

# Effects on central nervous system

## DEFINITION

The central nervous system consists of the brain and spinal cord.

The effects of treatment on the central nervous system are varied and mainly consist of dizziness, drowsiness, insomnia, the feeling of being dissociated from reality, confusion, headaches, difficulty concentrating, anxiety and strange dreams.

More severe symptoms such as psychosis, mood disorders (depression or manic episode) and aggressive behaviour occur more rarely.

## WHAT CAUSES IT?

Caffeine, alcohol, tobacco or recreational drugs can potentiate the effects on the central nervous system.

HIV and brain infections may affect the central nervous system.

Another cause may simply be ageing.

Many drugs, including anti-HIV medication (more specifically efavirenz (Sustiva®, Atripla™) and zidovudine (Retrovir®, Combivir®), can also affect the central nervous system.

## WHY TALK ABOUT IT?

To correctly identify the cause of the effects on the central nervous system and treat it, if necessary.

Because the effects on the central nervous system can affect your quality of life and decrease your adherence to treatment.

Because the effects on the central nervous system can affect your relationships and adversely affect your social life.

## WHAT TO DO?

**Before starting the medication:** let your doctor know that you have already had mental health problems in the past such as depression, psychosis or severe anxiety. It is also important to tell your doctor if you are using recreational drugs.

**When you start taking the medication:** if possible, begin taking the medication when you are rested, such as on the weekend or on a day off. During the first few days, avoid doing activities that require concentration.

### During treatment:

**Don't give up:** the effects on the central nervous system appear when you begin taking the medication and tend to decrease and go away after two to four weeks, once your body has become accustomed to the drug. Get some rest and decrease your level of activity for a few days.

**Ask for help:** if you are having trouble concentrating, take notes and ask your family or friends for help during the first weeks of treatment.

**Talk to your pharmacist or doctor:** changing when and how you take the medication sometimes helps control the drug's effects on the central nervous system.

In general, taking the medication at bedtime allows you to sleep through the adverse effects and feel them less.

When you experience too much drowsiness in the morning, it is recommended that you take efavirenz (Sustiva® or Atripla™) earlier in the evening rather than at bedtime.

Alcohol, recreational drugs and some medication may worsen effects on the central nervous system. They should be avoided. Your doctor and pharmacist can help you identify the drugs that are to be avoided.

You may sometimes feel an effect on your central nervous system caused by an interaction between some of the different drugs you are taking. Tell the pharmacist which drugs you are taking, both prescription and off-the-counter. The pharmacist may be able to determine which medications are interacting.

Your pharmacist or doctor may decide to measure the quantity of efavirenz in your blood to determine whether the effects on your central nervous system are due to overly high levels of the medication. Never change the medication dosage without first talking to your doctor.

### Pharmaceutical advice:

If you experience headaches, acetaminophen (Tylenol®) or anti-inflammatories (Advil®, Motrin®) should alleviate the symptoms. However, check with your pharmacist or doctor to make sure you are able to take these medications.

Depression, anxiety and insomnia can be treated with or without drugs.

If you have symptoms that prevent you from doing your day-to-day activities or symptoms that are more severe, your doctor may look into whether another type of treatment is available.

### Non-pharmacological advice:

If you are anxious or are having trouble sleeping, different relaxation techniques can help control stress or help you sleep. Tips on adopting good sleeping habits can help you control the medication's effects on the central nervous system.

## WHEN SHOULD YOU SEE A DOCTOR?

- When the effects on the central nervous system won't go away and they make you uncomfortable or prevent you from performing your daily activities.
- If the symptoms worsen.
- If you feel very anxious, depressed or are having suicidal thoughts.
- If you are behaving aggressively and think that this may be related to the drug.
- If your family and friends find you have changed.

By: **Rachel Therrien**

Pharmacist, Bpharm, Msc

Unité Hospitalière de recherche et d'enseignement VIH/sida  
Centre Hospitalier de l'Université de Montréal

Revised by: Marie-Josée Brouillette, MD  
Psychiatrist

CUSM - Institut Thoracique de Montréal

Produced with an educational grant from Tibotec, a division of Janssen-Ortho Inc.

© 2009 Tibotec, a division of Janssen-Ortho Inc. PRCE090197E-a

All listed brand names are registered trademarks of their respective manufacturers.