients' problems rather than simply good intentions. Excellence in medical care is assumed, but the special knowledge it takes to assess and treat musicians requires special experience and frequently an approach that is non-traditional in medicine.

There are more conferences and meetings being held than ever before. Some are medical and designed for sharing of information among doctors and ancillary medical personnel. Others, such as the Fifth Aspen Meeting this summer are primarily medical, but have active participation from musicians and dancers. Next September, for the first time that I am aware, there will be a meeting initiated and sponsored by one of your member orchestras, the Minnesota Orchestra, for musicians of the orchestras in the Twin Cities as well as students and teachers. I find this particularly exciting because it shows not only the new widespread interest in these problems, but also a switch from the previous ostrich philosophy of "ignore it and it will not exist" to an eagerness to learn all one can. Talking and learning about problems does not create injuries, it protects.

Although in this specialty area of medicine, generalizations may be hazardous to your health, let me suggest a few broad guidelines for musicians in facing their medical problems.

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## A Healthier Environment

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certification, training in alcohol and drug abuse treatment, and 30-40 hours of continuing education each year. The EAP counselor must make an appropriate referral to more specialized help if need be. Providers have a list of local experts for each type of problem: chemical dependency, psychiatric, legal, etc. Recommendations first consider quality of treatment, then location and cost. Outside referral is usually covered by the employee's major medical insurance. If not, the EAP tries to find the best referral the employee can afford. The attorneys and consumer agencies to which the EAP refers clients for legal or financial advice charge either no fee or a sliding scale fee to members of the EAP. When an outside referral has been made, a case manager will monitor the individual's progress. The case manager evaluates the appropriateness and adequacy of treatment. This is self-generated quality control on the part of the provider.

It is important to note that Employee Assistance Programs are not all things to all people. They can supply one form of crisis intervention, helping someone get back to the original level of performance. An essential ingredient in any EAP is the employee's desire to solve a problem.

By initiating the EAP, the St. Louis Symphony Society made a statement of management's positive attitude toward employees. It was a good-faith step on their part to say that a person is valuable and worth not losing. They wanted to provide a comfortable forum where employees could deal with personal problems away from work in a confidential and professional setting. Setting up the EAP was also very astute long-term business practice. Tim Hobart, Director of the St. Louis Area EAP, pointed out that people having difficulties on the job can cost an employer up to 25% of compensation (salaries and benefits combined) due to lost productivity, accidents, sick leave, and turnover. By solving problems and getting an employee's performance back to normal, an organization may realize a return of as much as \$10 for every dollar invested in the EAP. For the employee who can recover from a debilitating problem and hold onto a job, the return is inestimable.

Management and several members of the orchestra committee looked at "for profit" and "not-for-profit" EAPs in St. Louis, including United Way, National Council on Alcoholism, Personal Performance Consultants, Inc., and others. The St. Louis Area EAP is one of the oldest and most experienced, having been affiliated for 22 years with the National Council on Alcoholism. It offers a broad range of services and, because it is not-for-profit, has lower fees. Tim Hobart said that each member company pays only \$12-20 per employee annually.

Use of the SLSO's EAP has been above average, according to Mr. Hobart. (Due to zealously guarded confidentiality, the following percentages are approximate.) About 12% of the organization have used it, as opposed to 6-8% for most corporations. Of the 12%, 30% have been for family/marital problems, and 30% have been for emotional/stress problems. 35% were unclassified and only 5% have been for drug/alcohol treatment. Usually 20% of the people who use an EAP are treated for chemical dependency. Of the 12% who used the program, 25% were orchestra members, 38% were office/clerical, 6% management/supervisors and 31% unclassified. 30% of the total group were helped within the EAP through counseling sessions and 70% were referred to outside sources. A successful treatment is one that results in an improvement in a person's job performance within one year from the date of the first appointment. 70% of the SLSO participants achieved this goal. The general feeling about the validity of the service is very positive.

Four years ago, the SLSO management voluntarily instituted a Corporate Fitness Program. Last year, again outside the realm of contract negotiations, management initiated the EAP, demonstrating a commitment to our mental well-being and to the prevention of potentially debilitating problems in the workplace.

*Thomas LeVeck, St. Louis Symphony Orchestra ICSOM Delegate*

## 1986 Aspen Conference

The fourth annual symposium on Medical Problems of Musicians and Dancers was held last summer in Aspen, Co., sponsored by the Cleveland Clinic Foundation and the Aspen Music Festival. The scope of the conference was broadened to include the special musculoskeletal problems and rehabilitation of dancers' injuries, physical conditioning of the performing artist, and discussion of the special developmental problems and training of the musically gifted child.

Presentations relating to musicians included the surgical treatment of thoracic outlet syndrome and the effects of aging and injury on sight and hearing.

Thoracic outlet syndrome (TOS) is especially worrisome for musicians because the syndrome can cause weakness, numbness, disabling pain, and loss of function in the arm, hand, and fingers. The diagnosis of true TOS appears to be relatively rare, yet surgery is being performed extensively for conditions that do not meet the full diagnostic criteria for the syndrome. Some cases of carpal tunnel syndrome may have been mis-diagnosed as TOS and treated with surgery involving the removal of the first rib beneath the collarbone, through the armpit.

Delegates who were present at the 1985 ICSOM conference will recall that Stuart A. Schneck, M.D., professor of neurology at the University of Colorado Health Sciences Center, concluded that "...too many operations have been done based on too little objective evidence for the existence of this syndrome. Musicians seem to fall into a group prone to have it done since the fourth and fifth fingers are so involved in their symptoms."

The presentation of papers and discussion on aging, injury, and sensory loss reviewed anatomy of the ear and eye, technical terminology of basic acoustics, and explanation of the scientific technique of using audiometers and reading audiograms (a graphic representation of an individual's sensitivity to pure tones--not related to hearing as we conceive the sense). There were demonstrations of many degrees of hearing loss caused by aging, noise-induced injury, and combinations thereof. The audience, composed of medical professionals and musicians, was clearly fascinated by the taped reproduction of changes of sound level that hearing loss patients experience, presented in increasingly dramatic loss representation.

Eyeglasses and contact lenses were discussed fully, including the placement of small and large areas of bifocal lens alignment to suit the needs of the orchestra musician. Eyeglasses tailored to the distance of the music stand can easily be designed. The nuisance of glare, especially from fluorescent lighting, increases as we age; yellow-brown lenses reduce glare and increase contrast.

One in five individuals over age 65 may experience some hearing loss. Hearing aids do not reproduce sound as the normal ear transmits it. Wearing two hearing aids helps distinguish sound from the noise around us. Intensity of sound, not the frequency of the signal (a physical measure of the number of cycles per unit of sound) can produce hearing loss, according to the experts at the symposium. To protect

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## Work Dues: Do You Get What You Pay For?

### History

June 1980--The convention of the American Federation of Musicians (AFM) mandated a minimum 1% work dues for all local unions. One-half of one percent accrued to the Federation, the other half to the local unions. The 1% work dues was in addition to any local dues percentages already in place, and waiver of any portion of the work dues increase could be authorized only by permission of the AFM International Executive Board (IEB). A report in *Senza Sordino* voiced the anger and frustration of ICSOM orchestras: "ICSOM membership represents 1.3% of the total AFM membership, yet ICSOM membership will pay about 37% of last year's AFM deficit of \$910,000..."

### Then and Now

#### August 1980-1986 ICSOM Conferences:

ICSOM orchestras expressed dismay that the local union work dues increase was mandated at the AFM convention without any vote by musicians in each local, and that some locals live off the dues paid by their orchestras without attempting to collect dues from all working members.

The minimal, basic need of all ICSOM orchestras is for expert and professional help with contract negotiations and arbitrations. Even though an orchestra contract is often worth millions of dollars in wages and benefits and may be the largest employment contract in the local union's jurisdiction, orchestras are often put in the position of having to beg for the representation to which they are entitled by law.

Orchestras are angry that they carry the burden of support for as much as 80% of the total local membership's work dues while representing a small percentage of the local's membership.

**WE ARE PAYING TOO MUCH; WE CONTINUE TO OPPOSE THE CURRENT STRUCTURE OF WORK DUES TAXATION THAT PLACES MORE BURDEN ON SYMPHONY, OPERA, AND BALLET MUSICIANS THAN ON ANY OTHER CONSTITUENCY.**

Victor Fuentealba, President of the AFM, has heard these arguments many times at ICSOM conferences. He has agreed that we pay a disproportionate share of work dues in many of our locals. Last year at the ICSOM conference in Atlanta, Mr. Fuentealba announced that he would convene a special committee to develop recommendations to reform the fiscal structure of the Federation. He also suggested that a system of caps on work dues might be feasible. He has fulfilled the promise of a work dues study committee.

### Work Dues Study Committee

The appointed work dues committee met in New York for two days in January 1987. Participants included Mr. Fuentealba and other AFM officials from the U.S. and Canada, the Symphony Department, officers from seven local unions in the U.S. and Canada, ICSOM Chairperson, ROPA governing board member, and a former officer of the Recording Musicians of America. Recommendations from this committee must be reviewed by the IEB and the Federation's Law and/or Finance committee before being passed on to the convention. Mr. Fuentealba indicated early in the proceedings of the work dues committee that no recommendation from the committee may jeopardize in any way the fiscal stability of the Federation or any of its locals.

### Results

After debate, study of statistics, and consideration of many suggestions for fiscal change, the committee concluded, against ICSOM's wishes, that there would be **NO RECOMMENDATION FOR REDUCTION OF WORK DUES** for any segment of the Federation membership. The local union representation in the committee rejected any

version of a cap, sliding scale on work dues, increase in annual dues with a credit for a portion of work dues, or any other change in fiscal structure that would reduce work dues income for local unions. However, the committee unanimously expressed concern that work dues are not being collected from **all** working members in local unions. The IEB agreed that this problem must be addressed, and recommended a bylaw requiring locals to collect work dues from all working members in each local.

The work dues study committee debated the specific and **minimal** needs for all collective bargaining units in local unions. The committee finally agreed to recommend to the IEB that a new section be added to Article 21 (Symphony Orchestras) of the bylaws outlining the locals' responsibility to represent members of all collective bargaining units. The new section calls for the local to provide, at its own expense, "competent, professional representation for contract negotiations and the processing of grievances and arbitrations." Further, the committee recommended that the IEB have authority to implement this policy.

**IN EFFECT, THE WORK DUES STUDY COMMITTEE ACCOMPLISHED LITTLE EXCEPT TO REQUEST THAT THE IEB RECOMMEND TO THE AFM DELEGATES A BYLAW SPECIFYING REPRESENTATION FOR UNION MEMBERSHIP ALREADY PROVIDED FOR BY LAW.**

### The International Executive Board

The IEB, during meetings in March 1987, reworked the bylaw recommendation from the work dues study committee as follows: "The Symphony Department in the President's office and the Canadian office of the Federation shall supervise the locals' responsibilities in this regard and shall render whatever assistance it deems necessary."

### ICSOM Request: Bylaw Addition

At meetings in New York on March 22-23, the ICSOM governing board reviewed the work dues study committee recommendations to the IEB and the subsequent IEB recommendations to the upcoming AFM convention. The governing board proposed that the IEB recommendations at least contain a procedure whereby orchestras whose request for "competent representation" was rejected by the local union for financial reasons could apply to the Federation for immediate relief. The Federation would then advance the necessary funds to the orchestra and recover those funds from the local, at the Federation's discretion, **without additional cost to members of the orchestra.** President Fuentealba did not agree with all aspects of this request, but said he would present it to the IEB for consideration.

The IEB returned the following version of ICSOM'S request: "In the event that a local does not provide competent representation, the International President shall have the authority to provide such representation at the local's expense."

Clearly, the IEB was not willing to guarantee immediate representation if a local would need to borrow money from the Federation for that purpose, nor was the IEB willing to ensure that orchestra musicians would not have to pay **again** for the right of representation.

### Consequences

The Federation is willing to enunciate its responsibility to represent its membership adequately and according to law by its local unions. Yet the Federation is unwilling even to **LEND** money to its locals which may be unable to afford the representation orchestras must have--and have already paid for in dues--for negotiation or enforcement of contracts.

The Symphony Department has been designated to "supervise" the local's responsibilities to the orchestra membership and to assist in whatever way it "deems necessary." What does this mean? Who will determine what is "competent representation for negotiation of collective

bargaining agreements and handling of arbitration hearings?" What power would the Symphony Department have to right a situation in which competent representation is not provided? Would the Symphony Department itself be expected to supply representation?

The 1987 AFM convention will be the only decision-making forum until June 1989. If the IEB has been willing to take only minimal steps to address some of the reasons for major discontent among orchestra players in the AFM, one must question whether Federation officials really believe a problem exists. Most solutions to the problem still rest with each local union. The Federation is taking a leadership role only in delineating what a local should do, not in giving financial aid to locals in order to help orchestras during crucial times such as negotiations or arbitrations. The Federation has offered only Symphony Department help to fix battered relationships between locals and their orchestras. There can be no doubt that the issue of work dues will be a major topic at the 1987 ICSOM conference.

*Melanie Burrell, ICSOM Chairperson*

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## Calendar of Meetings

Oct. 22 Washington; ICSOM, AFM, ROPA, Metropolitan Orchestras, and the American Symphony Orchestra League discuss problems in troubled orchestras.

Oct. 26 Denver; ICSOM Chairperson and 3 medical experts discuss medical questionnaire; continue on Nov. 6.

Nov. 6-8 New York; ICSOM Media Committee and President, AFM, recording companies, local unions attend recording negotiations; follow-up meeting Nov. 12.

Dec. 7 New York; ICSOM Executive Committee and Major Orchestra Managers Conference Liaison Committee discuss medical questionnaire, sound levels, resume tapes, health care cost containment.

Dec. 8 New York; ICSOM Chairperson and AFM Symphony Department

Jan. 14-15 New York; ICSOM Chairperson, AFM, local unions, ROPA participate in Federation work dues study committee

Feb. 2 San Francisco; ICSOM-MOMC subcommittee on health care cost containment and Cathy French (League) meet with William Hembree

Mar. 16 Denver; AFM, ICSOM, MOMC, and doctors hold medical questionnaire meeting

Mar. 22 New York; ICSOM, MOMC, and League meeting; continuation of Dec. 7 agenda

Mar. 22-23 New York; ICSOM Governing Board and Counsel meet

Apr. 6 New York; same group as Nov. 6 continue recording negotiations; discuss CD production in U.S.

Apr. 13 Chicago; 8 of the negotiating orchestras meet with ICSOM Counsel, President, and Chairperson, Irving Segall (President's Council), and AFM Symphony Department.

As more meetings take place, information will be forthcoming through bulletins and/or *Senza Sordino*.

## Health Care Cost Containment

In an exhaustive presentation to the conference, William Hembree, director of the Health Research Institute, talked about the spiraling costs of health care and measures for controlling them. His statistics dramatically made clear the disastrous impact that escalating health care costs have on businesses, including our orchestras. He outlined how factors such as the manner in which we use hospitals have driven up the cost of health care. As solutions to the problems, Hembree cited measures such as more use of second opinions, competition in the medical industry, more preventive action, and more self-insurance and self-administration. Because administrative expenses of health care coverage greatly inflate the cost of that coverage, organizations can save significantly by using in-house administration. Hembree described joint management-labor efforts to reduce cost, and his remarks spurred renewed interest in the possibilities of jointly administering separate orchestra medical coverage plans. This is not a proposal to standardize benefits by providing all orchestras with one uniform "umbrella" plan.

*Tom Hall, Chicago Symphony Orchestra ICSOM Delegate*

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## Music Medicine Clinics

The following is a list of clinics we are aware of. ICSOM by no means endorses any of these, nor is the list necessarily exhaustive.

**Boston**

Music Medicine Foundation  
Fredrik Wanger, Consultant  
617-965-2305

**Denver**

U. of Colorado Health Sciences Center  
Stuart A. Schneck, M.D.  
303-394-7517

**Cleveland**

Cleveland Clinic Foundation  
Richard J. Lederman, M.D., Ph.D.  
216-444-5545

**Louisville**

U. of Louisville  
Jonathan Newmark, M.D.  
502-588-7981

**San Francisco**

UCSF Health Care Program for Performing Artists  
Peter Ostwald, M.D.  
415-476-7373

**Chicago**

Medical Program for Performing Artists  
Alice G. Brandfonbrener, M.D.  
312-908-2787

**New York**

Health Care Institute for Performing Artists  
Emil Pascarelli, M.D.  
212-554-6423

**Hamilton, Ontario**

McMasters Music Medicine Clinic  
Marie Peebles  
416-549-5946

from intensity of sound, only two forms of ear plugs are recommended: custom-made plugs and foam plugs. Cotton is not effective. A member of the audience asked whether a custom-made plug is available that would allow musicians in the orchestra to hear themselves or those around them while still dampening the effect of high intensity nearby. The answer was unequivocal: a custom plug is not well-made if it allows you to hear anything.

Other areas covered at the conference included the need to study people of exceptional talent in relation to brain function; the concept of physical conditioning to improve the quality and stamina of performance; the prevention of performance-related injury; understanding the stresses and needs of the young gifted performer; and expansion of ideas for the complete education of the young performer.

The on-going dialogue between medical professionals and performing artists provides the essential ingredient in the search for the identification of the artist's needs, as well as the development of the care and preservation of that resource. We are fortunate indeed that we are both the source of the information and the beneficiary of the knowledge.

*Melanie Burrell, ICSOM Chairperson*

## Update

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### A FEW GUIDELINES FOR MUSICIANS' HEALTH MAINTENANCE

1. No problem which affects your playing is too trivial to seek advice from a medical expert, not from your stand partner or significant other.
2. Many problems arise insidiously and are ignored. Others arise acutely and may be more difficult to forget. Problems that occur only while playing and do not cause pains after playing is finished may need as much attention as those that cause perpetual pain. As a general principle, a few days of rest, ice, and aspirin-type medication (if not allergic) are unlikely to cause serious damage. However, if after a few days the symptoms are not significantly improved, help should be found. Embarrassment, self-criticism, guilt, and fear are not reasons to avoid medical consultation. There is no sin in being examined carefully and being told the problem is not serious. And should the condition need treatment, the earlier this is started, the better the prognosis for prompt resolution.
3. Frequently, given our current state of medical knowledge of musicians' injuries, a definite diagnosis may not be reached, or there may be several diagnoses. Rather than representing second-rate medicine, this may be honesty, and with appropriate care, the person without a fancy diagnosis may be cured more readily than the player with Carpal-Tunnel Syndrome.
4. Try to choose your medical practitioner by expertise as judged medically, not by a popularity poll. If the advice you receive is questioned by you or otherwise unacceptable, seek a second or even third opinion. In instances where surgery is advised, particularly without a trial of more conservative, non-invasive treatment, always request a second opinion.
5. Don't automatically assume the worst when an injury develops: most musicians' injuries are curable and frequently preventable. Always remember that allowing an injury to remain unevaluated and untreated may necessitate a longer, less certain period of rest, treatments, and economic and personal trial.
6. Playing an instrument is a complex process undertaken by a very complex mind and body. Frequently, more than one factor is responsible for an injury. How one conducts oneself off-stage may be as important as at rehearsals and concerts. General good health and conditioning are essential. Poor

sleep, dietary, and life-style habits affect everything that one does. Stress, both physical and purely emotional, affects not only how an instrument is played but how resistant a person may be to injury, and how difficult a recovery period the player may have. One cannot isolate a body part, even if it is the symptomatic part, and ignore the body to which it is attached nor the mind that tells it what to do.

7. Because playing an instrument requires strenuous, repetitive muscle use, some of the principles central to sports medicine apply to musicians. Always do some flexibility stretching and some warming up before picking up the instrument. Pace yourself so that when your fingers, hand, or mind tires, and certainly if there is pain, you rest. If there has been a problem with pain in a local area, massaging with an ice cube is simple, safe, and potentially therapeutic. Be aware that at times of increased stress, musically or personally, there is an increased risk of injury. No matter how important an upcoming playing commitment, don't ignore a symptom until "afterwards."

8. Finally, please keep in mind that we who have involved ourselves in your medical care are as committed as you are to having you play at your optimal level. Like yourselves, we are not in this for financial gain, nor are we expecting the Nobel Prize for our research efforts. We are in it for many individual reasons, but essentially because the performing arts and artists are central to the quality of our lives. We feel that we cannot alter some sacrifices on the part of the artist. But we are determined to reduce your medical problems as they relate to your careers and to work with you towards this goal.

*Alice Brandfonbrener, M.D.*

*Director, Medical Program for Performing Artists*

*Northwestern Memorial Hospital, and*

*Editor, "Medical Problems of Performing Artists"*

## Overuse syndrome in musicians-- 100 years ago An historical review

(Excerpts from an article which appeared in "The Medical Journal of Australia" 1986; 145:620-625)

It is interesting and instructive to reflect upon the way that a familiar condition was viewed in past times.

In the last half of the 19th century, the condition that is now known as overuse syndrome was a standard part of medical practice. It affected most frequently writers and musicians, though many other hand-use-intensive occupations were affected also. That it was the same condition in all these groups was clearly stated by most of the doctors.

The condition was investigated by the methods of the day. The clinical descriptions were so clear and so detailed that it could not be mistaken for any other condition. Areas of doubt and differential diagnosis were delineated clearly. There were two main theories of causation. The first was that the condition was a form of derangement in the central nervous system (the central theory). The second theory was that it was muscle failure due to overuse (the peripheral theory). The two theories were discussed extensively and were not held necessarily to be mutually exclusive.

### Terminology

There were two principal names for the condition. Occupational cramp was probably the most common general term when the condition appeared to be related to occupation. The most common specific example was writer's cramp. The afflicted musicians were referred to generally as having musician's cramp but also more specifically, pianist's cramp, violinist's cramp, and so on. The term implied a painful

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# Overuse Syndrome

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spasm of muscle, although actual muscle spasm was not often mentioned among the symptoms.

Occupational neurosis was the other frequently used term; it referred to a neurological disorder of occupational origin. The term did not refer to a psychiatric condition and therefore was used differently from its modern meaning.

Other names used for the disorder included professional impotence, craft palsy, occupational overstrain, fatigue disease, overfatigue, overuse, and exhaustion neurosis.

## Occurrence of the disorder in musicians and others

Musicians were second only to writers in the recorded frequency of the disorder. Because writer's cramp was so common, it was taken as the model for clinical description. Musicians were regarded as constituting one of a number of occupational groups which suffered habitually from the condition in the upper limb.

## Aetiology

The small muscles of the hand were most frequently investigated in these experiments.

Virtually all the authors acknowledge that emotional factors aggravated the symptoms. However, allegations of the psychogenic origin of the conditions in musicians were conspicuously lacking.

## Clinical Features

Pain, weakness and loss of response and control were the dominating symptoms which led to loss of technique and incoordination. The terms spasm, cramp, paresis and palsy were regarded often as being unsatisfactory.

More than half the major authors noted areas of tenderness in the affected limbs.

## Treatment and prognosis

Many treatments were tried, but the only one that appeared to work reliably was absolute rest for many months. In this, almost all of the authors were agreed. Drug therapy was unsuccessful. Surgical treatment was a failure. That rest has been the only effective treatment is as true today as it was 100 years ago.

## Discussion

The 19th century saw considerable developments in musical instrument technology, which sought a faster, more versatile instrument with a richer and louder sound. Two good examples are probably seen in the development of the concert piano and the clarinet.

In the early 19th century, the concert piano, such as the Grober, had an action that involved about 6 mm of travel of the key; it took about 23 g to depress each key, the tension on the middle string section being about 12 kg to 15 kg. By 1840, iron-frame technology had arrived, and by the end of the 19th century, single cast-iron frame manufacture called upon the player to use a great deal more muscle power. Equivalent figures for today's Steinway Concert Grand are about 10.5 mm travel, 90 kg tension and 50 g to 60 g depression pressure.

The early 19th century clarinet was usually made of light boxwood and had about five light brass keys. It weighed about 300 g and was held with both hands, as with a modern-day recorder. With the addition of heavy keywork and the use of grenadilla (a heavy hardwood), the 20th century clarinet came to weigh around 830 g. Because of the increase in weight, it could not be held by the two hands and was loaded onto the right thumb with a thumb rest. The devastating overuse syndrome that is seen in clarinetists today was not noted by the authors in the 19th century. By contrast, the 19th century flutes were made of wood and were quite heavy; the modern metal flute is actually lighter, and here technology has, if anything, worked in the reverse direction to that of the clarinet.

The prevalence of overuse syndrome in the modern symphony orchestra is in excess of 50%.<sup>1</sup> It would have been surprising if this condition in musicians had been exclusive to the 20th century. Musical pedagogy has cast little light on causation. Musicians of great eminence suffered from the condition 100 years ago, as they do now--there appeared to be no serious proposition that this was in some way the fault of the players.

The clinical condition that was described by these authors 100 years ago as existing in musicians and other occupations was recorded in such detail and with such a high level of agreement that there can be no doubt that it is the same condition that is now termed "overuse syndrome" or "overuse injury syndrome." The causal factors appear to be identical. The clinical presentation in past accounts, while showing variability, is distinct and matches modern accounts of the condition. The treatment and prognosis appear to be totally unchanged now from a century ago.

<sup>1</sup>Fry, HJH. The incidence of overuse syndrome in the symphony orchestra. *Med Problems Performing Artists* 1986; 144: 182-185.

Hunter Fry, MS, FRCS, FRACS, Plastic Surgeon

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