

# AIDS related dementia

1.17

ABOUT DEMENTIA

This Help Sheet describes AIDS related dementia, its cause, symptoms, diagnosis and treatment.

## What is AIDS related dementia?

When someone has the human immunodeficiency virus (HIV) and acquired immune deficiency syndrome (AIDS) they may develop a complication to the disease which is known as AIDS related dementia, or as AIDS Dementia Complex (ADC).

ADC is a complicated syndrome made up of different nervous system and mental symptoms that can develop in some people with HIV disease. The incidence of ADC is uncommon in people with the early stages of the disease, but may increase as the disease advances to around 7% in people not taking anti-HIV drugs.

Not everyone who has HIV/AIDS will develop ADC, but some will.

## What is the cause?

While it has been shown that HIV does not directly infect nerve cells, it is thought that it can somehow infect them indirectly. Immune cells that are present in the brain act as HIV reservoirs and are the primary source of indirect damage to nerve cells.

## What are the symptoms?

The following is a list of possible ADC symptoms that could also be related to other problems that are not ADC.

### Possible symptoms of early stage ADC are:

- Difficulty concentrating
- Difficulty remembering phone numbers or appointments
- Slowed thinking
- Taking longer to complete complicated tasks
- Difficulty keeping track of daily activities

- Irritability
- Unsteady gait or difficulty keeping balance
- Poor coordination and a change in handwriting
- Depression

Results of mental status tests and other mental capabilities may be normal in the early stages. Symptoms usually develop slowly. In the later stages of ADC they become worse. They may also worsen temporarily when the person is sick with other illnesses.

### Possible symptoms of middle stage ADC are:

- Symptoms of motor dysfunction, such as muscle weakness
- Poor performance on regular tasks
- Increased concentration and attention required
- Reversing of numbers or words
- Slower responses and frequently dropping objects
- General feelings of indifference or apathy
- Slowness in normal activities, such as eating and writing
- Walking, balance, and coordination requires an increased effort

### Possible symptoms of late stage ADC are:

- Loss of bladder or bowel control
- Spastic gait, making walking increasingly difficult
- Loss of initiative or interest
- Withdrawal
- Psychosis or mania
- Confinement to bed

These symptoms can leave the person confused and unable to make sense of the world. This frequently results in depression.

Contact the National Dementia Helpline on **1800 100 500**

Visit Alzheimer's Australia at [www.alzheimers.org.au](http://www.alzheimers.org.au)

## How is it diagnosed?

ADC should be diagnosed by someone with knowledge and experience with HIV patients, such as an HIV general practitioner or a medical specialist. The diagnosis of ADC is usually made by excluding other possible causes of the symptoms.

However, the main way to diagnose and evaluate ADC is a test called the mental status examination. Also, certain laboratory tests, including an examination of cerebrospinal fluid (CSF) can be useful. In addition, the amount of HIV in the CSF seems to correlate with progressive dementia in children. Other tests which can help in the differential diagnosis of ADC are CT scans, MRI scans and SPECT scans. These tests help differentiate ADC from other brain disorders such as cryptococcal meningitis, toxoplasmosis, lymphoma. An early diagnosis is important as many of the symptoms can be caused by other conditions and illnesses common to people with HIV/AIDS, many of which may be treatable. Some of the symptoms typical of ADC are also seen in psychiatric illnesses such as anxiety or depression. If an early diagnosis of ADC is made, appropriate treatment and management can be started.

## What is the progress of ADC?

The rate of progression varies from person to person. However the disease can lead to complete dependence and death.

## Is there treatment available?

ADC can be treated to some degree and may even be preventable. The best treatments seem to be the anti-HIV drugs. Initially it was feared that highly active antiretroviral therapy (HAART) would not be effective against HIV in the brain, because many of these drugs do not cross the blood-brain barrier. However recent research has shown evidence of improvements in dementia and other neurological problems due to HAART. Despite these encouraging results, there is evidence that HAART is not as effective against dementia as it is against other opportunistic infections, as dementia is related more to tissue damage rather than removal of an infective organism.

Much of the evidence for the effectiveness of anti-HIV drugs against dementia relates to AZT, mainly because for many years it was the only available anti-HIV drug which crossed the

blood-brain barrier to any appreciable extent. Some of the newer drugs such as d4T, abacavir, nevirapine, indinavir and efavirenz also cross the blood-brain barrier and reduce the amount of HIV in the CSF. However, by treating the HIV outside of the brain, the immune system can recover and fight the HIV inside the brain to help reduce or prevent ADC.

Medications that can also relieve some of the symptoms of ADC include antipsychotics, antidepressants and anticonvulsants.

## Who gets ADC?

People who have HIV/AIDS are at risk of developing ADC. Because HIV/AIDS affects so many young people who are enjoying a full and independent lifestyle, there are particular issues such as employment, identity and sexuality which may have to be addressed.

HIV/AIDS is still a disease that has a stigma attached to it by many people, and the effect of dementia on top of that can be enormously difficult for all concerned. ADC can cause great isolation and loneliness which adds to the daily struggles with the disease.

*This Help Sheet was developed in collaboration with the Victorian AIDS Council.*

## Further Information

The AIDS Council in your State or Territory provides information and support for people with HIV/AIDS, their families and carers. Their contact number in each State and Territory can be found in the phone book, or by contacting the National Dementia Helpline on **1800 100 500**.

The Australian Federation of AIDS Organisations is the peak non-government organisation representing Australia's community-based response to HIV/AIDS.

Their web site contains useful information and can be contacted on **[www.afao.org.au](http://www.afao.org.au)**

Alzheimer's Australia offers support, information, education and counselling. Contact the National Dementia Helpline on **1800 100 500**.

For further information and to view other Help Sheets visit our web site at **[www.alzheimers.org.au](http://www.alzheimers.org.au)**