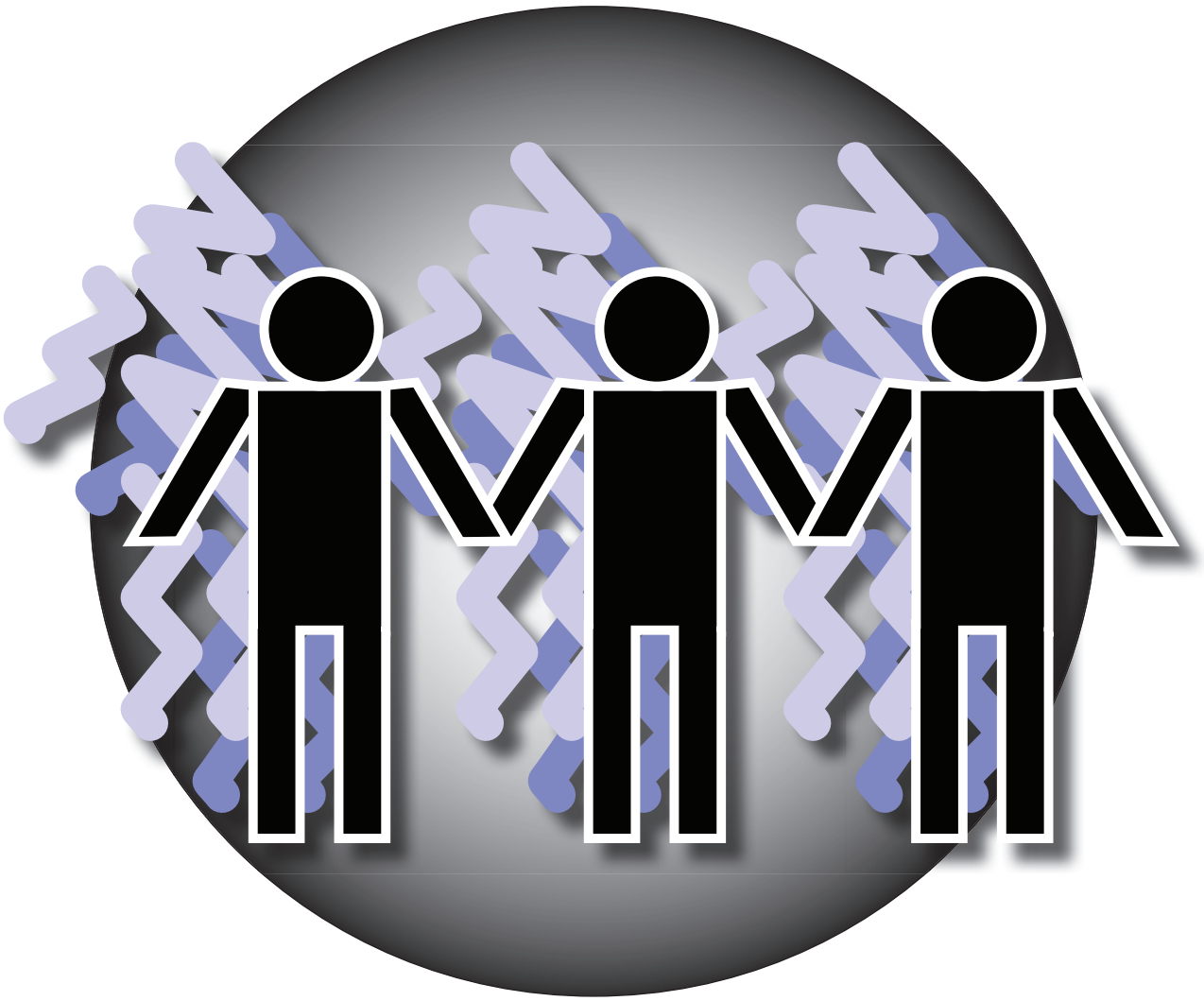
# COMMUNITY VOLUNTEER COURSE 5



*ACAT's PARTNERSHIP SERIES*

# COMMUNITY VOLUNTEER COURSE 5

## *ACAT'S PARTNERSHIP SERIES*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**AFRICA CO-OPERATIVE ACTION TRUST**

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# COMMUNITY VOLUNTEER COURSE 5

## PURPOSE OF THE COURSE

1. To equip Community Volunteers to implement elements of ACAT's Development Programmes which focus on Entrepreneurial Development and Sustainable Agriculture as a means to assist disadvantaged rural families to overcome poverty in a sustainable way.
2. To influence, assist and train community people to do that given above.
3. To be involved in capacity building, address the causes of poverty, implement the HIV and AIDS programme and in the spiritual upliftment of people.

## TAKE NOTE :

**You will enjoy this course and benefit greatly if you observe the following:**

1. Listen intently to the Facilitators when they present lessons.
2. Read the notes, instructions and questions carefully when you study each module.
3. Apply the important principles (lessons) you have learnt in this course.
4. Ask questions if you do not understand what is being taught.
5. Pray that God will enlighten your mind to the many important truths you will learn.

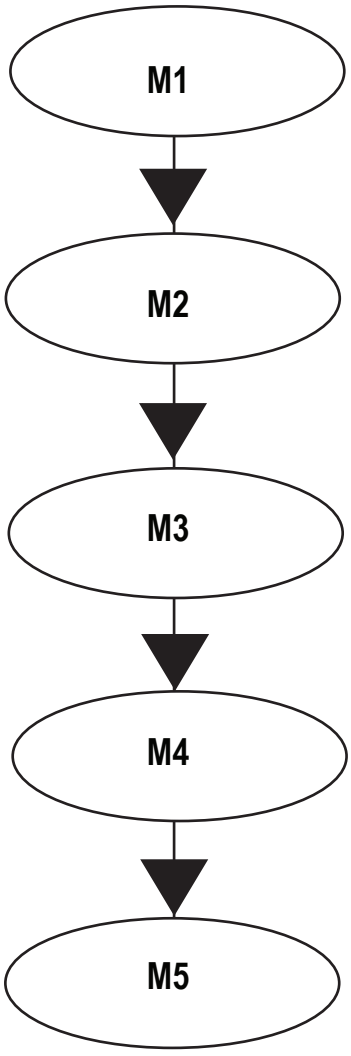
## COURSE OUTCOMES:

**By the end of this training course, participants should:**

1. Help people with AIDS understand how Anti-Retroviral drugs work and facts about ARV treatment.
2. Do budgeting for your personal needs and that of a small business.
3. Grow different types of vegetables for home use and for production purposes.
4. Describe the Biblical view of work, learn how to do counselling and learn about co-operatives and governing boards.
5. Apply the teaching on the Christian Family in your own context.

# COMMUNITY VOLUNTEER COURSE 5

## COURSE MAP




## COURSE CONTENT

**Healthy Lifestyle**
(Understanding ARV treatment)

**Basic Business Practices**

**Home Food Security**

**Life Skills**

**My Relationship with God**
(The Christian Family)

# Healthy Lifestyle Understanding ARV Treatment

## Module 1

### COMMUNITY VOLUNTEER COURSE 5

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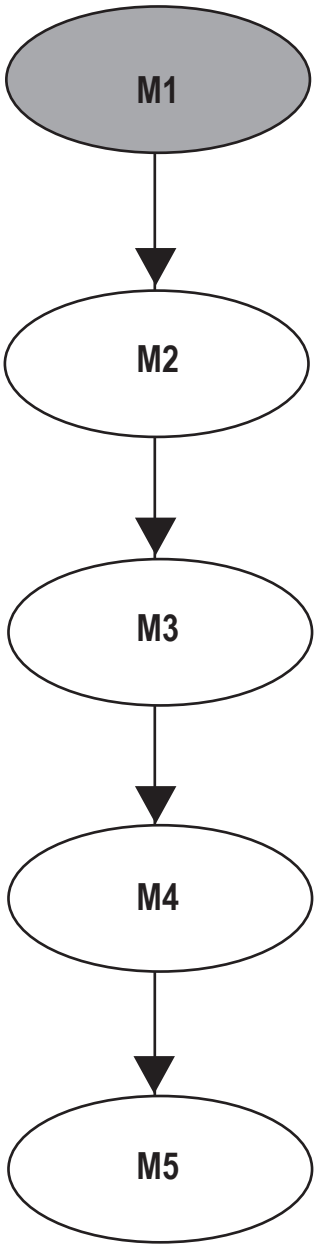
**COURSE MAP**




**COURSE CONTENT**

**Healthy Lifestyle**
(Understanding ARV Treatment)

**Basic Business Practices**

**Home Food Security**

**Life Skills**

**Spiritual Development**
**(The Christian Family)**

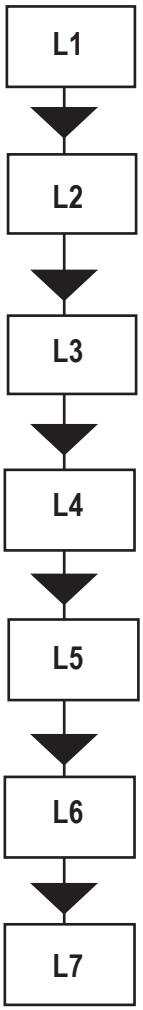
# MODULE OUTCOME

**After completing this module you will:**

- understand how the CD4 cell is infected by the HIV virus;
- have learnt about the different types of Anti-Retroviral drugs and how they work;
- be able to warn people with AIDS of the side effects caused by ARV drugs;
- prepare for and know the importance of taking ARV treatment timeously and regularly.

# MODULE 1 : HEALTHY LIFESTYLE
# Understanding ARV Treatment

**MODULE MAP** **MODULE CONTENT**



## *LESSON 1*

# UNDERSTANDING HOW HIV INFECTS THE CD4 CELL

**Outcome : After completing this lesson you will :**

- Understand about the immune system, and how HIV infects the CD4 cells.

### How HIV gets into the CD4 cell and kills it

Our bodies are made up of tiny cells. Cells are so small that millions can fit on the head of a pin. They can only be seen using a microscope. Each cell is like a little factory. Hair cells make hair, and skin cells make skin. The cell is made up of a wall, some gooey stuff called cytoplasm and in the middle is the nucleus. The nucleus is like the safe where the plans for reproducing that cell are kept. These plans are stored in the cell's DNA. This is made of two strands of RNA twisted together a bit like a "koeksuster".

The HIV virus is also a cell but inside its nucleus it only has two separate strands of RNA. These are not twisted together to make DNA. This means that by itself the HIV virus cannot make more HIV viruses. It needs to get inside the CD4 cell. There it takes over the DNA of the CD4 cell and forces it to make more HIV cells. This is a bit like getting hijacked, and just like hijackers, HIV has some other bad guys to help it.

Inside the HIV virus we find Reverse Transcriptase, Integrase and Protease. These are HIV's bad friends who are going to help him hijack the CD4. Their names are very difficult to remember so let's just call them RT, I and P. This is how HIV and its bad friends RT, I and P take over the CD4 cell and force it to make HIV viruses:

1. The HIV virus binds to the surface of the CD4 cell.

2. The HIV then joins with the CD4 cell.

3. RT helps the HIV virus's single strands of RNA to twist together to form DNA.

4. I helps the new HIV virus DNA to get into the nucleus of the CD4 cell and join with the DNA of the CD4 cell.

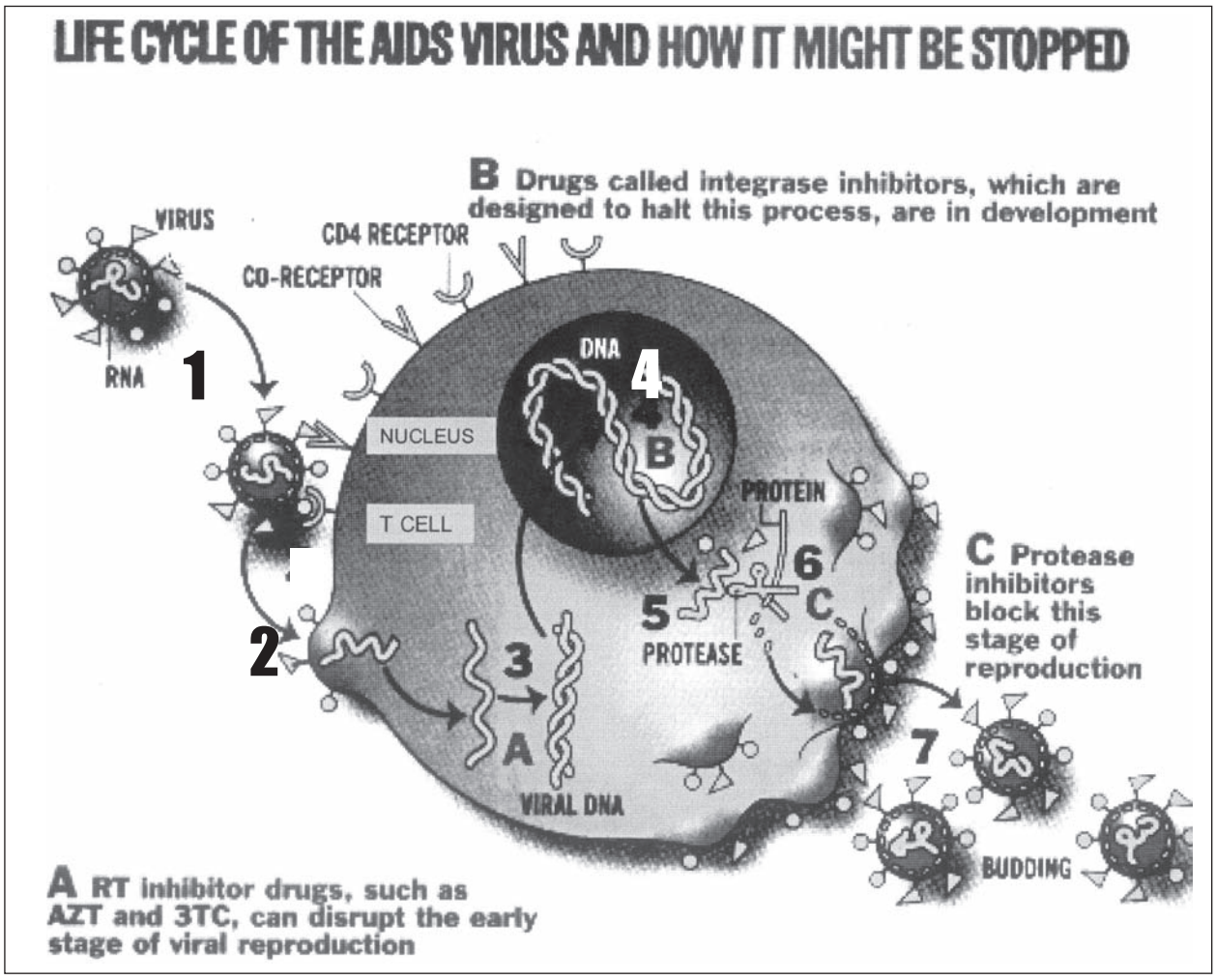
5. The CD4 cell has now been hijacked by the HIV virus. Instead of making more CD4 cells it makes the components needed for more HIV viruses.

6. P then helps to pack these components into HIV cells which bud off from the surface of the CD4 cell.

7. Lots of new HIV viruses bud off from the CD4 cell. During this process the CD4 cell is damaged and destroyed.

**GROUP ACTIVITIES:**

**Exercise:** Go over the main points of how the HIV virus infects the CD4 cell again. Then ask everyone to draw a picture of HIV infecting the CD4 cell. When they have finished, show them the picture in your notes. Discuss differences in the pictures.




**The ARV's work by blocking:**

1. Reverse Transcriptase
2. Protease

## *LESSON 2*

# HOW ANTI-RETRO-VIRAL DRUGS WORK

**Outcome : After completing this lesson you will :**

- Know how Anti-Retro-Viral drugs prevent the HIV virus from infecting the CD4 cell.

When scientists found out how HIV got into the CD4 cell and made more HIV viruses, they could then start making drugs to stop the HIV virus. They have managed to make drugs to stop HIV in two places.

The first type of drug stops one of HIV's bad friends, RT, from turning HIV's two single strands of RNA into DNA so that it can get into the nucleus of the CD4 cell and take over the cell making factory.

These drugs are called Nucleoside Reverse Transcriptase Inhibitors. Nucleoside is the name of the kind of substance the drugs are made out of. "Inhibit" means to "stop". So what this name means is that these drugs stop HIV's bad friend, Reverse Transcriptase, from doing its work. Because the name is so long everyone just talks about NRTI's. One way to remember this name is to call these drugs "Never Return To I."

There are other drugs which stop RT from doing its work. These drugs are not made out of nucleosides so are called Non Nucleoside Reverse Transcriptase Inhibitors. They are usually called NNRTI's. To remember this think of them as "Never, Never Return To I."

The third kind of drug stops HIV's bad friend, P, so is called a Protease Inhibitor. People talk about PI's. To remember this, think of them as "Protect I."

**Taking ARV's**

When people take ARV's, the amount of HIV virus in their blood decreases. If the drugs are working really well then the amount of virus in the blood is "undetectable", which means that it can't be measured because it is so low. Their immune system then has a chance to recover. Once their CD4 count starts to rise, the immune system can once again fight off sicknesses like opportunistic infections.