

**REFORMED
PRESBYTERIAN
CHURCH**

***MORAL ISSUES
FOR YOUNG PEOPLE***

**Human Cloning
Alcohol
Drugs**

Committee on Public Morals

Human Cloning

Human Cloning

Leaders' Notes

The birth of Dolly the sheep, the first cloned mammal, in 1997, represented a significant advance in reproductive science and has raised the possibility of human cloning. At the end of 2002 some newspapers carried reports that two separate human clones had been produced. This study examines the appropriate Christian response to the subject of human cloning.

There are 7 characteristics which distinguish living from non-living things. See how many you can list below. The first letter of each is given as a clue.

Movement

Respiration

Sensation

Growth

Reproduction

Excretion

Nutrition

Reproduction is one of the basic characteristics of life. Living things reproduce in two different ways.

1. Sexual Reproduction involves the coming together of a *Sperm* and an *Egg* in animals, or *Pollen* and an *Ovum* in plants and produces genetic *diversity*.

2. Asexual Reproduction eg the splitting of an amoeba into two, taking cuttings from plants, or the division of a fertilised egg which results in identical twins, produces genetic *homogeneity*.

The Bible has a number of things to say about human reproduction.

1. Genesis 1:27,28

"So God created man in His own image, in the image of God He created him; male and female He created them. God blessed them and said to them, 'Be fruitful and increase in number.' "

In these verses we are told 3 things which are relevant to our study:

- (a) We are made in *God's image*.
- (b) We are made *male and female*.
- (c) We are made to reproduce *sexually*.

2. Jeremiah 1:4,5

"The word of the Lord came unto me, saying, 'Before I formed you in the womb I knew you, before you were born I set you apart: I appointed you as a prophet to the nations.' "

Psalm 139:15,16

"My frame was not hidden from You when I was made in the secret place. When I was woven together in the depths of the earth, Your eyes saw my unformed body. All the days ordained for me were written in Your book before one of them came to be."

Both of these passages tell us that human life begins at *conception*, not at birth.

3. 1 Corinthians 12:14, 17-20

"Now the body is not made up of one part, but of many..... If the whole body were an eye, where would the sense of hearing be? If the whole body were an ear, where would the sense of smell be? But in fact God has arranged the parts of the body, every one of them, just as He wanted them to be. If they were all one part, where would the body be? As it is, there are many parts, but one body."

Do these verses suggest that God prefers *Uniformity* or *Variety*?
These verses suggest that God prefers Variety.

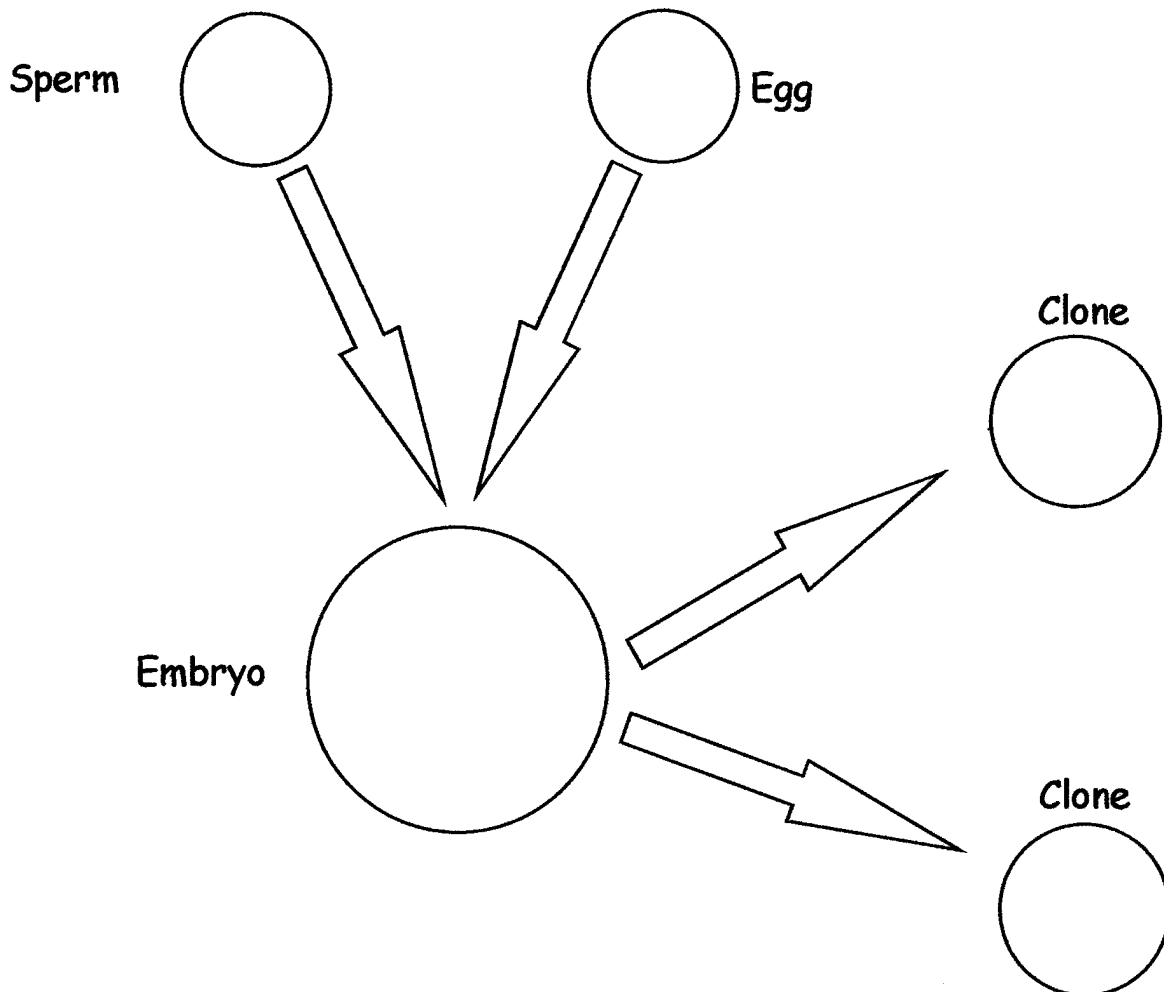
Cloning - What is it?

Creating one or a group of genetically identical individuals descended from the same parent by asexual reproduction.

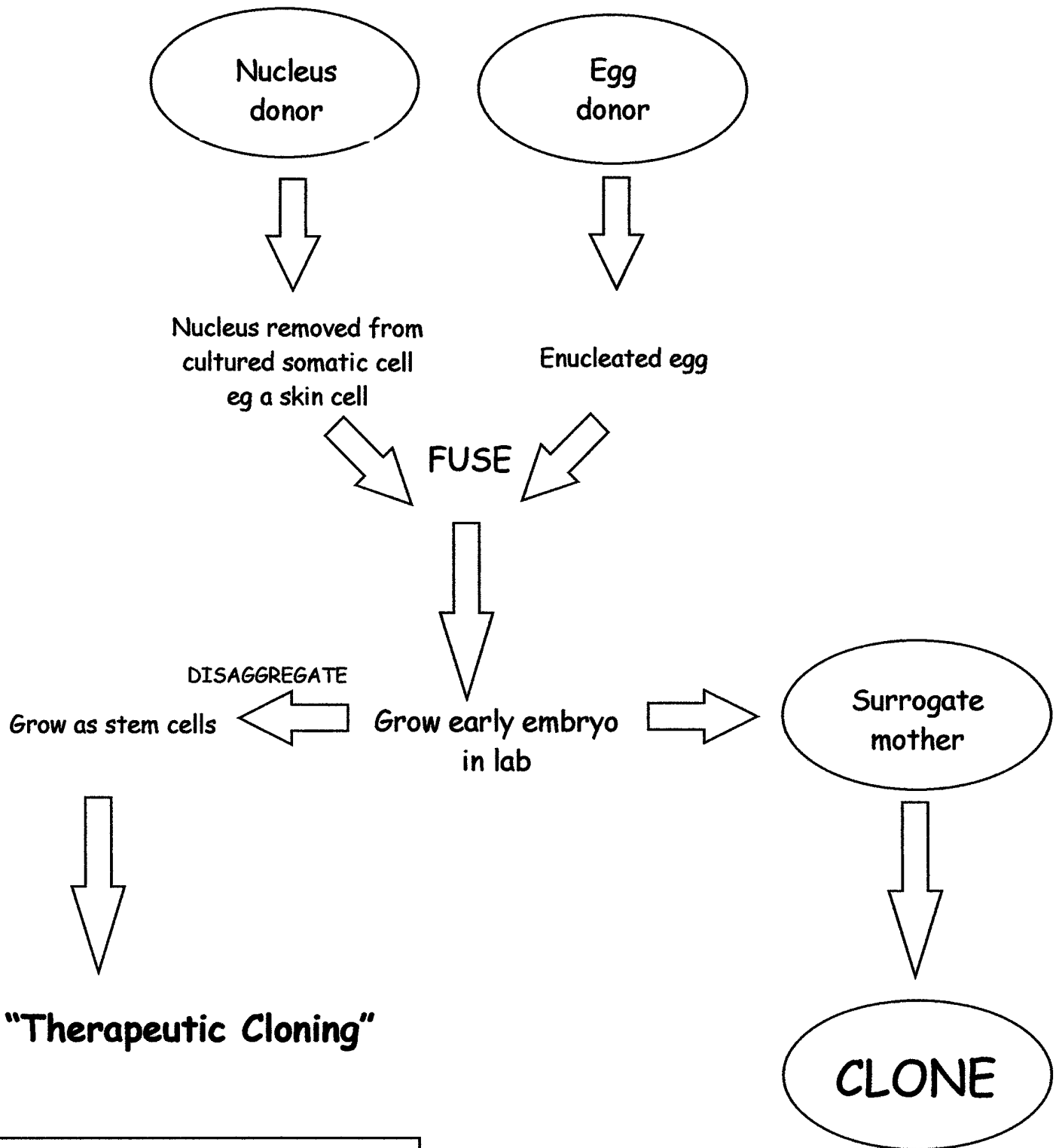
Cloning - How is it done?

Cloning could be accomplished by one of two methods.

(i) **EMBRYO SPLITTING**



(This is similar to what happens when identical twins are formed.)



Therapeutic Cloning

Therapeutic cloning refers to using cloning techniques to initiate the growth of embryos in order to create new organs or cells for medical and research purposes.

Reproductive Cloning

Reproductive cloning refers to the creation of a new person with the same genetic make-up as someone who is alive or has lived.

What do you understand by "stem cells"?

Stem cells are unspecialised cells that under certain physiologic or experimental conditions can be induced to become cells with special functions such as the beating cells of heart muscle or insulin secreting pancreatic cells.

Why are stem cells so important?

All the special organs in the developing fetus are derived from stem cells: stem cell research seems to hold out the possibility of producing perfectly compatible tissues to replace damaged organs and so pave the way for treatment of degenerative diseases such as Parkinsonism, diabetes and some heart diseases.

Cloning - Why?

Write down below any reasons you can think of why anyone might wish to clone a human being.

1. *To overcome infertility - if one partner was infertile*
2. *As a source of perfectly compatible transplantation tissue*
3. *To replace a child who has died of illness or accident*
4. *To replicate a talented individual*
5. *To enable homosexual reproduction*
6. *Out of curiosity*
7. *In a cultic context. Clonaid, a U.S. firm founded by the Raelian Movement, claims that Eve, born on 26/12/2002, was cloned. This sect claims that alien experimenters created mankind 25,000 years ago, and its founder, Claude Vorilhon, claims to have met and been abducted by aliens, and has been given the task of preparing the way for the aliens' return to earth by 2035.*

Reproductive Cloning - Would it work?

A cloned human being would be very similar in some ways to the individual from whom they were cloned, but different in other ways.

In what ways do you think a clone would be the same?

1. *Appearance*
2. *Physique*
3. *Athletic potential*

In what ways do you think the clone would be different?

1. *Personality*
2. *Talent*
3. *Life story*

Just as identical twins have different personalities and interests, so a clone would differ from his / her genetic donor, only more so, because of environmental differences. The clone will have been nurtured in a different womb, and at a different time. If an attempt was made to clone, for example, a great sportsman, the cloned individual would have the same physique and athletic potential, but might well be more interested in stamp-collecting!

Cloning - is it legal?

Do you think that *reproductive* cloning is legal in U.K.?

No, the law does not currently allow any form of reproductive cloning to be licensed. The Government have made it clear that they believe "human reproductive cloning is ethically unacceptable and cannot take place in this country".

Do you think that *therapeutic* cloning is legal in U.K.?

Yes, nuclear replacement of an egg (like the process which led to Dolly the sheep) and embryo splitting are currently allowed in human embryos under the jurisdiction of the Human Fertilisation and Embryology Authority (HFEA), only for short-term experimental use. However, the HFEA "has made it crystal clear that it will not license cloning by embryo splitting for treatment purposes." The HFEA also regulates the legislation which allows embryos up to 14 days old to be destroyed, frozen or researched on for specific purposes (laid out in the Human Fertilisation and Embryology Act 1990).

Cloning - Why not?

Write down below any reasons why you think that human cloning should *not* be allowed.

1. Disruption of Relationships

- ↔ *Between God and man*
- ↔ *Between man and woman*
- ↔ *Between parents and children*

These three sets of relationships are all upset if reproductive cloning is allowed. Man supplants the Creator/creature relationship by taking on himself the prerogative of genetic determinism. Male /female relationships are likely to be strained if only one partner's genetic make-up is passed on and the normal parent child relationship is distorted if they are, in fact, "identical twins".

2. Destruction of human life

Over 250 attempts were made before Dolly was successfully cloned. We believe that life begins at conception: such wasteful destruction of human life cannot be justified.

3. Devaluation of human life

Even if reproductive cloning is not legalised, to create a human being simply to "harvest" their cells to treat an existing individual devalues human life, reducing it to the level of a mere commodity.

4. Progression to Reproductive Cloning

If therapeutic cloning is permitted, it is inevitable that someone will go one step further and produce a full human clone. This statement is supported by the fact that, at the end of 2002, two researchers have already claimed to have produced a cloned child.

5. Unfair expectation

If a human clone were produced to replace a child who died as the result of disease or accident, there would be an intolerable weight of expectation placed upon the cloned child. Although looking identical to the child who had been lost, he/she would have a unique personality and be much less like the child who had died than an identical twin would be, having been nurtured in a different womb and brought up in a different time and environment.

6. Safety concerns

Reports have suggested that Dolly's cells aged more quickly than a normal sheep's cells would. All cells tend to develop minor genetic mutations as they get older. The process of cloning would tend to perpetuate these minor abnormalities, which could eventually accumulate and cause significant overt disease or disability.

Cloning - is there any alternative?

"Therapeutic" cloning is permitted in Britain in certain circumstances because of the perceived importance of stem cell research. Do you know of any other sources of stem cells which could be used instead?

Stem cells have been found in a number of adult tissues. These include the brain, bone marrow, peripheral blood, blood vessels, skeletal muscle, skin and liver. Each tissue contains only a small number of these adult stem cells and so far they have proved more difficult to culture than embryonic stem cells. This is important because, for cell replacement therapy to become a viable treatment option, large numbers of cells will be needed. However, adult stem cells cultured from the patient who requires the treatment would be perfectly compatible and take away the need for immunosuppression. The necessity to create and subsequently destroy many human embryos would also be eliminated.

In an article in the British Medical Journal in January 1999 it was remarked that the use of embryonic stem cells "may soon be eclipsed by the more readily available and less controversial adult stem cells."

Christian organisations such as Care have been lobbying Government to support and encourage further research into adult stem cells rather than promoting embryonic stem cell research.

For more information on the Christian's response to human cloning visit the *Care* website:

www.care.org.uk/resource/briefing/res_humanc.htm

For more details on stem cell research see

www.nih.gov/news/stemcell/primer.htm

Glossary of technical terms

nucleus: the part of the cell containing the paired chromosomes which incorporate the DNA encoding the c.30,000 genes of the human body.

nuclear transfer: the removal of the nucleus from one cell and transfer to a different cell from which the nucleus has been removed ('enucleated cell').

gametes: the sperm and egg cells which contain single copies of each chromosome ('haploid').

somatic cells: all the non-gamete cells of the body. During fertilisation the gametes fuse so that all somatic cells contain pairs of chromosomes ('diploid'). Every somatic cell contains all the DNA information to construct a complete human being.

pluripotent stem cells: cells that have not yet developed into the specialised tissues of the body and that have the potential to develop into any tissue. The early embryo up to 14 days consists entirely of stem cells.

Drugs

Leaders' Notes

General Introduction

We live in a drug using society. Every day on the media some aspect of drug abuse hits the headlines. The decision to use drugs has been made by many young people. The effects of drug abuse are serious. The Christian Church is concerned to minister to people, young and old, in the name of the Lord Jesus Christ. During His ministry He went about doing good, healing the sick and preaching the Gospel. Jesus was interested in the whole person and it is chiefly for that reason that the Christian Church has been at the forefront of social reform since the days of the Apostles.

The names of John Newton and Lord Shaftesbury are famous in British history. Newton, along with others, was instrumental in the abolition of the slave trade and Shaftesbury, as a Government Minister, effected many changes to the living conditions of children in the United Kingdom. These two men professed faith in the Lord Jesus Christ and acted as they did because of Him.

God is the Creator of the Universe. He made human beings in His own image. (Genesis 1:26ff) Adam and Eve found their full satisfaction in their unspoiled union with God and God gave them special responsibilities. (Genesis 1:28ff) Sin entered the world when Adam and Eve disobeyed God and the result was that they were cut off from their privileged position with God. (Genesis 3:8-19) This is called the "Fall". No longer did they find their satisfaction in God alone. This marks the point at which people, created by God and in His image, began to find pleasure apart from God. It promises but cannot deliver; it just leads to further frustration and unhappiness.

Genesis, from Chapter 4 on, records the sorry catalogue of human decline. After the Fall, God continued to love His creation and out of the corruption which sin had brought He selected Noah. (Genesis 6:1-9) Noah was the first person in recorded history to become drunk. (Genesis 9:21) Unwittingly he had produced fermented wine.

The Bible abounds with references to alcohol.

For an interesting description of the effects of alcohol read Proverbs 23:29-35. For an example of young people who refused to drink and therefore not be affected by alcohol read Daniel 1:8-21.

Alcohol, Tobacco and Prescription Medicines are legal drugs.

L.S.D., Cannabis, Ecstasy, Heroin and Cocaine are illegal drugs.

"All medicines are drugs, but not all drugs are medicines."

Why do young people use drugs?

There is a lot of drug education carried out in schools etc. Despite the large sums of money being spent on advertisements to try and stop young people using drugs, an ever-increasing number do use them. Why?

Below are several suggested reasons.

- "Everybody uses drugs."
- Experimentation / adventure.
- "Famous people use drugs."
- "My friends use drugs."
- "My parents use drugs."
- "My life is boring so I use drugs."
- "I am very insecure."
- "Drugs will make me happy."
- Poor decision-making skills.
- "I would never have problems with drugs."
- Inaccurate drug information.

Life is complicated and hard for young people. They are often at the receiving end of mixed messages.

The Church of Christ is uniquely placed to help them. Christians believe that Jesus not only promises, but delivers life in all its fullness. (John 10:10) Jesus offers peace, security, relationship, power and grace to all who come to Him. The Church has a "captive audience" in its Sabbath Schools and other youth and adult groups. We must use these opportunities to teach facts about drugs, so that our young people will be enabled to make informed choices. We must not fail them. We care about them in the name of Christ.

Hope UK is a Christian Charity which produces a list of useful drug education materials. A sample of these is included.

A full catalogue of available resources can be obtained from:

Hope UK,
25f, Copperfield Street,
LONDON SE1 0EN
Tel: 020 7928 0848 (24 hours)
Email: sales@hopeuk.org
Web Site: www.hopeuk.org

or Hope UK,
19, Clearwater,
LONDONDERRY BT47 6BE
Tel: 028 7131 1425
Email: j.fell@hopeuk.org
or s.dunford@hopeuk.org

In addition to drug education materials, Hope UK conducts "**Drugnet**" Seminars. (See catalogue for details) You could be enrolled in Hope UK's "**Voluntary Educators Scheme**". (An accredited Correspondence Course on completion of which you would be qualified and able to teach drug education. The course is accredited through the Open College Network in London.

1. Genesis 3.

The account of the Fall i.e. the coming of sin into the world and the results of man's disobedience.

(a)(1) The man *hid* from God in the garden. Sin had brought fear and guilt.

(2) They were *driven* from the garden as a punishment for disobedience.

(b) Long-term effects; Adam and Eve lost their original relationship with God eg.

(1) Sin brought pain (v16).

(2) Sin brought "toil" into work.

(3) Genesis 4:1ff records the events which led to the first murder.

(4) God sent the flood in Chapter 6.

In summary, fellowship with God was broken by sin and frustration set in.

Modern drug culture is an expression of that frustration. There have always been "real pleasure" substitutes. True happiness is only found in a personal relationship with God and anything apart from God that mankind uses to enjoy pleasure is doomed to frustration. It's the way we are made.

2. John 10:10

(a) Jesus, the Son of God, came to give all who believe in Him the gift of Eternal Life. (He gives life in all its fullness. In Him there is fulfilment and real satisfying happiness. All who take what He offers will be satisfied.)

(b) He came to bring "eternal life". This is a *quantity* of life and a *quality* of life. It is everlasting and it is the sort of life for which we were designed in the first place. (That's why we started with Genesis 3)

(c) Jesus offers life; the thief comes to steal and to kill. The two are opposites. The thief offers only frustration.

3. 1 Corinthians 10:23

We learn from this verse that things which are legal are not necessarily either beneficial or constructive.

- Corinth was a very wicked city. In fact there was a verb coined to describe how to ruin a life: "to corinthianize". In such a city how were Christians to live? Paul teaches that although many things were lawful, some of them were not "beneficial".
- There are drugs which are legal under certain conditions. Tobacco and alcohol are the most popular drugs. They can only be sold and bought if certain circumstances such as age and location permit.
- Not all things build us up as Christians or as good people. A drug does not have to be illegal to be dangerous. Some people use alcohol / tobacco without any *apparent* problems but millions who do use them harm their lives significantly. Any use of these drugs has some effects.
- When the facts about various drugs are made known then the decision whether or not to use them is taken. The drugs may be legal but their use may harm the user or someone else, as in the case of driving while under the influence of alcohol, or the effects of passive smoking (where a non-smoker breathes in smoke from a smoker)

4. Proverbs 23:29-35

(a) This contains a classic description of a person under the influence of alcohol. There are at least seven effects listed:

- (1) *He has troubles.*
- (2) *He has damaged his body.*
- (3) *He has bloodshot eyes.*
- (4) *He feels terrible, as if a snake had bitten him.*
- (5) *He cannot stand upright.*
- (6) *He sees strange things.*
- (7) *His mind is confused.*

(b) The person described by Solomon in this passage is **addicted**, for in spite of all his problems he says in verse 35b "When will I awake so I can find another drink?" Addiction is being attached to a particular drug. It is a terrible thing and hard to break. People have died from alcohol withdrawal effects.

This verse deals with our *rights* and *responsibilities*, especially in relation to the example we set to others.

(a) We do not live in isolation from other people.

(b) How would we feel if someone we knew had a problem with drugs or died through using them? We take our example from others. We will influence thousands of people during our lives. We do have rights, but we also have responsibilities.

6. Acts 2 and Ephesians 5:18

(a) God's plan for us is that His people should be filled with the *Holy Spirit*.

(b) One of the fruit of the Spirit is self-control. (Galatians 5:23)

A definition of self-control: *The ability to control, with God's help, our natural appetites and inclinations.*

Many drugs rob people of their self-control.

(c) (1) Stimulant Drugs: Effects: Calmness (Tobacco) and lots of energy (Ecstasy)

(2) Depressant Drugs: Effects: Slowing down of the brain (Alcohol); give a "Buzz" (Volatile Solvents)

(3) Hallucinogenic Drugs: Effects: These alter the way we see the world. Examples: LSD, Cannabis and Hallucinogenic Mushrooms. Former LSD users may experience flashbacks in which they relive the "trip".

7. I Corinthians 6:19-20; 10:23-11:1, Romans 12:1

We will only ever have one body.

It is important that we eat the right foods and keep our bodies healthy.

Our minds also need to be kept healthy.

The Christian's body is a temple of the Holy Spirit. (1 Corinthians 6:19)

It is vital to keep it clean and fit for God's use.

We must be very careful about the example we set. (1 Corinthians 10:23)

Romans 12:1 tells us to take care of our minds, letting God, and not some chemical substances, transform them.

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