

Wiggins: Sure. The bone is constructed in vitro on a support in the shape of the bone that needs replacing, and, when it has grown, it's transplanted into the body, and the support is absorbed over time. But not just that. We can use stem cells to treat and possibly cure many diseases such as heart disease, diabetes and Alzheimer's. Just imagine, the day may come when we'll be able to replace every part of the human body.

Interviewer: I wonder if we're talking about eternal youth or eternal age. As it is, the populations in the developed countries are ageing fast, that is, the percentage of old people is increasing. And population growth is one of the major hazards for the future.

Wiggins: Yes, it's true that every new step forward brings its own problems, and that 'll be the challenge for the scientists of the future.

Interviewer: And what about society? What major changes to society do you think medical advances might cause?

Wiggins: Well, I don't know about the organisation of society, but there could be changes in the type of individuals that make up society. Advances in genetic engineering could allow us to design our own children.

Interviewer: That's a terrifying idea. The ethical questions are immense.

Wiggins: That's true. On the other hand, all parents try to shape their children's personalities. Perhaps, with genetic engineering, we'll be able to produce a better sort of person to create a better world.

Interviewer: There's just one more thing. Will we be able to cope with all these changes? In Darwinian terms, can we evolve fast enough to keep pace with the rate of progress?

Wiggins: We have done so far. I don't see why we shouldn't in the future. And anyway, we can always use genetic engineering to modify ourselves for the future world.

UNIT 5 • The Media

D The Future - The Internet: Friend Or Foe?

Speaker 1:

The problem is that nothing that you put on the Internet is really secure. People can hack into your emails, for example, or get your credit card number if you buy something. The CIA already has sophisticated technology which monitors Internet traffic using key words. For all you know, the secret service has got a file on you. It's like putting a tap on your telephone so they can hear your conversations. The plus side is that this could be used to stop potential terrorist acts, for instance if a message contains bomb-making instructions, or when they enter a suspect's home and go through his emails. But on the other hand it could be used for more sinister purposes, such as limiting people's civil liberties.

Speaker 2:

It's out of control. There's just no censorship. People can put whatever they like on the Net. For example, I walked into my young son's room the other day, he's only eleven years old, and he had this really hard-core porn on his screen. I was shocked. It's appalling that young children have such easy access to pornography. And what about those paedophiles using the Net to share their filthy images and turning paedophilia into big business? It's disgusting!

Speaker 3:

It represents the biggest step forward in the freedom of information in the last couple of hundred years. Not long ago, for example, your only source of information was the

newspapers or the radio, and you can choose from a limited number of these, and we know who controls them. But there are no controls on the Internet. If your government wants to pull the wool over your eyes in the domestic media, you can just go on line and find out the truth and there's nothing they can do about it.

Speaker 4:

There's too much stuff out there and most of it's junk. Our kids are becoming anaemic with all that time spent chained to the modem. It sounds cool to say that you're 'surfing the net', but what does that really mean? Spending hours in front of the screen, finding out useless information about film stars or pop singers or whatever catches their fancy. And what do they get out of it? Square eyes. And if their parents haven't got broadband, whenever you call them on their home line, the telephone's engaged, because their kids are surfing the net!

Speaker 5:

It's no wonder they call it the Information Revolution. Not long ago, if you wanted to find out about something, you had to go to the library and hope they'd got the book you wanted, or search the bookshops to buy a book on the subject. But today, you just click onto a search programme, type in the key words, and you've got masses to choose from. Not only that, if you're doing research, you can quickly find out what's going on in the world and what research has already been done. It's like having the work of thousands of people on your bookshelf. It certainly speeds up the dissemination of knowledge.

UNIT 6 • Life - And Then What?

B Annabel Lee

(The poem is printed in the unit)

UNIT 7 • Anyone For The Quiet Life?

B Extreme sports

Interviewer: So, Jane, what actually goes on in the body when we're in a risky situation?

Fitzpatrick: Okay, it's like this. The first thing that happens when we're in some kind of tense situation is that the adrenal glands, which are situated near the kidneys, release two hormones, namely adrenaline and noradrenaline. Now what these do is to prepare the mind and the body for crisis mode, you know, for flight or fight. The adrenaline increases the pulse rate, that is, the speed at which your heart pumps blood round the body, and what happens is that blood gets pumped to your arms and legs, so that your arms are ready for a fight and your legs get ready for running away. You know, this is why people's faces go pale in tense situations, because the blood's gone to the arms and legs.

Another thing that the adrenaline does is to get the liver to provide glucose for greater muscle power, so you've got more strength in your muscles in case you need to respond physically to the situation. So that's what the adrenaline does to you.

Okay, let's turn now to the noradrenaline. Now what this does is to spread the message from brain cell to brain cell, and in fact it stimulates the part of the brain that's responsible for pleasure. This is what is happening when people say they get a 'buzz' or a 'kick' out of taking risks, because of this feeling of pleasure that it induces. It's even been claimed that noradrenaline might be addictive, which might provide a possible medical explanation for why some people are compulsive risk-takers.