

ACQUIRED IMMUNE DEFICIENCY SYNDROME

FACTS ABOUT AIDS FOR PHYSIOTHERAPISTS

by Nadine Kotkin

In a study describing the level of AIDS related knowledge amongst physiotherapists working in six major hospitals in the greater Johannesburg area, it was found that physiotherapists do not have sufficient knowledge to adequately protect themselves from contagion by the human immunodeficiency virus. This information sheet has been prepared in a question and answer format for distribution to physiotherapists using information from the study. It is hoped that you will use this information and distribute it as widely as possible to your staff members, your colleagues and students. Background information used in the preparation of this pamphlet was derived from information prepared for dental practitioners by the council on dental therapeutics, from material published in the medical literature by the council for disease control and from an article in the Australian Journal of Physiotherapy on Aids and Physiotherapy.

WHY DO I AS A PHYSIOTHERAPIST NEED TO KNOW ABOUT AIDS?

Many people, both lay and professional, tend to ignore literature on AIDS because they believe that the issue does not relate to them. There is a need for physiotherapists to have a basic understanding of the natural history of the virus, the consequences of infection, infection prevention and the treatment of infected people. Physiotherapists must have this knowledge in order to be able to educate and counsel their patients, to protect themselves from infection, to provide appropriate treatment for infected people and to make a contribution to the overall public health management of the disease.

WHAT IS AIDS?

AIDS is an extremely serious condition characterised by a defect or defects in the natural immune system. The defective immune system allows individuals to become susceptible to illnesses not commonly seen in people with normal immune systems. Two normally rare illnesses commonly found in patients with AIDS are *Pneumocystis Carinii* pneumo-

nia, a parasitic lung infection, and Kaposi's sarcoma, a rare cancer of blood vessel walls.

WHAT CAUSES AIDS?

A virus has been identified as the causative factor precipitating AIDS. It is called the Human Immunodeficiency Virus (HIV) and is classed as a retro-virus. A retro-virus transcribes its RNA into the hosts cell's DNA, thus taking over the function of that cell. The HIV attacks the T helper cell of the immune system and destroys it while using it as a vehicle to reproduce itself.

WHAT ARE THE SYMPTOMS OF AIDS?

The symptoms may include fever, night sweats, swollen lymph nodes, unexplained weight loss, various infections, diarrhoea, fatigue and loss of appetite. Physiotherapists are in a position to be the first health care professionals to identify AIDS patients. Patients often complain to their physiotherapists about various medical symptoms they are experiencing. Patients also often admit certain facts about their personal lives to a physiotherapist they trust. Physiotherapists must be alert to suspect patients, suggest that they be tested for seroconversion, and refer them to a physician if necessary.

WHO GETS AIDS?

Homosexual and bisexual men, heterosexual men and women and intravenous substance abusers make up 90% of all known AIDS cases. Haemophilia patients and transfusion recipients and others make up the remaining 10%.

HOW CAN I, AS A PHYSIOTHERAPIST CONTRACT AIDS?

Research at the Centres for Disease Control suggest that AIDS does not seem to be transmitted in a single parenteral or mucous membrane exposure. It seems to require repeated blood-to-blood or blood-to-mucosa contact, or sharing of needles. The virus has been identified in most of the body fluids of an infected individual, although semen, vaginal secretions and

blood are the most dangerous as far as transmission of the virus is concerned. HIV antibodies can normally be detected three to six months following seroconversion.

The AIDS virus has been identified in saliva and sputum, but to date no cases of transmission have been documented from casual contact alone. In the physiotherapy situation, saliva and sputum are often contaminated with blood. It is prudent to assume that where blood and saliva are mixed, there is a potential for transmission. Patients requiring physiotherapy commonly present with open wounds. These expose the therapist directly to potentially HIV positive blood. Physiotherapy is a patient contact profession i.e. we are required to touch every patient whom we treat. Direct contact with a seropositive patient's blood places the therapist at risk of contagion. Sputum and blood splashing into the physiotherapist's eyes or mouth, patients regurgitating or being incontinent onto the physiotherapist are not uncommon occurrences during treatment.

HOW MUCH EXPOSURE TO AIDS DO I HAVE AS A PHYSIOTHERAPIST?

In recent epidemiological studies on the AIDS epidemic, the results are alarming. In South Africa alone 60,000 people are thought to be infected with the virus (December 1990). Many of these people are not aware that they have the virus as symptoms may only develop up to 10 years after initial seroconversion. Many people may even test seronegative, when in fact they are positive as it takes time for antibodies to develop to the virus and thus to test seropositive. The epidemic is expected to double every eight-and-a-half months. In the future most physiotherapists are going to be dealing with AIDS patients, and from the study most are already.

HOW CAN I PROTECT MYSELF FROM INFECTION?

The Council for Disease Control (CDC) has formulated a comprehensive list of universal precautions that all health care workers should employ to protect themselves from infection. The CDC and the World Health Organisation (WHO) have recommended that all patients be treated as if potentially infected and all body fluids and specimens from all patients be treated

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WHEN MUCOCILIARY CLEARANCE IS A STICKY PROBLEM



Every physiotherapist knows that effective clearance of the bronchial passages is virtually impossible without the help of their staunchest ally - the cilia. But ciliary activity is inhibited by the thick tenacious mucus associated with bronchial disease. And, to make matters worse, the microbes associated with bacterial and viral infections can release certain compounds which slow ciliary beating⁽¹⁾.

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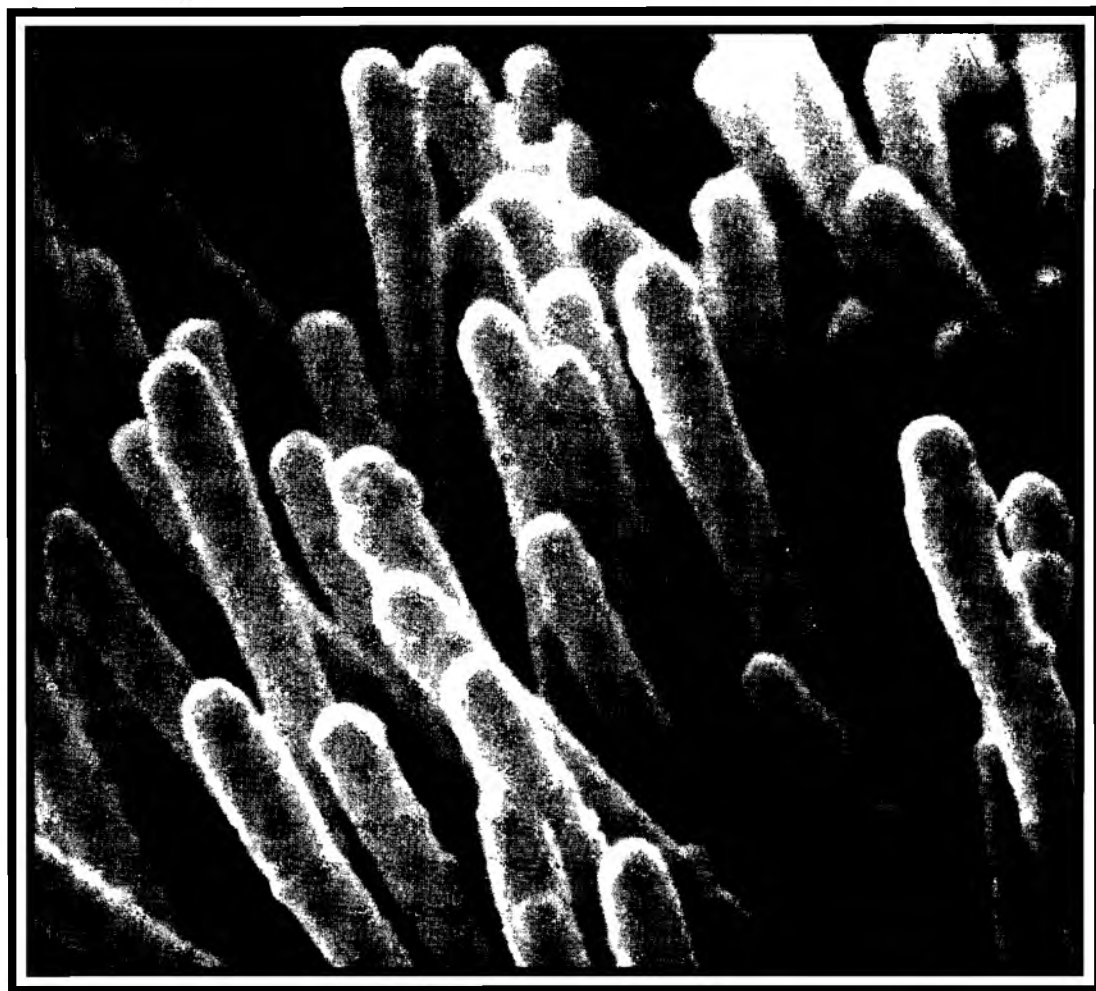
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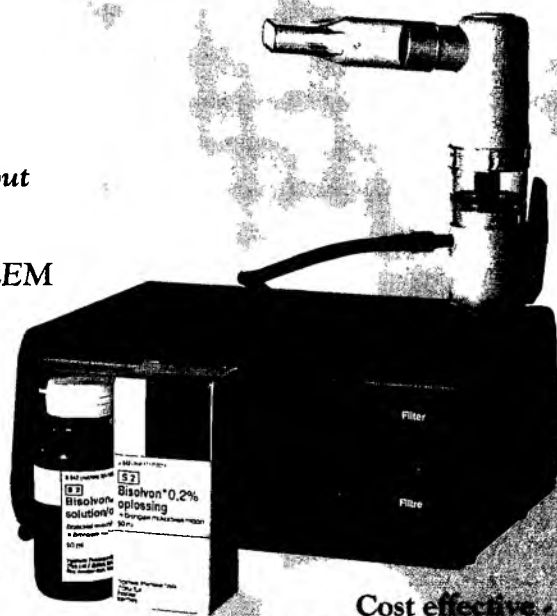
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(1) Brewis RAL, Gibson CJ, Geddes DM. Respiratory Medicine. Published by Baillière Tindall, London, 1990; Page 732. (2) Norris Melville G,
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308-312 (4) Houben JJC, van Rossum JM. Drug-Targeting door middel van inhalatie therapie. Journal for Drug Therapy and Research,
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Medicine 1992; 157-160 (6) Martindale. The Extra Pharmacopoeia, 29th Edition.



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as potentially infectious. Physiotherapists should be aware of and be diligent about their application of these precautions.

WHAT ARE THE PRECAUTIONS?

- Wear gloves in the following situations:
 - * when touching blood and body fluids, mucous membranes, or non-intact skin of all patients.
 - * when handling items or surfaces soiled with blood or body fluids.
- Change gloves or wash gloved hands after contact with each patient.
- Wear masks and protective eyewear or face shields during procedures that are likely to generate droplets of blood or body fluids.
- Wear plastic aprons and gowns during procedures where blood or body fluids splashes are likely.
- Wash your hands and other skin surfaces immediately and thoroughly if they become contaminated with blood or body fluids.
- Should blood or body fluids splash into

your eye or mouth wash it out immediately and report it to the employee, who should know the possible infection protocol at that hospital.

- If possible use disposable equipment for each patient. If not possible ensure that equipment is adequately sterilised before using it on other patients.
- Wrap disposable blood or fluid soiled items carefully before disposing them.
- Place all blood and body fluid specimens in sturdy containers with a secure lid. Avoid contaminating the outside of the container. If the patient is HIV positive label the container clearly so that the laboratory technicians are aware of it.
- Do not recap, bend or break needles or other sharp objects to avoid needle stick injuries.
- Make mouthpieces, resuscitation bags and other ventilation devices available in areas where the need for resuscitation is predictable.

The chance of occupational contagion of AIDS during physiotherapy management of patients is negligible if these precautions are practised.

HOW LONG CAN THE AIDS VIRUS SURVIVE ON SURFACES?

Studies indicate that the titre of the HIV in blood on surfaces decreases with time, but it is not certain whether the virus dies completely. This means that the virus may be able to survive on surfaces for some time. This is not an important issue however, if you are adequately attending to the cleaning precautions.

IS THERE ANY TREATMENT FOR AIDS?

Researches are testing several new drugs, but at present there is no cure for AIDS. Treatment revolves mainly around prevention. Once seroconversion has occurred, treatment relies on the relief of individual symptoms as they present. A drug which destroys the virus has not as yet been discovered.