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September/October
2000

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This journal focuses on Occupational Health, Medicine, Hygiene and Safety, Primary Health Care at the work place, Environmental Health and other employee health benefits

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Occupational HEALTH

SOUTHERN AFRICA

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Regulatory consolidation of safety and health

It is now common knowledge and has been reported in the newspapers that government is forging ahead to try and consolidate the legislation and inspectorate relating to occupational health and safety. In the past various commissions of inquiry have made these recommendations, but have been ignored while SASOM has since the late 1970s, more than twenty years ago, endorsed and advocated this route. It is my own speculation that the major pieces of legislation to be merged would be the Occupational Health and Safety Act with the Mine Health and Safety Act as well as the Compensation for Occupational Injuries and Diseases Act with the Occupational Diseases in Mines and Works Act. Various other pieces of legislation could also be incorporated. It also seems likely that there will be a single inspectorate with specialised divisions to take care of these areas which are different and unique.

Previous initiatives came to nought due to different departments jealously guarding their "own turf", the government of the day's concern about certain vested interests and the difference in the unfunded liabilities of the two compensation funds. It is likely this initiative will be a difficult one, but hopefully the negotiators can overcome the obstacles and they deserve the full support of the societies. It is hoped however that it will not take another 5-10 years to complete the process as many of us may well have retired to a quieter lane by then.

Stress at work

Both van der Merwe and Moch have discussed the epidemic of stress and the move by the wider society to wellness. Stress has become a major factor in our lives in South Africa due to downsizing and retrenchment, the ever-present threat of crime, the poor performance of financial markets which affects pensions and several other factors. More and more employees and especially those who are older are becoming victims of stress. The authors outline clearly that many of our physical illnesses are initiated or aggravated by stress and include conditions such as hypertension, coronary artery disease, etc.

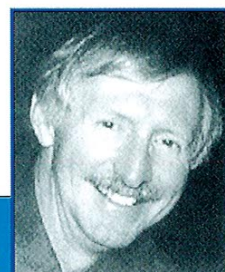
As a result there has been a worldwide trend towards staying well or wellness, and the techniques involved encompass a mix of Eastern philosophy and practise such as meditation and breathing routines combined with traditional medical values such as exercise and diet. The measures that are mentioned to achieve this state of wellness are so simple and yet so many people seem unable to change their behaviour. Perhaps these techniques need to be taught to our children at school or in tertiary institutions as part of their life skills training.

Hazards of game capture

Every now and again it is a pleasure to read articles that are different and unique, but at the same time relevant. Thomson has enlightened us with two articles (one of which is in a lighter vein) about the hazards of game capture which are both diverse as well as being potentially serious or even fatal. It's an occupation that I certainly never considered, but we need to remember that there are health and safety risks in virtually all forms of employment.

Occupational asthma from onion

New causes of occupational asthma are being discovered all the time and the onion has now been implicated. Rees and Mansoor have put together a good argument based on this case study. However, what is important is that the three-pronged approach they have used of confirming the asthma, confirming the exposure to a known cause and work-relatedness is a simple way to approach what can be a complicated and difficult topic.



Mike Baker
HONORARY EDITOR

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Help with depression and anxiety

The Depression and Anxiety support group was started in 1995 specifically for people with panic disorder. However, with the growth experienced, it now also reaches those with social phobia, generalised anxiety disorder and post-traumatic stress disorder. In February 1998 it further extended its reach substantially to include depression.

The main thrust is telephone-counselling, run by trained counsellors, able to support callers with advice, give referrals to professionals in the caller's local area, as well as support callers with literature (in various languages) and information on the regional support groups.

Tapes and booklets

Readers who are interested can receive copies of any of the following cassette tapes and booklets: **A patient's guide to social phobia (social anxiety disorder); A patient's guide to obsessive compulsive disorder; and A patient's guide to panic disorder, sponsored by SmithKline Beecham, free of charge. Write to The Depression and Anxiety Support Group, P.O. Box 652548, Benmore, 2010 for your free copies. Please remember to state the material requested and the number of copies required.**

Educational programmes are undertaken for health professionals and ongoing training is given to regional co-ordinators.

Recent programmes have been targeted at teens, children, the elderly, suicidality and post-traumatic stress sufferers.

New outreach projects to rural areas have been initiated as well as a programme in prisons where inmates are assisted to start their own support groups.

There are currently 100 established support groups country-wide, with the network being continually extended.

More information can be obtained from tel (011) 884-1797 or 783-1474/6.

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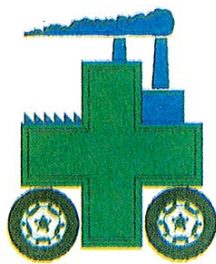
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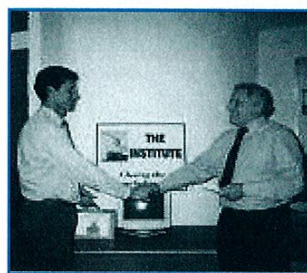
Pathology

Vision Tests

Lung Function Tests

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WINNER OF THE ANNUAL MOM COMPETITION.



The draw for the 1999 Mobile Occupational Medicine (MOM) competition was held recently at The Institute in Centurion. Thelma Meyer (RN) of General Food Industries in Waitloo was the lucky winner and received a prize of a week's holiday for her and her family. The draw was performed by Mr Arthur Pritchard (right) representing MoM's auditors and Director of The Institute, Dr Murray Coombs, (above).



Right: Thelma Meyer, winner of the 1999 MOM competition

SASOM scientific committees

SASOM has established various scientific committees during the past few years. Scientific committee membership of the society is open to all professionals and stakeholders in the field of occupational health and environmental medicine. The scientific committee functions acts as the scientific base for discussion groups, mainly through electronic mail, few meetings and telephonic contact. There is no cost involved and the main function of the scientific committees are the updating and expanding of SASOM guidelines and knowledge. The committees are:

Benchmarking in occupational health

A new scientific committee was launched in May. This committee will incorporate the audit function for SASOM. Various discussions with external and internal roleplayers are taking place to develop a benchmark for occupational health/medicine.

Co-ordinators: Dr Murray Coombs 012-667-2847
Dr Andre Kotze 011-606-2289

Noise-induced hearing loss

The representative committee consisted of the Department of Labour, Department of Minerals and Energy, NUM, COSATU, the Compensation Commissioner's office, SASOM, and Rand Mutual Assurance. The regulations will be promulgated under the Mine Health and Safety Act and the Occupational Health and Safety Act. Important aspects dealt with during the update of this guideline included:-

- Compensation will be based on deterioration from a baseline audiogram. Compensation may be apportioned according to previous employers
- Screening must be done every six months on workers exposed to noise >105dBA
- Typical cases of NIHL up to 30% PD may be submitted for compensation by an occupational medicine practitioner
- Accreditation will be done jointly by NQF, SASOM and SAMA

Comments are awaited from the advisory council constituted under the OHS Act as well as the Department of Labour. The MOHAC committee will look at the regulations under the Mines Health and Safety Act. The Compensation Board has made R100 000 available to finalise and review the annexures pertaining to the regulations and instruction.

Co-ordinator: Dr Dave Barnes 018-700-2292

Lung Function

A project was launched on Lung Function Guidelines in June.

Co-ordinator: Dr Rob Dowdeswell 014-567-9153

Biological monitoring

The Medical and Environmental Surveillance Guideline is now available to the industry in hard copy. Further liaison with the CSIR and AMPATH will take place in respect of Internet subscription and other options.

Co-ordinator: Dr Murray Coombs 012-667-2847
Dr Tony Cantrell 011-720-5734

Ethics and legal

The SASOM guidelines on Ethical and Professional Conduct for Occupational Health Practitioners have been finalised and Dr. Jim Murphy was commended for compiling this document.

Co-ordinator: Dr Jim Murphy: 011-445-1434

Dermatitis

Plans are underway to have the workshops accredited for continuing professional development and there are negotiations with academic centres for incorporation into registrar training programmes. Access has been obtained to the database on contact allergens from the Department of Dermatology at Leuven University, Belgium. It is hoped that sufficient funding can be acquired to purchase a computer and software to start adding local information to the database. Letters to occupational health workers and dermatologists during 1998 confirmed their support for the venture and their willingness to contribute data as for the SORDSA project. A website, allowing those in industry, healthcare workers and the workers themselves to obtain information on allergens and information on alternative products that can be used in various settings, is envisaged for the future. The current fund for the initiative is held at the University of the Witwatersrand.

Co-ordinator: Prof Gail Todd 021-4045268

Information technology

A special award and donation were made to Dr David Stanton, the developer of the ASOSH website during the ASOSH Awards function.

Dr Stanton remains the webmaster and in future more use of the website will be made in respect of job advertisements and other important information.

Regular IT updates are published in the journal.

Co-ordinator: Dr Hans van der Merwe 016-202781

Medichem SA

With 23 Members, Medichem SA, a scientific committee of ICOH, is the 4th largest group of Medichem in the world. Many nurses from SASOHN joined during the September 1998 conference in Cape Town. Dr H van der Merwe is the chairperson and Dr M Coombs is the board member of ICOH Medichem. Dr A Kotze is the local secretary. The local committee will be communicating via e-mail, fax, and telephonic conversations.

22 Articles from the Cape Town conference were published in the International Archives of Occupational and Environmental Health. The international conference will be held in Singapore during 2000 and in Prague during 2001.

Co-ordinator: Dr Hans van der Merwe 0169-202781

Primary health care

Louwna Pretorius of SASOHN reported that they had a meeting with the Nursing Council and two criteria were discussed:-

- In future, nurses may prescribe medicines if they have successfully completed a Health Assessment and Diagnostic course

- The nurse will only be allowed to dispense medicines in exceptional circumstances e.g. rural areas, but must still have completed a course approved by the Pharmacy Council

A meeting was attended with Dr Nono Simolele, Director HIV/AIDS and STD Directorate in the Department of Health by Drs La Grange, Murphy, Evian and Sr Louwna Pretorius. During this meeting, it was requested that a process be facilitated whereby occupational health nurses can be permitted to provide syndromic care for STDs after completion of the necessary training.

Co-ordinator: Dr Jim Murphy 011-445-1434

Transport-related issues

Numerous meetings of the working group, involving the Department of Transport was held during 1999 and the final document is now available from the SASOM National Office. Everybody in possession of the SASOM Ramazzini Guidelines have received this update free of charge. It will also be made available to the industry as a single document. Future accredited training workshops are planned by this scientific committee.

Co-ordinator: Dr Beau Dees 011-886-0123

GUIDELINES FOR SASOM SCIENTIFIC COMMITTEES OBJECTIVES

The SASOM scientific committees have formulated a guideline in respect of the objectives, formation and other general issues related to scientific committees.

- To provide guidelines covering topics related to occupational health, occupational hygiene, occupational and environmental medicine, medical surveillance and biological monitoring.
- To provide guidelines on relevant aspects of good practise, in its widest sense.
- To provide guidelines on minimum requirements for fitness to drive.
- To provide a forum which is open to all professionals and stakeholders in the field of Occupational and Environmental Medicine.

- To act as a scientific base for discussion groups, mainly through electronic mail, few meetings and telephonic contact.

- To provide this service at no charge with the main function of the scientific committees to update and expand SASOM guidelines and knowledge.

Formation of new SASOM scientific committees

A group of occupational health professionals in good standing who share a field of scientific interest may establish a scientific committee (SC). Members of a group, wishing to establish a SC, should submit to the SASOM executive a list of members, the scope of the activity, and a plan of future activities. The chairman of SASOM, in consultation with the vice-chairman in charge of the SC, shall appoint the chairman and approve the secretary of the newly formed SC.

General qualifications for membership

SASOM members and other occupational health professionals in good standing are invited to seek membership with a minimum of one and maximum of three scientific committees. The selection of a SC should reflect the member's areas of professional interest and competence. The members should have the time and capability to participate in the activities of the SC. SASOM seeks balanced international participation.

Appointment of members

SC members propose the SC chairman to the chairman of SASOM. The chairman confers with the vice-chairman in charge of SCs, and if in agreement with the proposal, the chairman appoints the SC chairman for a three-year period. Chairmen may be re-appointed by the same process for no more than one additional three-year term.

Criteria for membership of a SC

There are no specific criteria for membership in SCs beyond the qualifications mentioned above. SCs are encouraged to pursue academic excellence as well as balanced international participation.

Creation of an executive committee of a SC

If SC administration requires, an executive committee can be formed made up of the chairman, the secretary and other members, and those members most involved in the activities of the SC. The members of the executive group are appointed by the Chairman.

Creation of subcommittees

The SC may form subcommittees to deal with various scientific topics, conferences, publications etc.

Corresponding fellows

Two corresponding fellows may be appointed by the chairman of a SC. Corresponding fellows, upon approval by the SASOM chairman, receive all the benefits of SASOM membership for a three-year old period without paying dues. Criteria for appointment of Corresponding fellows are financial need and the importance of their scientific contribution to the SC.

Meetings and symposia

SCs are encouraged to hold a minimum of one meeting per year to which all members are invited. The SCs will also be requested to present updated reports during the year and at the SASOM AGM.

Publications

The SCs are encouraged to develop scientific reports, books, and articles and publish in Occupational Health SA as well as in international scientific journals. Consensus documents developed by SCs, under their responsibility, should be presented to the members of SASOM executive before publication.

Sponsorship

SCs may wish to be listed as sponsors of various conferences, symposia, publications and other public announcements. All sponsorships by SCs must be approved by the members of the SASOM executive.

Conflict of interest

SCs must remain scientifically objective. When a conflict of interest occurs with meetings, sponsorships, publications, etc, the members of the SASOM executive will require full disclosure of the conflict and the authority to properly intervene.

Interested parties should make contact with the SASOM national office for more information on existing scientific committees. An application form for membership to one or more of these scientific committees is enclosed. Contact the SASOM national office on (012) 667-5160

Contact the various SASOM chapters at these numbers:

Inland chapter:

Annelize Myburgh
(011) 606-2342/2289 fax (011)
606-3120
E mail: myburgh@ael.co.za

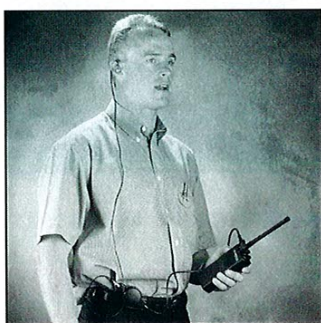
KZN-Natal chapter:

Dr Gerald Baize (031) 261-1173
E mail: gbaize@mweb.co.za

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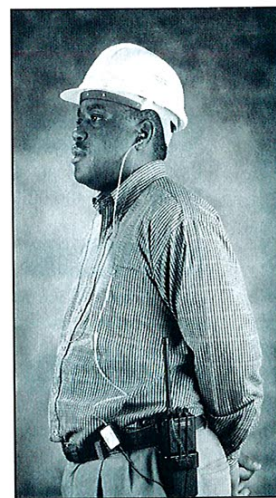
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SA's Mining fatality and injury rates lowest ever

The latest data published by the Mine Health and Safety Inspectorate shows that the South African mining industry in 1999 had its best year ever in regard to fatalities and injuries.

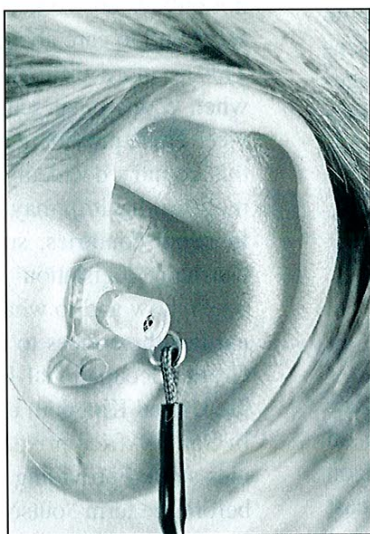
Dr Mike Gouws, Chamber of Mines Safety Adviser, said that 1997 and 1998 were also record-breaking years and he was delighted that the long-term efforts of the mining industry continually to reduce accidents and thereby also reduce fatalities and injuries, were continuing to bear fruit. The implementation of the Mine Health and Safety Act which came into effect in 1997, had also in recent times contributed significantly to mine safety as had the culture of responsibility for safety amongst the workforce. He added that the industry's goal of achieving world-class safety performance figures looked far more attainable today than it had even five years ago and, in 1999, there were already pockets of excellence where this goal had been achieved.

South Africa's total mining related fatalities in 1999 decreased by about 30% when compared to fatality rates for the early 1980s. The injury rate showed an improvement of more than 41% over the same period.

When comparing the number of fatalities in 1999 to 1998, in the three major sectors of the industry, gold mining accounted for a decrease of about 15%, coal for some 33% and platinum a little more than 11%.

Dr Gouws said that over the period 1984 to 1998 there had been an average of 8,5 major accidents each year. In 1999 there was one major accident (Mponeng Mine), while there have been two major accidents (African Rainbow Minerals and Beatrix Mine) so far in 2000.

HEARING CONSERVATION

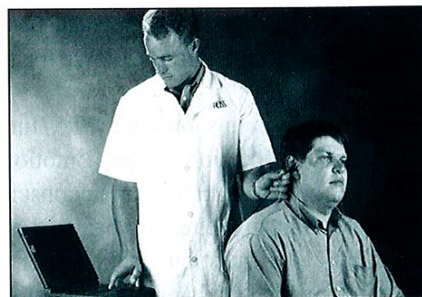


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To the Editor

There has been much discussion regarding the merits and demerits of outsourcing occupational health services.

However, the most important criterion was not mentioned – the size and needs of the company to be provided with a service.

If a nurse is contracted to work fulltime in a company, and if she is a skilled professional, she will be totally accepted as part of the occupational health team.

When a parent company uses their occupational health practitioners to service smaller companies within the group, very often the service is inadequate due to time constraints, travelling distances and availability.

However, when one nurse services a geographical area, it immediately becomes more cost-effective.

As possibly the first supplier of a contract occupational health service in this country, we have time and again found that the support and assistance of the company to be serviced is essential – no service will be effective or efficient without management backing and the knowledge and skills of the occupational health practitioners. Keeping up to date with current trends and ongoing skills training, as well as matching the right person to the culture of the company, is of crucial importance.

Shirley Hall

Occupational Health Services cc, Isando.

To the Editor

The primary motivation for outsourcing (Hobday in "Interface 3, 2000) appears to be that companies prefer to focus on revenue generating and on "core" activities rather than on those involving expenditure. Reduction of costs, or at least providing a better service at the same cost (e.g. occupational health) as well as bringing in specialists to improve efficiency are important considerations to serve the main objectives of an enterprise.

The four articles in this journal's May/June issue discuss "outsourcing" from differing angles. Emotional factors appear to play a role, if only to induce an unconscious bias, which may be more obvious to the reader than to the authors themselves. For example the question in the paper titled "Why buck a megatrend", which deals mainly but not exclusively with efficiency and, yes, bucks, is fairly exhaustively and persuasively answered by the preceding one "What is the bottom line", which concludes that one should buck the trend!

The authors of these two papers appear to work on opposite sides of the dividing line!

The papers on "Outsourcing" and "Examining the Advantages" are clearly written by people who know what they are talking about and who seem to be passionate about their calling as occupational health workers. The latter article mainly addresses cost factors and efficiency, the other one highlights (and I quote) that: "The success of any occupational health service is dependent on the quality and competence of the service given, on the personalities of those delivering the service and on continuity".

There is no general answer to the question whether a particular enterprise should opt for an in-house occupational health service, whether full time or part-time, or for a service provided by "outsiders". Major deciding factors would be the size of a company and its workforce, the type of operations, (industrial or other) and also the environment it finds itself in. The term environment is used here in its widest sense and includes country, people, climate, economic status, labour legislation etc.

It is self-evident that large industrial enterprises would be best served by an in-house occupational health service. In this the staff not only acquires intimate knowledge of the processes involved and of the "internal climate" of its human resources but also, very importantly, would build up a close relationship with all the workers over time!

It is part of "occupational health" to see one's fellow workers not only as co-workers and potential patients but as people to serve and to care about, not only to care for.

This is more difficult or impossible for smaller enterprises when economical scale preclude an in-house dedicated service. Then, providing an occupational health service (which in this country decidedly includes primary health care and promotional health), may well have to be "outsourced".

In some countries, such as the U.K., The Netherlands and Germany, legislation prescribes to employers of small firms when, how and to what extent they should provide occupational health services to their workers. A classic example is the Group Occupational Health Scheme developed in Slough in the United Kingdom decades ago.

In South Africa private individuals and at first small companies started providing occupational health services years ago, before the term "outsourcing" was even coined!

In my opinion the question about "outsourcing" of occupational health services is a semantic question.

Any enterprise which is economically large enough to run an in-house occupational health service, whether full time or part-time, also taking into account general climate factors as described earlier and its mode of operations would best serve its workforce by doing so, by "bucking the megatrend"!

Any other enterprise which realises the need for occupational health services, or for which this is prescribed, had better resort to an "outside" occupational health service, professionally run by people who are prepared to serve their workforce by becoming thoroughly involved with not only that workforce but also the companies activities and internal climate environment in so far these involve occupational life and health.

Perhaps this is also an unconsciously biased view from my own experiences?

Dr J T Mets

Cape Town

Quotation :

"Opinion is ultimately determined by the feelings, and not by the intellect".

Herbert Spencer, 1820-1903)

J Soc Occ Med, 2000, 50;4:227

To the Editor

Ivan Illich would have approved Prof David Rees' letter in the March/April issue. Illich contended that the medical profession had become the enemy of health, and that one of the major failings of doctors was their tendency to assume roles for which they were not qualified or specifically empowered by statute. More importantly, as the letter explains, doctors seem to think that when they choose they can not do things which they are bound to do in terms of existing statute.

At the clinic at Praktiseer today I examined an applicant for benefits in terms of the ODMW Act. In passing I enquired how he came to have his left hand and part of the forearm amputated – this is the story: while working as a team leader in the plant at Kromellenboog Mine, then owned by Cape Asbestos, his left hand and forearm were caught in an M7 machine. The accident took place in 1974 and was not reported. In consequence he has had no compensation. When he took up the issue with the new owners (Rand Mines) after 1979, he was told that Cape had gone and the matter had nothing to do with them. It goes without saying that he also has asbestosis, and to cap it all has recently been treated for pulmonary tuberculosis.

It is not uncommon to find ex-miners with significant permanent disabilities following injury at work who have never been compensated. This man has a 55% disability. The cumulative amount due to him, plus interest, for the unpaid benefits over the past 25 years must be a tidy sum. Perhaps your readers might like to answer the question: "who exempted doctors from obedience to the law?"

Working among ex-miners in the remote rural areas is clinically fascinating, sociologically instructive and emotionally harrowing. Since April I have seen three other men – one with an incomplete transection of the spinal cord, another with a radial nerve palsy, and a third whose left arm has been amputated at the elbow together with his right thumb and index finger. Like the first man, none has had any compensation because the injuries were not reported.

Yours faithfully,

Tony Davies

**Prof Emeritus, University of the Witwatersrand
Professor Tony Davies,
Ferndale,
Randburg**

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Occupational hazards of game capture

Gillian Thomson

Ngodwana, Mpumalanga.

Occupational Health SA 2000, Vol 6, No 5, Pg12-16

With the increase in number of private and public game reserves and the rising potential of eco-tourism in South Africa, game capture for the relocation and sale of animals as well as for scientific investigation is becoming more and more common. There is a significant and diverse range of hazards which are discussed as well as recommendations to minimise them.

Introduction

It became immediately apparent that the game capture environment has numerous hazards and in some instances few practical solutions. This investigation emanated from taking part in game capture operations in the Kruger National Park and as an occupational health practitioner it was felt that there was a need to institute safety and health measures to reduce the potential risks. Game capturers are different people and nearly every game capture takes place in different and difficult circumstances. Until now, it is felt they have been lucky that none of the game capture team have been lost to trauma on a capture.

Hazards

The hazards are classified (see Table I) and then discussed individually with some recommendations. A full risk assessment has not been performed to rate the highest to the lowest risk.

Physical

Noise

Fire-arms:

Culling of animals is the only time that live ammunition is used, and that the 85 decibel limit is exceeded. Fire-arms are frequently discharged within the cabs of vehicles. This is done:

- because the animals are less afraid of the vehicles than of people
- an attempt is made to lessen the noise in order not to offend visitors
- laziness?

Table I:

Hazards by group	Individual Hazards
Physical	Noise Solar radiation Heat exposure
Chemical	Pharmaceutical drugs
Biological	Zoonotic diseases Malaria Bilharzia
Mechanical	Trauma
Ergonomic	Lifting and moving

This allows for the impulse noise (worst type of noise, as there is no chance of a protective threshold shift) to bounce all around the cab and increase the damage to the ears.

Darting has become extremely sophisticated, with gas driving the dart and making only the faintest of sighs.

Helicopter:

A helicopter is used to track animals and to dart from. Those people on the ground are exposed to the noise of the helicopter as it takes off and lands during the course of the capture.

Recommendations

- All vehicles should be issued with muff-type protection which should be kept in the glove compartment (one needs to cover the mastoid bone to prevent noise entering the ear through conduction)
- All staff be educated on the hazards of noise, and the wearing of hearing protection and actually wear it when firing live ammunition.

Solar radiation, heat stroke and dehydration

All planned captures start at round about 4am or late afternoon to ensure that the animals are caught and transported during the coolest hours of the day. This usually works well, but temperatures in the Park often rise into the 40 degree range, and captures don't go smoothly all the time... This means that there are times when the employees are performing heavy manual work in full sun. Many employees don't wear hats and are at risk of developing skin cancer and melanomas. Many of the workers have pterigiums from the constant irritation of dust and glare during their days work.

Once out of the vehicle, an employee might work three or four hours in the burning heat with no time to stop and drink something. If they have brought along fluids, they are usually in the vehicles and not easy to reach. This means that together with the heat and hard labour, heat-stroke/exhaustion and dehydration are a possibility.

Recommendations

- Hats with neck protection, sun-block and dark glasses be issued as P.P.E and worn by all personnel
- Water be made available to all workers involved in the game capture operation.

Chemical hazards Pharmaceutical drugs

The drugs used to immobilise the animals are incredibly potent central nervous system depressants. **Carfentanil** is the most potent opioid known, and should there be accidental contamination with antidote given, renarcotisation occurs very often. **Phencyclidine** is a prohibited schedule 8 substance and **Fentanyl** is a pethadine analogue analgesic with a potency 100 times that of morphine. It is a cyclohexylamine which is often combined with a neuroleptic. Salivation a common side effect and relatively small doses cause "behavior toxicity" which manifests as agitation, inco-ordination, aggression and self-mutilation. One can imagine how difficult it might be to resuscitate someone like this. It also causes muscle rigidity in humans making ventilation difficult/impossible.

The drugs can be absorbed through any break in the skin and accidental contamination with these drugs may lead to almost instantaneous loss of consciousness and respiratory arrest. They used to be mixed with a drug called dimethyl sulphoxide to speed up absorption by the animal...unfortunately this also meant one could absorb it through intact skin, and the practice has now been stopped. There is an antidote that works well to reverse the effect of the drug called **Naloxone HCL**.

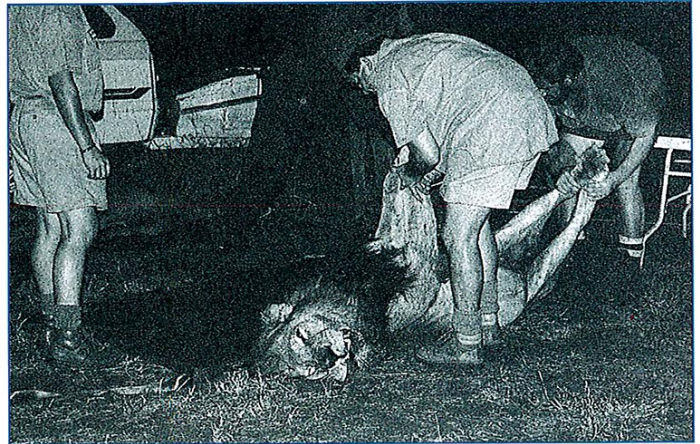
When dealing with the drugs, the following recommendations stand:

- Know the drugs you are using, and attend regular refresher courses
- Know your emergency numbers and closest hospital points, and educate the staff on the drugs being used
- Work with a buddy system
- Have water and an eye-wash bottle available
- Have an emergency kit available
- Cover all wounds, or better still, wear gloves
- Never eat, drink, smoke or rub your eyes whilst dealing with the capture drugs
- When drawing up the drugs, use a needle to equalise the pressure inside and outside all new vials before attempting to draw up the drug, and never push air into the vial as the solution might leak out
- Use a thin needle to lessen the chance of any drug leaking out of a large hole in the rubber stopper
- Carry loaded darts in a container
- Keep drugs locked away.

Several functions expose one to the drug:

Preparation of the darts:

The actual preparation of the dart requires solutions to be drawn up by needle, and then the needle (a long thin epidural-type needle) needs to be inserted into the needle of the dart to push the solution into the chamber. This takes quite a bit of dexterity and there is a risk of pricking the hand that is holding the dart. The darts have to be primed with springs to pressurise the solution, and then, just before they are used, an enzyme which improves the absorption of the drug, is mixed with the sedative.



Here two people are attempting to lift a 200kg lion. Note the curved backs and poor knee position.

Once the darts are ready, the needle is covered with a rubber plug affectionately known as a condom, and this condom has got to be the most dangerous part of the whole affair!! It has a small lumen, and has to be pushed over the needle tip. Push it too far, and the tip of the dart, loaded with M99 goes into your finger.

Recommendations

- The darts to be prepared with an extra light source. According to the Environmental Regulations for Workplaces 1987 (one of the regulations of the Occupational Health and Safety Act) one needs 1000 Lux for "very fine work, e.g. small precision assembly". There are all sorts of different lighting sources which could be utilised, which are light and portable.
- A stand should be designed to stand the dart upright so that the drug can be put into the chamber without having to hold onto it.
- A rag should be on hand to wipe spills which is discarded after every dart filling episode. This will stop shirts from being used, especially in view of the fact that absorption can occur through the skin.
- The antidote for the drug should be drawn up ready to use if there is an emergency. I hear that usually there are two people who prepare the darts. This should be standard policy, that no-one deals with this drug on their own. A situation could develop where there is an accidental injection of such volume, that the person is unable to inject the antidote into themselves before passing out. This could result in a fatality. There are several types of emergency "pen" set-ups which people who are allergic to bee-stings etc have. The drug is drawn up, and the needle just has to be plunged into a muscle and it automatically injects a certain amount. The pen can be set to deliver two separate doses. Inquiries should be made into getting the drug packaged in this type of dispenser. I understand that the drug is better given intravenously, but this might not always be possible.
- There should be a safer way to cover the tips of the needle. The "condoms" are rubber and accidental piercing is very possible while placing them on the dart, and while transporting them.

Darting the animals

During the actual darting, the person is hanging out of the helicopter on a harness. If he pricks himself (and the chances are much greater here with all the movement as he reloads the dart gun) he needs the antidote at hand. The pilot of the helicopter cannot remove his hands from the controls to help, and also may have difficulty landing the helicopter in decent time.

Recommendations

- A person should ride next to the “darter”, not in front with the pilot, and be aware of the possibilities of accidental injection, and know how to inject, what and how much etc.

Pulling the darts out of the animals

The larger animals such as the buffalo and the pachyderms have incredibly tough, thick skin. The dart is often firmly wedged into the animal, and it is a battle to pull it out. The sudden “give” as it eventually comes out is the moment where one can drive it into ones thumb by mistake. Most of the accidental contaminations I have heard about have occurred like this. The needle is a hollow bore one, and contains the drug in enough quantity to cause respiratory arrest.

Recommendations

- Darts should be removed with pliers in a rotational type movement, and not by hand.

Accidental discharge

Should a loaded dart gun go off and someone receive enough drug to fell an elephant, chances are they will be anaesthetised immediately. Should this occur, immediate respiratory and cardiac support would be required with buckets of antidote.

Biological hazards

There is an increased awareness of the potential for infective agents to cross from their normal animal hosts to human beings e.g. Chicken Flu in Hong-Kong, which has recently killed several people. There is also a possibility that the H.I.V. virus came from the rhesus monkey, and this disease is likely to kill more people than any other infectious disease in the history of mankind. In Kenya and the surrounding countries, there has been an outbreak of Rift-Valley fever. 200 people have been infected, and it seems as if people are now transmitting the disease to other people, which has never happened before. This opens up all sorts of frightening scenarios. It is therefore important to have universal protective measures even when there is no obvious risk of known infectious disease.

Another concern of mine is that the H.I.V. rate is high amongst people living along the Mocambique border. If their immune system is depressed, who is to say what organisms could get a hold of someone, introducing a lethal infection into our society.

The impact of Zoonotic diseases (animal diseases that can be transferred to humans) are the following:

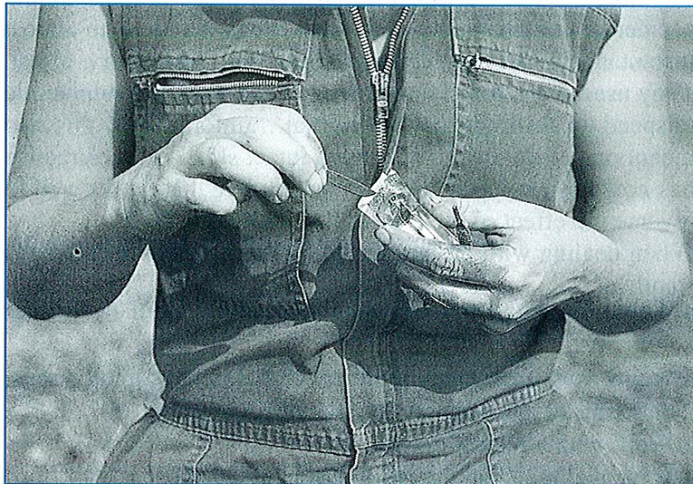
- Illness
- Unfavourable publicity

- Adverse effect on morale of personnel
- Medico-legal implications
- Man-hours lost.

Staff are at risk of contamination from the faeces, blood and body fluids of the animals which are taken from the animals for research purpose.

Zoonotic diseases of importance in the Kruger National Park:

- **Brucellosis:** approximately 14% of the buffaloes at the park are infected with the disease
- **Q-Fever:** from the ticks off infected animals
- **Anthrax:** infection with the spores through contact with the infected animal via the skin, mucous membranes or respiratory tract.



Vet with bloodied hands holding a blade. Surgical procedures performed without gloves leaves the door open to zoonotic infection.

- **Tuberculosis:** Buffalo, lion, kudu and cheetah suffer from this disease which can be transmitted to man
- **Rabies:** not a disease found in the wild animals in the Park, but the stray dogs who come over from Mocambique have been found to have an 80% infection rate
- **Encephalomyocarditis:** in rodent and elephant populations of the Park, known to cause disease in man
- **Echinococcus granulosus:** in carnivores - it is undecided whether this can cause disease in man, as it is now thought to be species specific.

Malaria and Bilharzia should be mentioned here, although they are not strictly zoonotic illnesses.

Malaria is a common problem in the Park among those who work there. Long-term prophylaxis does not seem to be practical or safe, and many prefer to take their chances. Bilharzia becomes a problem when game has to be chased into water to capture it.

Recommendations

- Gloves to be worn by every person dealing with the animal.

One gets used to them when you have used them for a while. Surgeons use them for very physical orthopaedic procedures and microscopic surgery, so can vets! Spare pairs should be kept on each person in case of perforation. Water and soap should be available for people to wash their hands should they need to. The very nature of the work means that one has cuts/grazes all over one's hands. This is a direct portal for bacteria/viruses to enter the body.

- Overalls to be worn by every person dealing with the animals. Shorts and short-sleeved shirts do not offer enough protection. The captures are done in the cool of the early morning so the overalls should not be unbearable.

The overalls should be removed once the catch is over, bagged and washed with a strong disinfectant in a washing machine. The overalls should not stay on longer than they need to, and should definitely not be taken home to infect the rest of the household. The person who washes the overalls should wear gloves when handling the garments, and should have all the necessary vaccinations, and an annual medical examination.

- A sharps bottle with a wide mouth needs to be used to dispose of contaminated needles. This will prevent the haphazard piling of dirty syringes into boxes/crates ready to stick some poor unsuspecting person
- Soap and water should be on hand at every capture site to allow staff to wash should they become contaminated
- Vaccination of all staff for rabies and for other relevant zoonotic diseases and a three yearly tetanus toxoid injection will offer some protection
- Annual medicals done on all persons who come into contact with animals to monitor their health status
- Malaria testing kits to be available at all times, and medication to start treatment should be taken along on long trips to prevent a time lapse from diagnosis to treatment taking place.

Electro-ejaculation

Sperm is collected from the darted animals to check for diseases, fertility studies and breeding purposes. An electrode is inserted into the rectum to stimulate the prostate gland which causes ejaculation.

Sheath –wash:

To remove any contaminates before collecting the sperm:

This should be done with gloves on.

The Electrode:

Apparently one cannot get a bad shock from this device (I don't know, but the buffalo certainly reacted to it!!!) It has to be held in place in the rectum by pushing the tail down. This should be done with gloves on, due to possible faecal contamination.

The staff administering the shocks and holding down the tail should be as far away from the back legs of the animal as possible, because as the shocks are wound up, the back legs go rigid, and one is in danger of collecting a hoof to one's head if you are not careful.

Sperm-collection:

The person who is collecting the sperm needs to use a bigger wider-mouthed funnel to prevent sperm being sprayed all over them. The tube from the funnel should be shorter as they work close to the ground, and one has to tip the funnel at a crazy angle to get the funnel tube into a test-tube. This means that sometimes the funnel is not over the penis just at a crucial moment, and a precious sperm-rich sample is lost.

Mixing the sperm with buffer solution:

Solutions should be drawn out of test-tubes with pipettes instead of being poured from one small tube to another. This will prevent more contamination with body fluids.

Mechanical hazards

Trauma

The potential for trauma is quite spectacular! From:

The animals being captured:

Being gored by a rhino, eaten by a lion, trampled by an elephant to being kicked in the head by an impala in a net.

The animals in the vicinity:

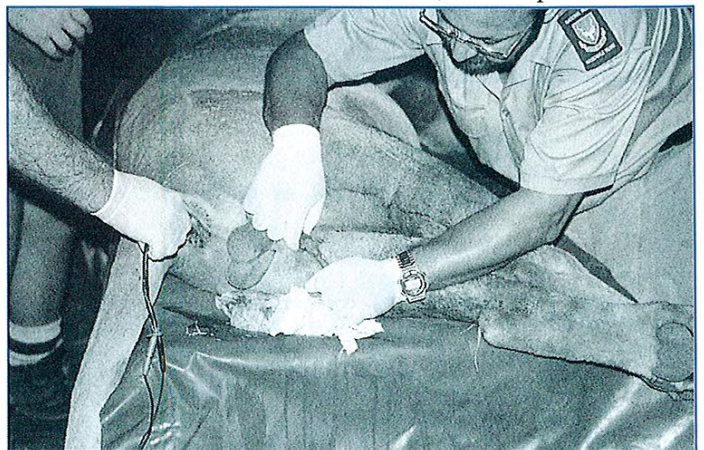
The matriarch of darted elephants and rhino often charge to protect the young. The matriarch, and sometimes the herd comes back to see what you are doing to their friend.....Snakes, scorpions and spiders are an added problem.

The equipment:

M.V.A's and helicopter crashes aside, winches snapping while hauling an elephant onto a trolley, accidental discharges, being hit in the face with the hook from the crane, amputating fingers with crates full of buffalo settling snugly onto your thumb as you guide it onto the truck, falling off a speeding bakkie bumping through the bush to get to a downed animal etc..etc..

Recommendations

Unfortunately, due to the unpredictable nature of trauma, most of these "recommendations are re-active, and not pro-active.



Electro-ejaculation of a lion

- The vets receive advanced trauma life support training
- All staff should have a valid first-aid certificate
- There should be a well-stocked trauma kit
- After a "situation" a de-briefing should occur to discuss the incident/accident, why it happened, how it could have been handled better, and how to prevent it in the future
- Staff should be well trained in the use of all equipment used
- Stand back from winches whilst in operation (or have minimal people present)
- Safety boots to be worn during captures.

Ergonomic hazards

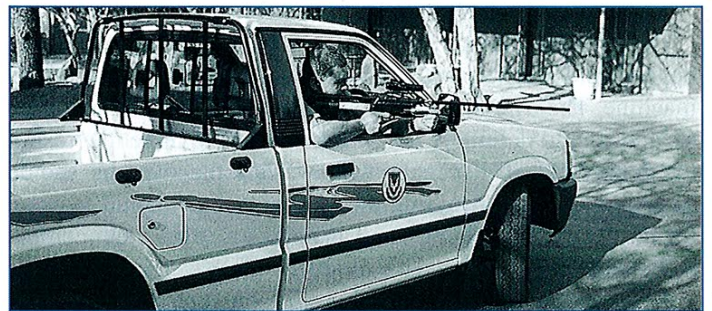
The moving of an elephant or rhino is simple, as not even the considerable egos in the game capture crew will consider attempting to lift one on their own. The problem arises when there is a buffalo or lion to move. Once the animal has been darted, one has to move in very quickly and do what has to be done. The animal reacts in a very individual way to the drug, and may wake unexpectedly. Being anaesthetised often compromises the airway, and so the animal sometimes has to be moved quickly to save its life. This element of "rush" means that attempts are made to lift loads way beyond the capabilities of the staff. Knees are not bent, but backs are, and there are many employees who complain of backache.

Recommendations

- A back-safe programme should be implemented to teach the employees the safest ways to pick up heavy loads
- Cranes should be used when ever possible.

Conclusion

An initial investigation has been made into the hazards of game capture. It has shown that the hazards are diverse and vary considerably with each animal captured and that some of the hazards are potentially life-threatening. Some recommendations have been made, but there is scope to undertake further research, institute the collection of statistics and to complete a formal risk assessment on all the hazards that game capturers are exposed to.



A ranger is exposed to impulse noise whilst firing a rifle from the cab of his vehicle.

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Social Phobia (*Social Anxiety Disorder) in the workplace

Social Phobia* is a common and disabling condition which is known to affect a significant proportion of the population. Surveys carried out in the United States and France report a lifetime prevalence of 13.3 and 14.4% respectively, making it the most prevalent of the anxiety disorders.¹

The diagnosis of Social Phobia* is based on the patient having a fear of being assessed or scrutinised by others with the expectation that the assessment will be negative or humiliating. The fear is marked and persistent and occurs in both social and performance situations. While a certain degree of anxiety is considered normal, and in fact necessary for normal functioning, those who suffer from Social Phobia* experience exaggerated fear which interferes with their normal functioning. Fear of this magnitude cannot be regarded as normal, and constitutes a psychiatric disorder. Typical situations which produce this overwhelming anxiety in those who suffer from Social Phobia* include meeting people in authority, initiating conversation with a member of the opposite sex, using the telephone, receiving visitors, being watched while doing something such as writing or using the keyboard of a computer, and public speaking.¹ It therefore becomes obvious that Social Phobia* can significantly hamper function in the workplace.

Other diagnostic features of Social Phobia* listed in the Diagnostic and Statistical Manual of Mental Disorders (DSM-IV™)* include:

- The anxiety response may take the form of a situationally bound or situationally predisposed Panic Attack.
- Adults and adolescents with Social Phobia* recognise that their fear is excessive or unreasonable.
- Most often, the social or performance situation is avoided, although it is sometimes endured with dread.
- The avoidance, fear, or anxious anticipation of encountering the social or performance situation interferes significantly with the person's daily routine, occupational functioning, or social life.

Social Phobia* can be divided into various subtypes. Generalised Social Phobia* in which the individual fears most social and performance situations; nongeneralised Social Phobia* in which only two or three situations are feared, and public speaking phobia - sometimes included in the above, or referred to as discrete or specific Social Phobia*. Those with generalised Social Phobia* are more likely to have severe social and work impairment, are more likely to be single, have an earlier onset of the disorder, and have a higher rate of comorbid alcoholism and atypical depression. Generalised Social Phobia* has also been found to be highly familial.¹

Social Phobia* typically starts in the teenage years, a time when social, educational and career development are of particular importance. Those suffering from Social Phobia* therefore have a significantly impaired quality of life. The impairment places a burden not only on the individual, but on society in terms of lost work productivity due to emotional problems and illness. One study showed that patients with Social Phobia* had a 12% reduction in work productivity compared to control subjects. Amongst patients, 8% reported taking time off work because of their condition amounting to an average of 12 hours in the previous week, while 23% reported substantially impaired working performance due to their Social Phobia* symptoms. The disability associated with Social Phobia is compounded by comorbid conditions such as depression and alcoholism which occur in around 80% of patients with Social Phobia*.¹

Management of Social Phobia*

With the growing appreciation of the prevalence of Social Phobia* and the disability associated with it, has come a recognition of the need for effective treatment. Success has been achieved with both pharmacotherapy and psychotherapy, used either alone or in combination^{2,3}.

Psychotherapy generally takes the form of cognitive-behavioural therapy which targets the different components of anxiety. Through exposure to feared situations patients are helped to understand the symptoms and fear is reduced. Social effectiveness therapy is another intervention used in the management of Social Phobia*.²

A number of pharmacological agents are used in the management of Social Phobia*. Choice of initial treatment depends on a number of factors including comorbidity, prior treatment history, patient preference and adverse effect profile of the selected agents. Patients should be referred to their medical practitioner for a full assessment.

Social Phobia* is a chronic and disabling disorder which can severely hamper the functioning of the patient in the social and occupational environment. Despite the availability of effective treatment, few sufferers seek help for their condition. A heightened awareness of the disorder amongst all healthcare workers can help to bring relief to patients, with significant benefits to both the individual and society in general.

The Depression and Anxiety Support Group offers on-line advice and counselling as well as further literature on Social Phobia* and other conditions to patients and healthcare professionals. They can be contacted on (011) 783-1474/6 or (011) 884-1797.

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* Social Phobia (Social Anxiety Disorder) Diagnostic and Statistical Manual of Mental Disorders (DSM-IV™) American Psychiatric Association.



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The move to wellness

Dr Arien van der Merwe

Wellness consultant, Pretoria

Occupational Health SA 2000, Vol 6, No 4, Pg18-22

Introduction

Wellness is a pro-active, dynamic process whereby the individual and the group become aware of the life choices and self-responsibility they have and then taking the decision to make the right choices toward a life of wellbeing and quality. Deciding on a wellness lifestyle would require the individual to become actively involved in his / her own health and wellbeing. By gaining more knowledge and insight into one's own wellbeing, the individual becomes empowered to make the right choices to lead a healthier and more fulfilling life. It shifts the responsibility to the individual, to consciously become involved in his/her own health and happiness. It is a lifelong discipline that, with the help, facilitation and support of wellness consultants / professionals, will, in the long-term, restore individual, family and community health.^{6,1}

For businesses, big or small, the wellness of its staff makes the difference to the bottom line profit margin.

Some disquieting statistics

- The leading causes of death in SA are heart disease which includes high blood pressure and atherosclerosis; cancer and infectious diseases such as HIV/AIDS.
- Depression and hypertension are the 2 main reasons for absence from work and low productivity.
- Tobacco kills 25 000 South Africans every year
- 50 000 South Africans are infected by HIV every month. 22.8% of the population in SA is HIV positive.
- Hypertension (high blood pressure) is the most prevalent disease in SA (18% of 20-50 year old SA males have hypertension)
- 25% of the general population has some form of heart disease.
- 32% of people with high blood pressure do not know that they have it and will only realise it once they either have a heart attack or stroke.⁶

What does this do to a company's bottom line profit margin?

There are six dimensions or aspects to balanced wellness: ^{1,6}

The physical aspect

The body ensures our ability to survive and flourish in the physical, material world. The physical aspect enables us to care for and enjoy our bodies. We need to develop the necessary abilities and skills to live effortlessly and effectively in this world in our present physical manifestation. The physical aspect encourages the individual to become aware of physical fitness; the ability to meet the needs of your lifestyle with ease, having reserves for life's emergencies. It incorporates a good diet; regular use of supplements; regular but moderate exercise for cardiovascular endurance, flexibility and strength; weight control and a positive approach. Developing the physical level would, of course, discourage the use of tobacco, drugs and excessive alcohol consumption and encourage pro-active well care and the appropriate use of the medical and health insurance systems.

The mental / intellectual aspect

The mind houses the intellect. This ensures our ability to think, analyse and reason. It encapsulates our thoughts, attitudes, values and beliefs. The mind is our greatest gift and it can also be our greatest curse. It is the level where a lot of our stress is generated. The uncluttered mind allows clear thinking, open-mindedness and intelligent discrimination. The mind allows the collection of knowledge and wisdom from our own experiences and from the life around us. The intellectual dimension also encourages creative, stimulating mental activities and the ability to use the available resources in a discerning manner to expand knowledge, improve skills and increase the ability and willingness for sharing with others.

The emotional aspect

This level provides us with our deep experience of life. We connect with each other and the world on the emotional level. Developing our emotional aspect allows us to reach the full human potential of emotional experiences. Frustration, resentment, anger, bitterness, fear and discontent can drain our energy, vitality and enthusiasm for life. It may then manifest as physical disease processes. We need to do most of our healing work on the emotional level. Feelings (or emotions) should not be suppressed. Any emotion not expressed, becomes negative. Any emotion expressed appropriately is positive. Feelings need to be acknowledged, accepted, worked through. Then we'll be ready to move beyond negative, suppressed emotions towards health and healing. Emotional wellness encompasses the degree to which you feel enthusiastic about yourself and life. It includes the ability to manage feelings and related behaviours in a realistic way by assessing and accepting your personal limitations, celebrating your strengths and the ability to cope effectively with stress, as well as maintaining satisfying relationships with others.

The core / soul / spiritual aspect

This level is our inner being. It houses our soul, that part of us that exists beyond time and space. It provides us with a sense of knowing that we belong as part of the universe. It gives us our sense of deeper meaning and our awareness of our purpose and goal in this life. It helps us to see the bigger picture and gives us a broader perspective. It is the level where true inner healing takes place. The spiritual aspect includes the development of a deep appreciation for the depth and boundlessness of life and the universe. It also involves the development of a strong personal ethic and value system.

The social aspect

This aspect encourages the individual's contribution to his or her human and physical environment for the common good of the community. It emphasises the interdependence with others and nature. It also includes the pursuit of peace and harmony within the family unit.

The occupational aspect

This dimension involves the individual's preparation for work where he /she will gain personal satisfaction and become enriched in life through work. Developing the occupational aspect is also related to the individual's attitude to his / her work.

Stress in the workplace

Unrelenting, chronic stress is our national plague. Research has proven that 80 – 90% of today's diseases are stress-related. (Table 1) Virtually all illnesses - from infections to cancer - are influenced by our thoughts and feelings. In the US the cost of job-related stress comes to \$200 billion per annum, often disguised in the form of increased absenteeism, reduced productivity, increased staff turnover, accidents, compensation claims, health insurance (medical aid) claims and medical costs.³

Emotional stress may be transformed (somatised) into and expressed or manifested in any number of specific and non-specific physical symptoms such as neurodermatitis, heart palpitations, backache, chronic fatigue, headaches, sleep disturbances, abdominal pain, gastrointestinal distress, hyperventilation, low blood sugar, high blood pressure, urination problems, fatigue, weight gain or weight loss, unusual allergies, frequent irritating infections such as colds, leaky gut syndrome, Candidiasis and cold sores, depressed mood and so on.³

Doctors are trained to find a diagnosable disease as a physical cause. Many of these symptoms of somatisation cannot be identified as a specific disease. Evaluations such as expensive lab tests, X-rays, CAT scans and MRI's are intensified. Highly-skilled physicians consistently fail to recognise patients with the 'worried well' syndrome, because they are trained to look for the organic causes of illnesses. The Kaiser Permanente Health Plan found that 70% of all visits to a physician by its 2 million enrollees in California, had no diagnosable physical disease.

Thirty subsequent studies have since confirmed this data regarding the somatisation of stress.³

Summarising 20 years of research over a five-year period, there is an astonishing 75% reduction in the use of medical resources in patients with stress associated symptoms after they start implementing stress management techniques. The decrease in symptoms become noticeable within 2-8 sessions.³

Supporting the data, a World Health Organisation International Study lists the following six diseases as the most common reasons for visits to primary care facilities: depression, anxiety / stress / tension, alcohol / substance abuse, sleep disorders, chronic tiredness / fatigue, unexplained psychosomatic complaints.⁶

The top 10 South African Medical Aid claims (in other words cost of claims to medical aids) in order of appearance, are: hypertension, hyperlipidemia, asthma, depression, Type I diabetes, epilepsy, cancer, osteoporosis, arthritis, Type II diabetes. Stress is implicated in ALL of these, either as direct cause, or exacerbating factor, or both.⁶

There is a worldwide move to wellness leading to a perception shift from 'sick care' to 'well care'.

Research has proven that Wellness Programmes are implemented with great success in the US and European countries. There is a dire need for these programmes in South Africa to contain rising health care costs, stress-related diseases and to increase productivity. According to 87% of businesses in the USA that implemented Wellness Programmes, every \$1 spent on these programmes led to an average saving of \$5 in health care costs, absenteeism, sick leave and accidents.⁴

Wellness programmes would include features such as stress management tools and techniques; life-skills development; living with vitality, passion and purpose; health education concerning correct nutrition; appropriate use of supplements; HIV/AIDS in the workplace; smoking cessation; antenatal care; exercise programs; weight reduction programs; heart health and complementary health care advise.^{4,6}

Table 1: Factors contributing to death due to the following diseases (US)

	Lifestyle factors	Environmental factors	Heredity factors	Access to health care facilities
Heart Disease	54%	9%	25%	12%
Cancer	37%	24%	29%	10%
Stroke	50%	22%	21%	7%
MVA	69%	18%	1%	12%
Influenza / pneumonia	23%	20%	39%	18%
Diabetes	34%	0%	60%	6%

Well-designed Wellness Programmes are focused on maintaining the balance and harmony of all six levels of human existence: physical body, mind, emotions, soul, social and occupational (including environmental) aspects. It is no longer enough to have diseases treated only symptomatically. The origin of the disease process has to be found by also looking at the soul and emotions - the areas where most diseases originate. Problems then need an holistic approach to reverse the disease process, to prevent disease and to learn to use disease as a teacher for working through the deeper levels of healing. There are various tools and techniques available to assist the body and mind in returning to peak metabolic performance level with a return to vitality and health.⁶

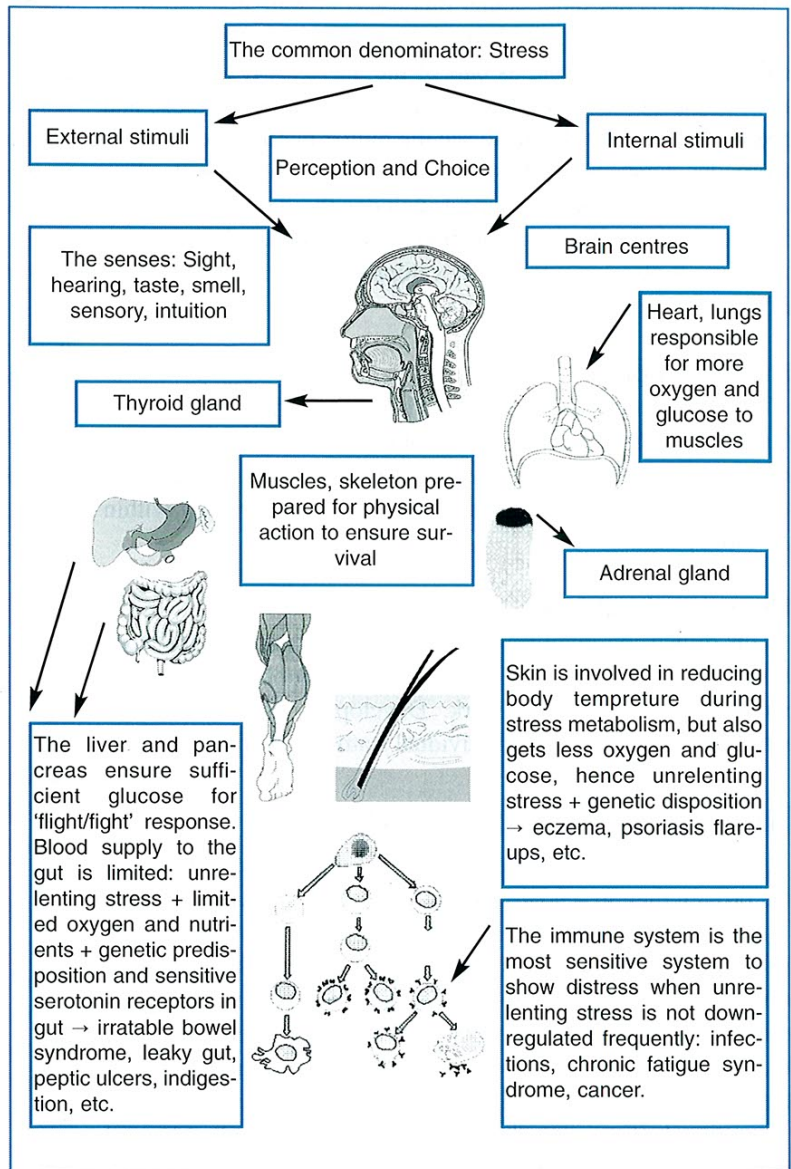
Elements of wellness programmes:

1. Health screening and health risk assessment for lifestyle and stress-related diseases and to assess improvement once program is implemented. Stress questionnaire to ascertain stress levels and everyday coping skills – can be kept confidential if required. Used to evaluate successful implementation of stress management programs.^{4,6}
2. Health risk interventions including physical, mental and emotional empowerment based approaches, such as employee assistance programs (EAP's) including stress management and self-esteem enhancement programs.^{4,6}
3. On-site health education and information as requested by the company: e.g. stress management, weight management, impotence, prostate health, smoking cessation, prenatal care, breast health, osteoporosis prevention, sleep education, living with disease, exercise and movement, rehabilitation programmes.^{4,6}
4. Health benefits designs: incentive programs, absenteeism policy, coverage of disease prevention and mental, emotional, physical health promotion benefits.^{4,6}
5. Complementary health care advice: e.g. medicinal herbs, food supplements, chiropractic, ergonomics, reflexology, aromatherapy, acupuncture, therapeutic massage, colour therapy, enhancing the workplace.¹
6. Home exercise (movement) programs and walking clubs.^{1,6}

Goals of wellness programmes

1. Reducing health insurance claims as substantiated by research while simultaneously enhancing managed well care.
2. Decreasing absenteeism and sick leave while enhancing employee and company morale.
3. Motivating pro-active health and well care through:
 - Screening procedures
 - Health enhancing lifestyle changes and choices
 - Education and empowerment

Chart I: The stress reaction in the body ^{5,6}



- Raising the level of health and wellness awareness in South Africa.

Stress Management: changing our perceptions, making the choice, working with our stressors. Realising that we do have a lot of control over our own stress reaction: the neo-cortex can be trained to override primitive reptilian survival brain responses. We can learn to use the stress reaction appropriately to stay in a positive stress phase.

If a health assessment is done for any group of people, 2 out of 3 individuals would suffer from any one or more of the following diseases: high blood pressure, depression, asthma, bronchitis, arthritis, anxiety, tension, chronic infections, stomach ulcers or pre-cancer and cancer states. We needn't wait for a catastrophe to happen before we decide to listen and to make the decision to be well. But also, it is never too late to do something!^{1,2,5,6}

Stress Management Tools

The 6-point plan^{2,3,5,6}

- The physiology of breathing. The effects of stress on your breath and oxygen availability. Experiential breathing exercises, including office techniques and specific techniques to alleviate back and neck pain.
- Stretching exercises to release physical tension, increase oxygen flow and focus thoughts away from monkey chatter in the mind; including specific office techniques.
- Quiet time and deep relaxation. Can be done anywhere, any-time to refocus the mind and improve concentration and sense of wellbeing. Enhancing cardiovascular health, improving mindset. The art of relaxation. Using an experiential approach that covers an introduction to a few potent techniques in the field of reflective technology. Diffusing stress: Practical tools you can use every day at home and at work to elicit the relaxation response. The focus remains on the experience, but emphasis is on the physiological and scientific pathways involved in these techniques.
- Perception and self-esteem: identify symptoms of stress, identify sources, identify individual response to stressors, set goals for more effective response, motivation, change perception and thinking patterns, deal with boss / employees, when in conflict negotiate, pace and balance yourself, know when to quit. Adapt or die. Dealing with change. Anger, fear and worry: The three big ones. Personal knowledge. Positive thinking. Tolerance, flexibility, adaptability. Sense of humor. Enthusiasm. Time management, planning, organisation.
- Nutritional tools for peak performance living:

Facts:

1. You have a whole new gut lining every 5 days.
2. You have new skin every 5 weeks.
3. Your entire skeleton is new every 3 months.
4. You have new blood cells every 120 days.
5. Every year 98% of the atoms in your body will be replaced.⁶

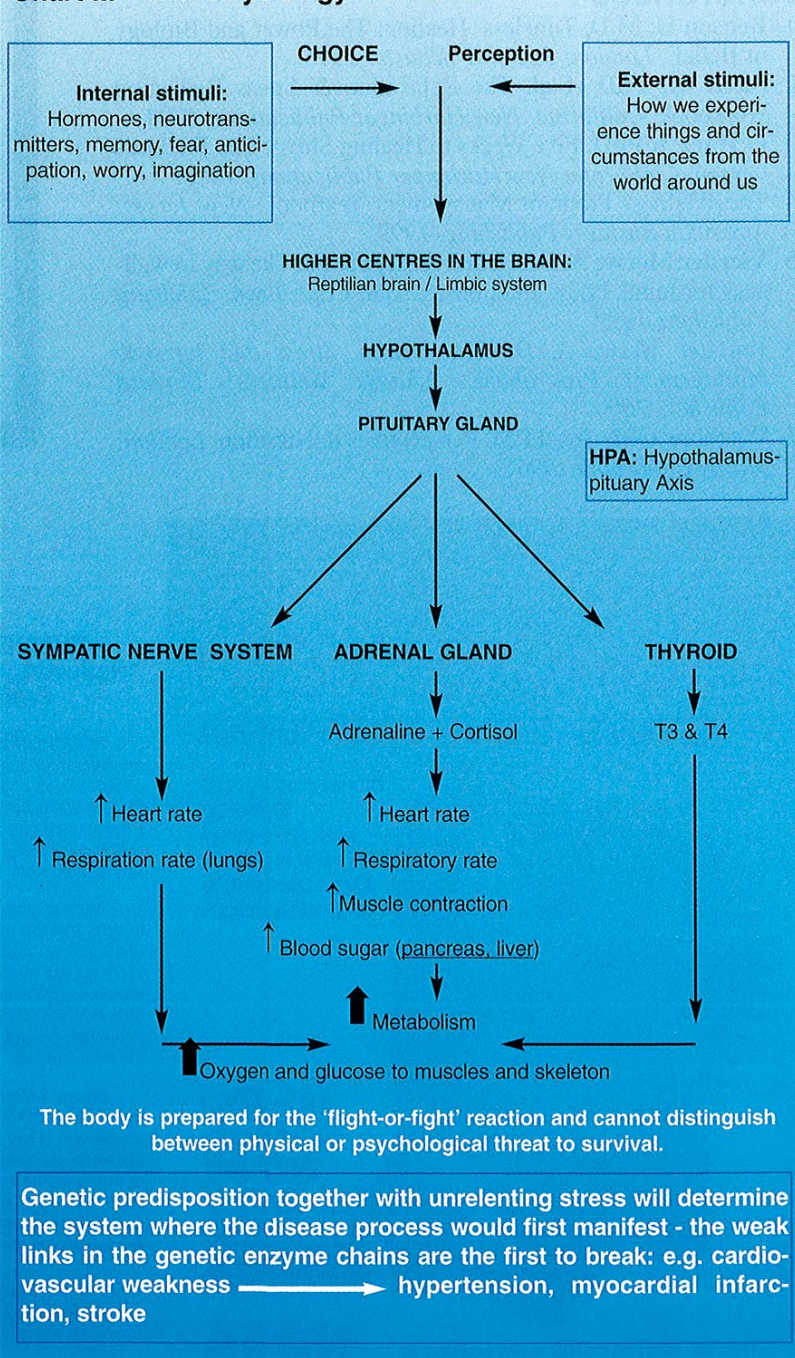
The human body regenerates itself every second of every day. The necessary building blocks for this process comes from the food we eat and the nutritional supplements we use. Daily stress, pollution and high corporate demands increase the need for nutrients and lifestyle boosters.⁶

Fuelling your body frequently. Back to basics. Complex carbohydrates: prevent mood swings, low blood sugar, increase concentration, eat 'feel good' foods, keep hydrated, limit refined sugar and fat, limit caffeine and alcohol. Food supplements,

herbs, micronutrients and the stress reaction. How the right choice of supplements can improve your health, vitality, sense of wellbeing, energy, creativity, productivity. Making sense of supplements: the four basics: anti-oxidant / multivitamin combination; calcium, magnesium; essential fatty acids and healing herbs.^{5,6,7}

- Moderate exercise: movement techniques that can be used in the workplace and at home. Regular exercise increases the formation and secretion of 'feel good' neurotransmitters like endorphins and serotonin.^{5,6}

Chart II: The Physiology of Stress^{5,6}



Conclusion

We can all become pro-active, self-aware healthy whole human beings knowing that by becoming responsible for our own health and wellbeing, we are also responsible for the earth and all its living creatures. We are the teachers.⁶

As the UNICEF: Progress of Nations 1999 proclaims:

The day will come when nations will be judged not by their military or economic strength, nor by the splendour of the capital cities and public buildings, but by the wellbeing of their peoples; by their levels of health, nutrition and education.

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Stress reduction programmes - Milpark Hospital

Dr Jonathan Moch

Psychiatrist, Milpark Hospital, Johannesburg

Occupational Health SA 2000, Vol 6, No 5, Pg24-26

Introduction

The central aims of the medical model are accurate diagnosis and appropriate intervention. Historically, each culture has had its own medical diagnosticians who, by taking a history of the main complaint, further questioning and sometimes additional investigations, obtain a differential diagnosis. Based on this accumulative evidence a treatment plan is instituted with varying degrees of outcome.

Today enormous effort is concentrated on the impersonal, technological aspect of investigation and heavy weighting is placed on pharmacological and surgical intervention. This is the dominant practice of allopathic western medicine. Reactionary forces now offer a quieter, more gentle approach by means of extensive personal interviews and a softer medicinal usage.¹

The past century has also seen the birth of talk therapies - initially psychoanalysis - but have been dominated more recently by cognitive behaviour therapy, and the growing influence of eastern methodologies into the medical treatment model. These techniques include meditation, diet, and exercise.^{2,3} For example, the National Institute of Health in the USA recommends meditation as the first line of treatment for mild hypertension.⁴

More recently, it has become more firmly established that many disease processes are stress-related, whereby the chronic activation of the stress response either causes or maintains the disorder.⁵ The stress response aims to re-establish homeostasis.^{6,7} Treatment models incorporate exercises that counter the stress response by inducing the relaxation response.²

It is against this background that the need arose to create a centre of excellence in Johannesburg that assesses and treats stress-related illnesses in a holistic way.

The Stress Reduction Clinic at the Milpark Hospital was established in 1995 to provide a model of investigation and treatment practices for patients suffering from severe, chronic stress. The programmes are an amalgamation of ancient wisdom, modern scientific principles and personal experience.^{8,9,10,11} Another aim was to develop programmes that are reliable, user friendly, affordable and can be replicated in other centres.

Diagnosis

Assessment and diagnosis is based on clinical interview and the Moch Stress Curve that has been validated against international inventories.¹² The score measures past stressors, current lifestyle practices and symptoms, as well as perceived levels of stress and functioning. It has been tested on thousands of persons. A review of the methodology and results was published in Occupational Health SA, May/June 1999.¹³ The Stress Curve is now available on the Internet and the website can be visited at www.optimallife.co.za

The results place respondents along a spectrum of stress levels ranging from boredom through to ideal, distress, burnout, and breakdown. There are often co-existing stress related illnesses such as depression, hypertension and chronic fatigue. *Depending on the degree of disturbed functioning the patient is advised to be treated on one of three different levels, namely:*

In-patient programme

The facilities of a medical ward at the Milpark hospital are utilised. These patients are in severe burnout or breakdown and cannot function without medical and nursing help. Very many are suicidal and present a threat to their own safety. A common feature is their complaint of significant fatigue and sleep deprivation. This programme extends from three days to two weeks.

Special investigations, including the measurement of stress hormones such as urinary cortisol, metabolic disturbances, and deficiency states are performed. The patient is referred to a specialist if warranted. Medical conditions such as hypertension, diabetes, hypothyroidism and asthma are often detected.

The use of medication is minimal. If necessary, neuroleptics are prescribed for agitation or marked sleep deprivation; antidepressants for depression; benzodiazepines for anxiety disorders; and vitamin supplementation if required.

A vegetarian diet is prescribed, particularly the increased consumption of fresh fruit and vegetables.¹⁴ All caffeine-containing drinks are removed and the use of refined sugar, sweets and chocolates is severely limited. A dietician is available for special diets.

Exercise classes are conducted at the Wellness centre, which has a fully equipped gymnasium with a heated indoor pool.³ Special focus is on aqua-aerobics, cycling and stretch exercises. The biokineticists or physiotherapists formulate a home plan.

Psycho-education is conducted on topics such as stress, psychosomatic illness, the importance of lifestyle changes, and taking responsibility for one's own health.^{2,15,16}

If required, psychotherapy is conducted to assess and treat conscious and unconscious processes that predisposed, precipitated or maintain the chronic stress. Special emphasis is placed on cognitive behavioural therapy. If necessary, family and marriage consultations are provided by a social worker.

Classes in relaxation, visualisation, and affirmations are provided on a daily basis when the in-patient links up with the stress reduction programme.

Out-patient programme

This intervention is aimed at patients who are not ill enough to be in hospital, but not well enough to be at work. From the stress curve scores they are in severe distress or early burnout. Patients may also have completed their stay in hospital but require further stress reduction. The programme runs in cycles of five days. Experience has shown that on average ten days is sufficient. Each participant receives a book describing the objectives of the programme as well as two audio-cassette tapes that have recordings of body scans with emphasis on the breath, stress reduction, and self-esteem enhancement.

The programme, conducted in small groups, is divided into three parts. The first session is that of awareness training with exercises in mindfulness meditation, silence, gentle stretch exercises, music, relaxation and visualisations. Emphasis is placed on developing awareness of inner world experiences. These exercises run for 150 minutes with some time allowed for interaction between members.

The second session is devoted to intense interpersonal interaction led by expert facilitators in relationships, cognitive-behavior therapy, self-esteem, goal- and timesetting. Group dynamics are essential in facilitating change.

The third session is aerobic exercise performed in the Wellness centre under the guidance of trained exercise professionals. Every two weeks a nutritionist gives an overview of dietetic principles.

Back to basics and balanced living programme

By committing time and effort to the "Back to basics" programme, participants set themselves on a path of achieving optimal health. Health is not just the absence of disease. Maximal health is a superior state that includes high levels of energy, strong connections with others, and a positive meaning of life with regular nurturing of the soul.

The programme is based on the well-known adage: "You can take a horse to water but you cannot make it drink". The water is represented by the knowledge and instructions of the programme. Water is also a primary substance of the earth and symbolically implies a basic compound. The theme "Back to basics" is based on the belief that, to manage stress, simple fundamental ideas need to be practiced (and then analysed) on a regular basis. For example the breath, the food we eat, exercise and how we relate to others.

Participants meet as a group once a week for two hours (The programme is now available in cyberspace via: www.optimallife.co.za). After eight weeks changes occur and with continual practice these changes are incorporated into daily schedules, and become part of a permanent lifestyle and habit.

This is not a quick-fix programme! For change to occur, courage, effort, commitment, time and self-discipline are required on the part of the participant. "Only the horse can drink the water." On average an hour a day is required to complete each day's objectives.

Each week specific directions are given under the following headings:

A = Awareness training

The initial step to change is becoming aware of the need to change. Unfortunately most humans are on automatic pilot, drifting through life unaware of the depth and breath of the potential that lies within. The opposite of awareness is denial. The main thrust of these exercises is to instill a daily discipline of awareness sensitivity through listening to tapes (body scan, general relaxation or self-esteem enhancement) and doing various mindful projects such as planting seeds, writing letters or gazing at the night sky.

B = The Breath

The breath is the only physiological mechanism that can be consciously controlled. The ability to manipulate the breath has been known since the beginning of recorded history. With practice, breath control can be used in a broad range of situations, immediately bringing reduction of stressful feelings and a renewed sense of balance. Each week a different breathing exercise is prescribed.

C = Cognitive

There is a space between every stressor and response to that stressor. Most of the time people respond to any stimulus in an automatic way. The emotional response is regarded as a direct consequence of the stimulus. The greatest freedom is the choice of response to any situation. Infinite potential and possibilities lie within this space. No-one can take that away, as this is the individual's personal responsibility. In other words the ability to respond is a skill that can be improved.

D = Diet

The most important drug that is ingested in life is food. The ideal combination of minerals, vitamins, carbohydrates, fats, proteins and water (at the right time and dosage) remains controversial. The main physiological aim of nutrition is to supply energy and the building blocks to the body. Unfortunately, small things like taste buds, hunger pains, society pressures and the mind get in the way! The recommendations are not another miraculous diet but rather wisdom gained from participants on the programmes (in-patient and out-patient), experts in the field of nutrition and sound scientific principles. Energy changes occur after a week or so.

E = Exercise

A healthy mind requires a healthy body. The programme recommends two forms of exercise. Brisk walking and a stretch exercise known as the sun salutation.

Walking is probably the safest, cheapest and physiologically most effective form of exercise if done briskly and on a daily basis. Most people in most situations and at any age - at home, the office, and the airport can perform the stretch exercise. These exercises do not require expensive equipment or the need to bath after completion. There are added benefits of breathing fresh air, exposure to the sun (good for vitamin D synthesis) and conversation with friends as you walk.

Conclusion

The assessment and treatment of stress-related illnesses have historically been distinguished by relatively weak theoretical models of stress. The dawn of the new millenium suggests that the basic sciences are now providing a solid foundation for appropriate interventions.¹⁶ These need to be vigorously evaluated.

At the Milpark Hospital a two-year study is presently being conducted to evaluate the effectiveness of such interventions. In summary, a group of patients measured in severe burnout or breakdown are treated by way of the above interventions.¹⁷ Each month psychometric testing is conducted as well as neuroendocrinological investigations on stress hormones that include cortisol, adrenaline, and noradrenaline as well as other hypothalamic and pituitary hormones. The hypothesis is that these hormones change with appropriate treatment interventions.¹⁸

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Taking occupational health lion down

Gillian Thomson

Ngodwana, Mpumalanga

Occupational Health SA 2000, Vol 6, No 5

I am a changed woman. I really mean it! I have survived a night of lion capture in the middle of the bush. Why was I there? Well, I was doing research on the occupational hazards of big-game capture, and this is how I came to find myself in the middle of nowhere with a vet, various members of his team, and "Prof" a delightful man doing research on lion sperm. The vet is doing a study on T.B in lions, and we were there to dart them, shave them, and inject them for follow-up in 72hrs.

I was told we were going to camp, and so I expected...well...a camp...(what about my hair-drier?) well, the "camp" consisted of two caravans at 90% angles to each other in the middle of nowhere! I was given a slasher and told to clear an area for my car and for the kill, which was to be chained right next to my car. (My car was to form the third side of a triangle) Me with a slasher come on.....I mean.... At first slash, I was nearly swung over by the fat on my upper-arms...if that wasn't bad enough, the first thorn-bush I attacked just refused to go down. I bashed it...it jumped up...I bashed it...it jumped up...blisters were forming, and one of the onlookers had a very stupid grin on his face... I renewed my efforts, gripping the slasher, my muscles bulging....SLASH!!! A stone flew over and nearly emasculated a very nervous stander-by. Needless to say, I was re-assigned to another duty.

A dead zebra was then slit open, and its intestines pulled out. They were riddled with parasites, but apparently a symbiotic relationship exists between them and their host, so that if you de-worm zebras, they lose their physical condition. We then dragged the zebra all over the show, to make nice juicy smells to attract the lions. Once the dragging was over, we returned to camp, and then struggled for half an hour to pull the zebra under an acacia tree (you know, the one with the thorns...) and chain it there. I was stabbed in the back repeatedly by wayward branches, and made up several new swear words, with Zebra **##@ featuring liberally!

We had to pack thorn trees around three sides of the tree to force the lions to come in and eat with their rear-ends towards us so we could dart them. It was finally accomplished, and we all creaked upright, pulled the sticks and thorns out of our hair and skin and stumbled back into camp. Two enormous speakers were then placed in a tree, and the calls of lions, hyenas, jackals, zebras and buffalo in distress were played.

It was just dark, when suddenly the bush came alive with darting smudgy shapes...yipping and snarling, the real macoy had arrived! The hyenas were so BIG! When you see them from a car, they are...well...sort of "nice doggy", but close up, they came to my chest, smelt, snuffled and giggled and what was more, their eyes glowed green in the light of my torch! They fell on the kill and with-

in minutes, they had ripped the back leg off and sucked out his eye-balls. We had to eventually stone them to keep them away, as the zebra disappeared like pieces of a puzzle. Stoning Hyenas has got to be the best fun I have had in a long time! I knew as I was doing it, that I would rise immeasurably in my sons' esteem when I told him, and I seemed to get divine intervention from Gogo Adams..., until I almost hit the vet with a particularly large rock and had to grudgingly withdraw back to the fire.

There were two other camps in the vicinity that were doing the same thing as us (I would like to think not with as much style..) but at about 8 o'clock, the radio crackled into life. Camp B had darted two lions! We piled into Prof's vehicle and bounced off into the darkness leaving the vet and crew to watch our kill. I had to sit next to a rather large microscope each bump catching my head between the window and a large wooden box...(I told you I had changed...)

On arrival, there lay two rather tatty male lions, with staff members darting around giving them injections and writing furiously on hundreds of different forms.

I was officially instated as Prof's spermatozoa assistant and we proceeded to collect the sperm samples. I must say at this stage, that I doubted my sex-life would ever be normal again and that the nervous tic I have developed started at the lion's bedside...

The lion's genitals are washed and dried. There is then plenty of undignified groping to find the penis. This is not where the lion got his "king of the beasts" title from! Once found, an electrode is passed into the rectum to stimulate the prostate gland and a sperm sample is delivered. The test-tubes have to be warm to enhance the sperm's motility and so I had to keep them in my pocket until needed.

We then had to check the samples under the microscope to check motility etc. Only one of the two had sperm, and it was fascinating to see them buzzing around, swimming, crawling, and generally having a ball. We were eventually all done at about 10pm, and drove back to camp.

At about 1am, we had to head into the bush to cut more thorn bush to cover the kill, as the hyenas had almost finished it. My job was to hold the torch. I right there and then developed the amazing ability to shift my ears around to the back of my head and wiggle them. It didn't hurt a bit, and I now use it to trap my children in compromising situations. The chopping was fairly erratic, as I had to keep peering behind me when I heard the slightest hint of life. (I think Mr. Vet was annoyed at having his light source snuffed, but I couldn't see his face as I was shining the torch in the other direction...)

We packed the thorn-bush over the kill and decided to try and get some sleep. I changed into my jammies in the luxurious safety of my dark, locked car. I snuggled into my sleeping bag and lay there listening to the symphony of a kill. I was just drifting off when the radio crackled into life.... Camp C had darted four lions.

I had to have a rather severe talk to myself as my body leopard-crawled to the bottom of the sleeping bag and my mind dragged it kicking and screaming up and out.

Back to the crushing embraces of the microscope...warm test-tubes and all that. We weighed and measured, and shocked and looked and scribbled furiously. At about 4.30 we were finally finished and back to camp we crept, dodging night-jars and sleepy impala. We woke Mr. Vet up and demanded coffee with condensed milk. I then walked a short distance and placed my chair bang in the middle of a midden (a huge pile of buck droppings). The sun was rising, a huge cool orange ball, and the birds put the Drakensberg Boys choir to shame. I sipped my coffee, tired, burny-eyed, but so absolutely satisfied. I had survived a lion capture, and what's more, I want to do it again, today, tomorrow, and every day of my life!

Case report of occupational asthma due to onion

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Introduction

The case of a young woman with probable onion-induced occupational asthma is reported. The diagnosis was based on convincing evidence of asthma, symptoms related to occupational exposure to onion and specific IgE to the vegetable. Some of the difficulties in diagnosing occupational asthma are illustrated by the case.

Exposure and asthma history

A 28 year-old woman presented to the Occupational Medicine Clinic of the National Centre for Occupational Health (NCOH) with a diagnosis of asthma related to work. She had peeled and cut fresh vegetables at work from 1995 to January 1999. She developed respiratory problems in 1997 and asthma was diagnosed in October 1997 during a hospital admission. There was no history of childhood asthma. Although she had worked with many vegetables (but not garlic), she identified onions as the most problematic exposure, as her chest became tight soon after peeling them. Later she also responded to bleach and cleaning agents. Her chest was better at home unless she used onions domestically. (She had resorted to leaving them under water for an hour or so before chopping them up.) Her work was modified in November 1997 so that direct occupational contact with vegetables stopped, but by-stander exposure still provoked symptoms so she was moved to a cold storage area in January 1999. Not surprisingly, the cold air triggered asthma attacks and the patient was relocated to an outside cleaning job in September 1999.

Diagnosing occupational asthma

In general there are three considerations in diagnosing occupational asthma: there should be a good diagnosis of asthma; there should be exposure to a known cause; and work-relatedness should be demonstrated, preferably using objective means.

Asthma?

Table I shows that the patient had airflow limitation with an unequivocal response to inhaled salbutamol on two occasions. (E.g. FEV₁ improved from 1.18 litres to 2.20 litres on 19/8/99.) This response with the symptoms of variable cough, wheeze and chest tightness, and improved airflow on the 23/11/99 compared to 19/8/99 is good evidence of asthma.

Table I: Spirometry pre- and post- bronchodilator in a 28-year black woman of 159cm and 65kg

	19 August 1999		23 November 1999	
	Pre	Post	Pre	Post
FVC (L)	2.0	2.9	2.3	3.3
FEV ₁ (L)	1.2	2.2	2.3	2.7
FEV ₁ /FVC (%)	58	75	72	83
PEFR (L/S)	2.5	5.0	5.2	6.4

Exposed to a known cause?

Establishing whether exposure to a known cause of asthma has occurred is sometimes not easy. Onion is not a generally accepted cause of asthma, but then new causes are being identified all the time; lists of known causes are out of date on publication.¹ Garlic, a close relative of onion, is reported to be a cause and Valdivieso and co-workers documented onion-induced allergic disease in four subjects.^{1,2} It would be reasonable to conclude that onion is a reported but not generally accepted cause of occupational asthma.

Work-relatedness?

The patient gave a clear history of asthma symptoms that started after exposure, worsened in response to onion and improved away from work, but then onion is known to cause tearing and rhinorhea in persons who slice and cut it, so possibly the response was non-specific. Usually changes in airflow or bronchial responsiveness in relation to work would have been measured but the patient had already been relocated to an exposure free position. Specific provocation testing is problematic in our setting because facilities are not available, and, in any event, the patient refused further testing.

Table II: Skin prick test (SPT), specific RAST, Dot Blot and Western Blot results in a 28-year old woman exposed to onion but not garlic

	Onion	Garlic
SPT	-	-
RAST	-	-
Dot Blot	+	+
Western Blot	+	++

Positive tests of sensitisation (i.e. specific IgE) to the putative agent support work-relatedness, and are particularly useful in this kind of setting. Table II summarises the results of tests of specific IgE to onion and garlic. A full description of the methods is not given but is available on request from the Immunology and Microbiology Section of the NCOH.

Discussion

Is this a case of occupational asthma caused by onion? The patient has asthma, onion is a previously reported cause and she has evidence of work-relatedness based on symptoms and objective improvement in asthma after prolonged avoidance of the agent at work. Skin prick tests and specific RAST were negative for onion, but specific IgE was detected by Western Blot and Dot Blot techniques. In our view there is sufficient diagnostic certainty to accept the case for compensation purposes and for workplace management to relocate the worker and monitor exposed co-workers, but insufficient certainty to add onion to the list of known causes of occupational asthma.

References

1. **Chang-Yeung M, Malo J-L.** Aetiological agents in occupational asthma. *Eur Respir J* 1994;7:346-371.
2. **Valdivieso R, Subiza J, Varela-Losada S, Subiza JL, Narganes MJ, Martinez-Cocera C, Cabrera M.** Bronchial asthma, rhinoconjunctivitis, and contact dermatitis caused by onion. *J Allergy Clin Immunol* 1994;94:928-930.

The health, stress & lifestyle management programme: choose life!

Dr Arien van der Merwe; Published by Modern Publisher 2000

The aim of this book is to reduce absenteeism and accidents, increase productivity and creativity and reduce medical aid claims. The contents include: * Wellness programmes for SA, which outline the worldwide move to wellness leading to a perception shift from "sick care" to "well care".

The programme detailed in the book focuses on helping the individual and the group to maintain the balance and harmony of all six levels of human existence: the physical body, mind, emotions, as well as soul, social and occupational (including environmental) aspects. Other chapters include: * learn the facts about stress and its management * holistic health for balance * assist your body and mind to function at peak performance level * antioxidants * alternatives to antibiotics: chronic fatigue syndrome, candida infection, leaky gut * cardiovascular diseases: high cholesterol, high blood pressure, etc - a natural, complementary approach * body detoxification programmes.

Visit the website for more information:
wellnessempowerment.com

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- Personal communication and unpublished observations may be cited in the text, but not in the reference list.
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Examples:

Journal references

1. Zwarenstein M, Barron P, Tollman S, et al. Primary Health Care Depends on the District Health System. *S Afr Med J* 1993; 83:558.

Book references

1. Thompson L.A. History of South Africa. Newhaven and London: Yale University Press, 1990.

PROOFS

- Alterations to proofs must be limited to misprints or factual errors. Major alterations or new material cannot be accepted. Proofs not returned within the time limit specified will be regarded as approved.

CONTACT PERSON

- Articles should be sent to Ilse Dreyer, Managing Editor, at P.O. Box 1307, Ferndale, 2160 or faxed to (011) 791-2618 or emailed to jeni@emmagaccess.co.za.

South African SHE Law Update: Regulations, Codes of Practice and Guidelines

David W. Stanton
Chamber of Mines

Occupational Health SA 2000; Vol 6, No 4:

This second South African SHE Law Update lists Regulations, Codes of Practice and Guidelines published since the Occupational Health and Safety Act, 1993. The first SHE Law Update listed Acts, Bills and White papers. Full text of the majority of the documents listed can be obtained via the links on the Legislation

page of ASOSH.ORG (Southern African component). The third South African SHE Law Update will cover law that is under preparation. It is hoped that readers will provide additional information to the author to aid in the development of a master listing of SHE and related law for South Africa.

Regulations
<p>Regulations on Fluoridating Water Supplies, Health Act (No. 63 of 1977) Department of Health, GG No. 21533, 8 September 2000 Every water provider must practice fluoridation, unless exempted.</p>
<p>Marine Traffic (Inshore Vessel Traffic Services) Regulations, 2000, Marine Traffic Act (No. 2 of 1981) Department of Transport, Government Gazette (GG) No. 21136, 5 May 2000 For the promotion of safe and efficient navigation and environmental protection in South African waters.</p>
<p>Regulations for the South African Police Service, South African Police Service Act (No. 68 of 1995) Department of Safety and Security, GG No. 21088, 14 April 2000 Chapter VI: Working Environment, 33. Health and Safety: The National Commissioner must establish and maintain a safe and healthy work environment for employees of the Service.</p>
<p>National Road Traffic Regulations, 2000, National Road Traffic Act (No. 93 of 1996) Department of Transport, GG No. 20963, 17 March 2000 Addresses: registration and licensing of motor vehicles, fitness of drivers, professional driving permit, fitness of vehicles, loads on vehicle, transportation of dangerous goods and substances by road, road traffic signs, and rules of the road. Prohibition on the use of communication devices (cellular or mobile telephone) while driving on a public road unless "hands free".</p>
<p>Merchant Shipping (Safe Manning) Regulations, 1999, Merchant Shipping Act (No. 57 of 1951) Department of Transport, GG No. 20772, 30 December 1999 Addresses requirements for the employment of crew personnel and watch keeping standards. Includes requirements for safety and pollution prevention training and experience.</p>
<p>Merchant Shipping (Training and Certification) Regulations, 1999, Merchant Shipping Act (No. 57 of 1951) Department of Transport, GG No. 20772, 30 December 1999 Prescribes the standards of competency and the conditions to be satisfied for certification as master, ship's officer or rating on South African ships other than fishing vessels.</p>
<p>Regulations in Terms of the Medical Schemes Act, 1998 (Act No. 131 of 1998) Department of Health, GG No. 20556, 20 October 1999 The Act and Regulations aim to improve the affordability of, and access to private health care through medical schemes. The Regulations largely deal with administrative issues and matters relating to information to be provided to members of medical schemes.</p>
<p>Amendment to the General Regulations Made in Terms of the Medical Schemes Act, 1998, GG No. 21256, 5 June 2000</p>
<p>Regulations on Use of Water for Mining and Related Activities Aimed at the Protection of Water Resources, National Water Act (No. 36 of 1998) Department of Water Affairs and Forestry, GG No. 20119, 4 June 1999 Aimed at the protection of water resources in respect of the use of water for mining and related activities.</p>

Regulations Relating to the Basis on which Owners of Controlled Mines and Controlled Works Shall Pay Amounts in Respect of Risk Shifts Worked, Occupational Diseases in Mines and Works Act (No. 78 of 1973)

Department of Health, GG No. 19383, 23 October 1998

Sets out the amounts payable by the owner of each controlled mine or controlled works for the benefit of the compensation fund. Based on each shift worked by any person who performed risk work.

SAMSA Regulations, 1998, South African Maritime Safety Authority Act (No. 5 of 1998)

Department of Transport, GG No. 18820, 3 April 1998

Addresses responsibility for the Maritime Fund, the collection of charges and levies and detention of ships.

Regulations Under The South African Qualifications Authority Act, 1995 (Act No. 58 of 1995)

Department of Education, GG No. 18787, 28 March 1998 (NSB Regulations)

National Qualifications Framework established to provide for the registration of national standards and qualifications. National Standards Bodies to be established for each of twelve different fields contemplated in regulation 3(4) and Standards Generating Bodies to be established for sub-fields.

Regulations Under The South African Qualifications Authority Act, 1995 (Act No. 58 of 1995)

GG No. 19231, 8 September 1998 (ETQA Regulations)

Addresses: education and training quality assurance bodies, providers of education and training, moderating bodies, and the inclusion of professional bodies and examining bodies in standard setting, quality assurance and moderation.

Major Hazard Installation Regulations, Occupational Health and Safety (OHS) Act (No. 85 of 1993)

Department of Labour, GG No. 18608, 16 January 1998

Applicable to employers who have on their premises, either permanently or temporarily, an installation or a quantity of a substance which can pose a significant risk of resulting in a major incident, that could affect the health and safety of persons outside the premises, including the public.

Civil Aviation Regulations, 1997, Aviation Act (No. 74 of 1962)

Department of Transport, GG No. 18286, 26 September 1997

To enhance the safety of civil aviation and ensure that the SA legislation complies with the minimum standards prescribed by the International Civil Aviation Organization. Areas addressed include aviation accidents and incidents; aircraft; personnel including medical certification; rules of the air and general operating rules including conveyance of dangerous goods by air.

Eighth Amendment of the Civil Aviation Regulations, 1997, GG No. 20896, 18 February 2000

Merchant Shipping (Dangerous Goods) Regulations 1997, Merchant Shipping Act (No. 57 of 1951)

Department of Transport, GG No. 17921, 18 April 1997

Addresses the carriage of packaged dangerous goods and dangerous goods in bulk to comply with the requirements of the International Maritime Organization.

Arrangement of Regulations, Mine Health and Safety Act (No. 29 of 1996)

Department of Minerals and Energy, GG No. 17725, 15 January 1997

Addresses the arrangement of the regulations; Chapter 6 Health and Safety Representatives and Committees; Chapter 7 Inspectorate of Mine Health and Safety; Chapter 18 Tripartite Institutions.

Amendment of Mine Health and Safety Regulations

GG No. 18078, 21 June 1997

Addresses Chapter 6 Health and Safety Representatives and Committees; Chapter 7 Inspectorate of Mine Health and Safety; Definitions.

Constitution of the Mine Health and Safety Council

GG No. 18352, 10 October 1997

Addresses establishment of Council and committees, functions of Council, nomination and appointment of members.

Constitution of Mining Qualifications Authority

GG No. 18854, 24 April 1998

To provide for the constitution of the Mining Qualifications Authority and for the promotion of the objectives of the National Qualifications Framework in the mining industry.

Regulations

GG No. 19354, 16 October 1998

Addresses Chapter 1 Appointments and Administration.

Mine Health and Safety Act, 1996 (Act No. 29 of 1996): Regulations

GG No. 20155, 11 June 1999

Occupational Health subregulation 11.1 Appeal regarding finding of unfitness to perform work.

GG No. 20714, 17 December 1999

Occupational Health subregulation 11.2 Annual Medical Report (details to be included).

Vessels under Pressure Regulations, 1996, OHS Act (No. 85 of 1993)

Department of Labour, GG No. 17468, 4 October 1996

Apply to all users of vessels under pressure (e.g. boilers, pressure vessels, pressurised systems or portable gas containers).

Incorporation of Health and Safety Standards, GG No. 17468, 4 October 1996

General Administrative Regulations, OHS Act (No. 85 of 1993)

Department of Labour, GG No. 17403, 6 September 1996

Addresses: availability of the OHS Act and Regulations at the workplace, health and safety committees, reporting of incidents and occupational diseases and handling of hazardous chemical substances. Material safety data sheets (MSDSs) to be provided for hazardous chemical substances containing all the information as contemplated in either ISO 11014 or ANSI Z.400.1 - 1993.

Regulations for Hazardous Chemical Substances, OHS Act (No. 85 of 1993)

Department of Labour, GG 16596, 25 August 1995

Apply to an employer or a self-employed person who carries out work at a workplace which may expose any person to the intake of a hazardous chemical substance at that workplace. Occupational Exposure Limits (OELs) and Biological Exposure Indices (BEIs) provided in Annexure 1.

Regulations for the Integration of the Occupational Health and Safety Act, 1995, The Integration Of Labour Laws Act (No. 49 of 1994)

Department of Labour, GG No. 16387, 28 April 1995

Set the date (1 May 1995) on which the OHS Act, 1993, came into operation in those parts of the national territory which immediately prior to the commencement of the Constitution, comprised the territories of the former Republics and the former self-governing territories.

Minerals Act, 1991 (Act No. 50 of 1991) Amendment of Regulations

Department of Mineral and Energy Affairs, GG No. 16363, 13 April 1995

Amendments to subregulation 2.16 on the appointment and duties of mine Environmental Control Officers.

Amendment of Regulations, Mine Health and Safety Act (No. 29 of 1996)

Department of Minerals and Energy, GG No. 18992, 26 June 1998

Amendments to Chapters 1 Definitions, 16 Winding and 18 Traction. New regulations to improve locomotive braking following the Vaal Reefs disaster.

Amendment of Regulations

GG No. 20219, 25 June 1999

Chapter 5 (prevention of pollution) amended by the addition of regulations on "performance assessment and monitoring of environmental management programme".

Amendment of Regulations

GG No. 20606, 12 November 1999

Amendments to Chapter 9 Explosives and Chapter 16 Winding.

Maritime Occupational Safety Regulations, 1994, Merchant Shipping Act (No. 57 of 1951)

Department of Transport, GG No. 16068, 11 November 1994

Addresses duties of employers; first-aid kit and first-aider; reporting of accidents or serious injuries on board vessels; safety provisions for staff on board ship; appliances and equipment.

Lift, Escalator and Passenger Conveyor Regulations, OHS Act (No. 85 of 1993)

Department of Labour, GG No.15658, 29 April 1994

Addresses: permission to install and use; design and construction; particulars of lifts, escalators or passenger conveyors; inspections and tests; and maintenance.

GG No. 21527, 7 September 2000

Incorporates SABS 1543 and 1545

Workplace Environmental Regulations Amendment, OHS Act (No. 85 of 1993)

Department of Labour, GG No. 15560, 18 March 1994

New regulations for noise added to the Environmental Regulations for Workplaces, 1987.

Draft Regulations

Proposed Plastic Bag Regulations, Environment Conservation Act (No. 73 of 1989)

GG No. 21203, 19 May 2000

To restrict the production of non-reusable plastic shopping bags and to promote re-use and recycling.

Proposed Regulations for the Control of Environmental Conditions Constituting a Danger to Health or a Nuisance, Health Act (No. 63 of 1977)

Department Of Health, GG No. 20796, 14 January 2000

Addresses nuisances, accommodation standards, control of vermin, handling and disposal of medical wastes and latrines at public gatherings.

Notice Relating to Smoking of Tobacco Products in Public Places, Tobacco Products Control Act (No. 83 of 1993)

Department of Health, GG No. 20687, 3 December 1999

To declare where smoking in public places is permissible and the conditions subject to which such smoking may take place, as set out in the Schedule.

Proposed Amendment of the Regulations Relating to Communicable Diseases and the Notification of Notifiable Medical Conditions, Health Act (No. 63 of 1977)

Department of Health, GG No. 19946, 23 April 1999

Provisions for the notification of the Acquired Immuno Deficiency Syndrome (AIDS). Does not require that HIV-positive status be notified.

Draft Regulations for Hazardous Biological Agents, OHS Act (No. 85 of 1993)

Department of Labour, GG No. 20555, 1 November 1999

Applies where a hazardous biological agent (HBA) is deliberately produced, processed, used, handled, stored or transported or an incident occurs that does not involve a deliberate intention to work with a HBA but may result in persons being occupationally exposed to a HBA.

Draft Amended Asbestos Regulations, OHS Act (No. 85 of 1993)

Department of Labour, GG No. 20325, 16 August 1999

To replace the Asbestos Regulations, 1987. Lowers the OEL from 1,0 to 0,2 regulated asbestos fibres per milliliter of air averaged over any continuous period of four hours.

Draft Amended Lead Regulations, OHS Act (No. 85 of 1993)

Department of Labour, GG No. 20359, 16 August 1999

To replace the Lead Regulations, 1991. Lowers the BEI for lead in blood from 80 to 60 µg/100 ml (>60 µg/100 ml and the employee is certified as unfit for work in an area which exposes him or her to lead).

Draft Amended Diving Regulations, OHS Act (No. 85 of 1993)

Department of Labour, GG No. 20360, 16 August 1999

To replace the Diving Regulations, 1991. Applies to all diving operations and all persons engaged in diving operations in the Republic of South Africa or the territorial waters thereof.

Draft Explosives Regulations, OHS Act (No. 85 of 1993)

Department of Labour, GG No. 19779, 24 February 1999

Applicable to employers, self employed persons and users who operate an explosives workplace for the purpose of manufacturing or use of explosives.

Draft Amendment to the Vessels Under Pressure Regulations, 1996, OHS Act (No. 85 of 1993)

Department of Labour, GG No. 18716, 6 March 1998

Amendment of Regulation 13 on Inspection and test. Includes a new subregulation (c) : No person shall perform internal and external inspections and hydraulic pressure tests unless such a person is at least a holder of a certificate of registration issued by an organisation approved by the chief inspector.

Draft Tunneling Regulations, 1995 Publication for Comment, OHS Act (No. 85 of 1993)

Department of Labour, GG No. 16296, 10 March 1995

Addresses: notification of tunneling operation; supervision; safety precautions; personnel safety equipment; access requirements; rescue and evacuation; monitoring of gas and dust; fiery tunnel requirements; blasting; methods of operation; and offences and penalties.

Draft Railway Health and Safety Regulations, OHS Act (No. 85 of 1993)

Department of Labour 1994, GG No. 16222, 20 January 1995

To apply to all users of a railway system, other than a railway system on a mine or mining area. Health and safety management system required for the safe maintenance and operation of a railway system.

Draft General Health and Safety Regulations, OHS Act (No. 85 of 1993)

Department of Labour, GG No. 16222, 20 January, 1995

To replace the General Safety Regulations, 1986. Addresses: personal health and safety equipment; emergency equipment; medicine and first aid; use and storage of flammable liquids; work in confined spaces; work in elevated positions; working in danger of engulfment; stacking of articles; welding, flame cutting, soldering and similar operations; roof work; demolition and excavation; ladders; access scaffolding; and gas installations.

Draft Incorporation of Health and Safety Standards, GG No. 16222, 20 January, 1995

Codes of Good Practice

Code of Good Practice on the Protection of Employees During Pregnancy and After the Birth of a Child, Basic

Conditions of Employment Act (No. 75 of 1997)

Department of Labour, GG No. 19453, 13 November 1998

To provide guidelines for employers and employees concerning the protection of the health of women against potential hazards in their work environment during pregnancy, after the birth of a child and while breast-feeding.

Code of Good Practice on the Arrangement of Working Time, Basic Conditions of Employment Act (No. 75 of 1997)

Department of Labour, GG No. 19453, 13 November 1998

To provide information and guidelines to employers and employees concerning the arrangement of working time and the impact of working time on the health, safety and family responsibilities of employees.

Draft Codes of Good Practice

Draft Code of Good Practice on Key Aspects of HIV/AIDS and Employment for Public Comment, Employment Equity Act (No. 55 of 1998)

Department of Labour, GG No. 21809, 25 April 2000

Sets out guidelines for employers and employees to implement so as to ensure individuals with HIV infection are not unfairly discriminated against in the workplace. To be accompanied by Technical Assistance Guidelines on Managing HIV/AIDS in the Workplace to be published in 2001.

Guidelines for the Compilation of a Mandatory Code of Practice - Mining

In accordance with Section 9(2) of the Mine Health and Safety Act, 1996, the Chief Inspector may require the mine manager to prepare and implement Codes of Practice. These Codes of Practice must comply with all applicable provisions of any guideline that the Chief Inspector has issued. Guidelines are available online from the Department of Minerals and Energy (<http://www.dme.gov.za/mhs/codes.htm>) and Cominfo (<http://www.cominfo.org.za/MHSC/guidelines.htm>).

Guideline for the Compilation of a Mandatory Code of Practice for the Prevention of Coal Dust Explosions in Underground Coal Mines (1997)

Guideline for the Compilation of a Mandatory Code of Practice to Combat Rockfall and Rockburst Accidents in Metalliferous Mines and Mines other than coal (1996)

Guideline for the Compilation of a Mandatory Code of Practice to Combat Rockfall Accidents in Collieries (1996)

Guideline for the Compilation of a Mandatory Code of Practice on Trackless Mobile Machinery (2000)

Guideline for the Compilation of a Mandatory Code of Practice on Mine Residue Deposits (2000)

Guideline for the Compilation of a Mandatory Code of Practice on Minimum Standards of Fitness to Perform Work at a Mine (2000)

Dee Boorman

Dee Boorman is a well-known occupational health practitioner with an extensive nursing background. She completed her nursing training at the Addington hospital in Durban, following it up with midwife training at Pietermaritzburg's Grey's hospital.

This native Natalian's passionate nature and warm enthusiasm spills over into her work. "I truly believe we should encourage a mentoring system and in that way, utilise both highly specialised professionals as well as giving new recruits a head start into this specialised field. This would ensure not only a high standard of professional conduct and practice but a comprehensive network within which each person would feel like a team member, not as if they were working in isolation," Dee says.

Dee added First Aid, CPR, and Family Planning to her qualifications. She has also written and presented many articles and talks on both local and international level, as well as having lectured at Wits Technikon. Presently she is a member of committees of the department of Transport and Mines and also gives input as a member of the Wits

Technikon advisory committee on occupational health.

This dynamo counts her most treasured personal achievement as that of bringing up two warm, balanced individuals, her children who are already adults. She has been running her own consultancy for the past seven years and cites personal growth in a multi-disciplinary field, balanced with a meaningful social life, as her future goal.



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