BSDH Spring Scientific Meeting
'Chemical Dependency in Special Care Dentistry'
Bridgewater Hall, Manchester
May 2004

Dr Vanita Brookes, Honorary President of the Society welcomed colleagues to the first scientific meeting of her presidential year held at the prestigious Bridgewater Hall. Many of the delegates had also attended the British Society of Gerodontology meeting on the previous day when the theme was Domiciliary Dental Care, a subject that is also very pertinent to Special Care Dentistry. The theme for the BSDH meeting was 'Chemical dependency in Special Care Dentistry'. Vanita introduced Lord Chan of Oxton to formally open the meeting.

Lord Oxton of Chan

For all members of our society, whatever their ethnic or racial background, whatever their social class, gender or place of residence, this is a very important issue. In 2001, the Government established the National Treatment Agency for substance misuse. This is a special health authority which forms part of the Government Health Strategy. In 2002 it promised more resources, more support for parents, carers and families, expansion of services including the criminal justice system, better targeting of communities with the greatest need, strengthening of the work force capacity and improved services in communities affected by crack cocaine use.

Funding for treatment of drug misuse will have risen by 44% between 2002-2005. The reason for quoting these figures is to raise awareness of what we can do and what the Government is doing because we need to work together. Although I support the Government in all its sensible policies, I am also a thoughtful critic of what the Government puts out. The National Treatment Agency chaired by my friend Baroness Massey of Darwin in the Lake District has been given the target of doubling the number of people in treatment from one hundred thousand in 1998 to two hundred thousand in 2008. This is a rather modest increase in the number of people treated. However I am well aware that it is a difficult and complex procedure to treat people who are using the substances of addiction.

The Strategy and the Treatment Agency will also reduce waiting times for treatment, improve effectiveness by retaining people in treatment, improve staffing levels, involve users and carers, and will pay attention to the diverse needs of black and ethnic minority groups and young people. The National treatment agency has produced a template for local drug action teams who develop treatment systems. We have at the moment 149 drug action teams working in communities including the one where I live and they are being maintained and monitored by the National Treatment Agency.

More people are entering treatment, waiting times are shorter and more trained staff are being recruited. A recent independent audit of treatment agencies and drug action teams by a group of people who are involved, and also are users and families of users indicated that quality and quantity of drug treatment has improved over the past two years. So although this problem has been with us for decades and is increasing, intense government action has only occurred very recently.

A survey of the needs of black and minority ethnic communities in regard to substance misuse was completed last year. This was carried out over three years and involved community groups in 47 locations in the research. 204 local people from different communities were trained by the University of Central Lancashire in the Special Unit Centre for Ethnicity and Health. Community groups were therefore able to carry out the needs assessment and engage in their own community. The project identified deficiencies in services that we would expect for ethnic minorities groups such as language, cultural difficulties, involvement of woman and so on.

One spin off of this particular research project was that it empowered communities to work cohesively to solve their problems. Many who received training are now working with drug action teams. More recently NHS Primary Care Trusts are also developing partnerships in the treatment

of drugs users, with local authorities and specialist voluntary bodies to treat patients and also people sentenced by our courts to drug testing and treatment orders.

You have a broad ranging programme for today from tobacco smoking to drug misuse and treatment, the use of cannabinoids in multiple sclerosis as well as the consideration of problems within your own profession. I have no doubt that this conference will maintain your interest and increase your knowledge of chemical dependency. I want to conclude by congratulating the British Society for Disability in Oral Health for its innovative programme and wish you all well.

'The Effects of Smoking' **Dr Kevin Jones**
Consultant Physician
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Smoking is endemic in our society. Despite numerous government campaigns, millions of people in the United Kingdom continue to smoke. It is therefore of paramount importance that the dental team are aware of the effects that smoking can have on patients' general health.

I am a chest physician. I do my best to avoid the mouth as much as I can so when I carry out a fibro-optic bronchoscopy, I go through the nose. I eventually find myself at that marvellous portal where the human soul resides and that is the vocal chords. I go through the vocal chords and down the trachea. This is a healthy trachea at the main carina where it splits into right and left main bronchus. These are some gory examples of what you find; carcinoma that has invaded through the subcarina glands at the main carina. This is obviously irremovable; as to remove the whole of the carcinoma would involve removing both lungs. Even brownies know with their first aid badge that if you take both lungs out there are going to be problems. Progressing past the main carina leads into the right lower lobe with its segmental bronchi which in turn lead to the papillary alveolar interface. Occasionally even that is blocked by tumour and a biopsy that will give the patient the bad diagnosis of lung cancer.

More of these images can be seen in my presentation on the Action on Smoking and Health (ASH) web site. This is a fantastic website that contains everything you could possibly want to know about smoking and is easily downloadable in Powerpoint format.

I will not harp on too much about the effects of cigarette smoking because I think you know the effects of cigarette smoking. I have to deal with the deaths caused by smoking related diseases. A great deal of my time is spent in dealing with lung cancers but it also causes other cancers as diverse as pancreatic, breast cancer, and bladder cancer which are all associated with smoking. Chronic obstructive pulmonary disease used to be called chronic bronchitis. Other problems include emphysema and ischaemic heart disease which is the western world's biggest killer. Smoking is the major factor in that, other circulatory diseases and digestive diseases. For example, bleeding from a duodenal ulcer is commoner in smokers.

I learnt a great deal about what smoking does to your mouth. It is amazing that smoking can increase your risk of dental caries, increase your risk of implants failing, that periodontal disease is probably your biggest problem that smoking has a large role to play in, and of course the fact that smoking does not just cause lung cancer, it causes cancer anywhere in the upper respiratory tract. You will all be aware of malignant and pre-malignant oral pathology that is smoking related.

So what is the impact of tobacco on society? Tobacco is a unique consumer product. It kills one in two people, and that is when it is used as intended. It is addictive, poorly regulated and pervasive. But it is the children we should worry about as they are all desperate to try smoking. The ASH website provides some astounding facts that we should get over to our children. As an ex-smoker, I can testify that it is magnificently addictive and the cigarette is just about the best delivery device you can find. People who have never smoked will not understand the hit you get from a cigarette within nine or ten seconds of inhalation. You can control what nicotine does to you because nicotine has different affects on the brain in different doses. To relax, you inhale deeply. Smokers learn to control the way that nicotine arrives at their brain. Smoking is an instantly controllable, magnificently efficient delivery device. If we could put asthma drugs into a safe cigarette, I promise you we would do that.

The problem of course with the cigarette is that it is the dirty syringe because it is the nicotine content of a cigarette that is addictive and makes people want to smoke. But unfortunately the cigarette comes with some 4000 other chemicals. For those of you who have not smoked, you need to be aware that when you start smoking, you feel physically sick. But people go through that appalling sickness in order to be able to smoke and fit in with their peer group, and by the end of about ten cigarettes, you have already started to become addicted. Smokers who are not smoking crave for nicotine. The marvellous feeling of relaxation that smokers get is nothing to do with nicotine but is to do with the relief of cravings for nicotine. The smoker thinks that the cigarette is relaxing them but it is in fact stopping them from withdrawing from nicotine addiction. And unfortunately, with the cigarette come the carcinogens in tobacco smoke that cause pulmonary and upper respiratory tract disease.

The smoking habit has three major components. It is behavioural; Freud suggests that smokers never progressed out of the oral phase of development - they want something in their mouth all the time. They like something in their hand, touching their mouth. There is also the social aspect of smoking; there is no doubt that if you do personality traits, then smokers do tend to come out as more generous outgoing people. Smokers are desperate to give you a cigarette - they are not generous, they just want to bring you into their dark and secret habit. So there is great social pressure to smoke, especially on children and young people. But the major pressure to smoke is a physiological addiction to nicotine.

So who smokes? There are thirteen million smokers in the UK, 28% are male and 26% female. Professional classes smoke less than the manual and skilled classes. The tobacco industry knows that 82% of smokers start when they are teenagers. That is where the fight against the tobacco industries must start. It is a sad statistic that 70% of smokers want to quit and they try over and over again. Fortunately about three hundred thousand a year manage to succeed.

If you look at the prevalence of smoking, the UK is not the worst country in Europe but it is still way ahead of the United States where they take this health threat more seriously. Looking back to the prevalence of smoking, in 1948 if you were a non-smoker, you were considered to be 'odd'. Over the years and for various reasons, the message is getting through. People are beginning to give up and the prevalence of smoking has dropped. But the worrying statistic for all parents is that teenagers are taking up smoking in their droves, especially young women. There are theories about that. The theory is that a young woman going through puberty is far more aware of her body image than a young man. Young women take up smoking to look like film stars and that is one of the theories as to why young girls tend to smoke more than young boys. Whatever the reasons, there is a frightening uptake of smoking amongst young people. That is a time bomb because if you look at this theoretical model, you will see that the fatal effects of smoking tend to come on about 35-40 years after the smoking habit is taken up. With male smokers, as their incidence increases, a time lines occurs with deaths due to cigarette smoking. Women took up smoking later than men and women are on the steep part of the fatality curve. So what we are finding now is that lung cancer in Britain is a commoner cause of death in women than breast cancer because the woman are taking up their smoking habit later than men.

The other interesting thing about smoking is that it is the people that who can least afford it who smoke and the people who already have the most lack of privilege in society that smoke the most. Statistics for male and female smokers in manual social classes reveal that although the total number of smokers has reduced, the rate at which they are reducing smoking is lower than in non-manual classes. So it is the poorer members of society that smoke and because of that, they suffer a higher rate of smoking related disease.

I was never a believer in conspiracy theories. But many of the documents released by the tobacco industries and in the trials going on in the United States are staggering at the level of lying and deceit that went on. What is now known with absolute certainty is that the cigarette industry knew about the addiction and the effects of nicotine long before the medical profession knew it. The tobacco industries had done studies into the addictive effects of smoking long before the information reached mainstream medical journals. So the tobacco industry knew how addictive tobacco was long before the medical profession. Of course we can laugh about the tobacco industry now and its advertising, but believe me, they are the ones that who are laughing.

Advertising campaigns capitalised on the weight problem, marketing cigarettes as a way of losing weight. Phillip Morris used the medical slant of getting doctors to compare cigarettes and recommend that one brand was better for your throat than another. To the shame of the medical profession, more doctors smoked Camel cigarettes. Film stars were used to advertise brands. The medical profession has always been afraid to use shock tactics to discourage smoking but the visible effects of smoking that could be stressed include baldness, premature wrinkles, stained teeth, and nicotine stains in grey hair. So it is very important to stop tobacco advertising, to stop tobacco looking cool, to take Benson and Hedges off racing cars, and to take Benson and Hedges away from sporting events. In surveys, children always name cigarette brands that are linked with sporting events and can identify which sporting event is linked with a particular brand. Advertising has a very big influence.

Unfortunately in the UK, tobacco raises huge revenue for the government. That is one of the reasons that cynics might say that the government is not madly keen on totally banning advertising or is very slow in introducing it. If you look at the European Union, the UK gets the largest amount of revenue from tobacco than any other European country. There is a half-hearted attempt at reducing tobacco advertising but it is a slow process to try and ban advertising and increase health warnings on tobacco products. In countries such as Canada, the health warning on tobacco products is fairly obvious.

The campaign also wants the government to keep putting up the price of cigarettes because there is very good evidence that this is one of the things that can discourage children and young people from smoking: making smoking un-cool, getting rid of tobacco advertising, publicising the health effects and putting the up the price of smoking because as the price goes up, it is related to consumption. So we should always be looking out in the budget and hoping that the price of cigarettes has gone up. We also have to give an example to our children. They are not stupid. It is no good telling children 'Do as I say, not as I do'.

The final message is about how we can help people to try and stop smoking, or at least give advice to help people to stop smoking. Preventive medicine is not sexy. People go into medicine to bring people around from cardiac arrests in a shiny intensive care unit. But the truth of the matter is that if a lot more was spent on smoking cessation, we would not need half as many intensive care units. Getting people to give up smoking is very very cheap and very cost effective compared to the cost of a pneumanectomy for lung cancer or coronary artery bypass grafting. It is a fact that giving up smoking extends life on average by about seven and a half years; this is epidemiological data from Doll and Peter. People who have never smoked regularly tend to live longer.

As we get older our lung function which is a measure of lung function forced expiratory volume in one second tends to decline. But it does not decline to an extent where you feel breathless, so your breathing does not disable you because you die before you reach that state. If you smoke and you are susceptible to cigarette smoking in that you develop chronic bronchitis and emphysema, then the decline in your lung function is accelerated so that you do reach disability before you die and so you become breathless. However lung function does not return to normal after giving up smoking, and it is the thing that patients find most disappointing. But it does put their rate of decline in lung function back at the same level as a non-smoker. If you give up smoking when you have become breathless then obviously you are not going to stop being breathless but your rate of decline will slow.

How to help people try and give up smoking? Most people try and do it without any help using will power. Some take nicotine replacement therapy and a large group are helped by health professionals, general practitioners, smoking cessation groups and other agencies. We know that giving up smoking is difficult, very difficult. Only about 1% of those who give up smoking have stopped smoking a year after giving up cigarettes. With the help of nicotine replacement therapy and Zyban, that can be doubled. Although it seems that smoking cessation is hard work, every person that you help to get off cigarettes is saving the NHS a huge amount of money.

The healthcare profession is extremely important in getting people off smoking. You will be amazed how often the wife of a patient will say that 'it is thanks to you Doc as you told him to give up smoking'. Sometimes as doctors, we forget to do that simple thing in a consultation in a chest

clinic. And if you don't say it, they go out and say 'Well the doc never told me to stop, he didn't say stop smoking so it must be alright for me to smoke'. So it is important to say it each time. And if you look at what has prompted people to attempt to stop smoking, you will see that it is often families and friends. After families, it is a health professional, whether that be the nurse, dentist, dental hygienist or doctor. We under estimate the power that has and so I want you to take that more seriously in your practice. I am trying to take it more seriously in my practice and I think all of us should be doing it.

If you want to read about smoking cessation guidelines, read the publication in Thorax in 2000. The British Dental Association and Department of Health websites contain large amounts of information on the dangers of smoking and what health professionals can and in fact are encouraged to be doing now routinely with all the patients that we come into contact with. It does not have to take up too much of your time. It can take less than five minutes to do what we call the 'brief intervention'. This is a jargon phrase that I have come into contact with over the past two or three years, mainly through the respiratory nurse specialists who are trying to run smoking cessation clinics in the chest clinic.

The brief intervention is very easy to remember. We must ask all patients we come into contact with whether they smoke and record it in the patient's history. If they smoke, the next stage is to advise. Smokers often don't give up because low self-esteem and low confidence in their ability to give up. The reason they don't try is that they are afraid of failing. Therefore any negative advice makes them feel negative about their chances of failing. The advice given about giving up smoking has to be very positive. For example, 'Have you ever thought about giving up smoking because its difficult but I am sure you could manage it. You look like the sort of person I think that could give up smoking. You have got that sort of positive look about you. I really admire that about you. You have an aura around you that just says to me that you can give up smoking. I know it will be hard, there will be times when you take them up again but never mind, in the end you can do it. I know you can do it and God knows you will feel better for it, seriously you will feel a lot better for it'. Negative messages about dying of lung cancer are not received positively.

If the patient agrees to try and give up smoking, the third step is to assist them to find the local smoking cessation clinic. One of the Bolton Health Centres runs a Fresh Focus group. The patient is referred to this group and is contacted by phone at home to arrange an appointment to see them and offer support. Finally the intervention includes follow up at the next patient contact, providing reassurance and support to continue. If you would all take the message of the brief intervention back and put it into practice, we as health professionals can make a difference.

'The Drug Scene' **Dr Mark Hamilton**
Media Doctor, Staff Emergency Physician
Salford Royal Hospital NHS Trust

Some of my other colleagues are going to be going into the detail of drug use, drug abuse, and drug treatment. I will give a general overview of the scene as I see it. I work in Accident and Emergency. I also work on Radio 1 and I am also a club DJ so it is quite a necessity as well as an interest that I become passionate about this particular topic.

I will first describe the impact of drugs on society, in other words why it is important that we understand the drug scene. Then I will describe the current drug culture. It always changes but I just want to briefly cover how things are at the minute - the trends, what is becoming more popular, what is less popular, and some information on some specific drugs, particularly some new drugs which you may encounter in practice or on social occasions. I will cover legislation briefly, not so as to preach my views on legislation but more to give you food for thought in order to help you think laterally about legislation.

As Lord Chan said in his opening words, drug use is endemic in society. It covers all areas of society, male, female, young and old. There are some well recognised norms or areas where it is more prominent but the reason why it is important is that it is on the increase. Drug use is not something that is going to go away. The so-called war on drugs is being won by a group of people who are too battered to realise that there is a war going on so that gives you an idea that the

legislation and the drive to get rid of drugs from our society are not working which of course brings us into the frame.

Emergency services are at the forefront. We see people who have drug problems, drug addictions and health related problems associated with drugs so we can actually make a difference. There are potentially approximately 2000 avoidable deaths a year. When you put that in context with the information presented by Dr Jones on smoking where there are around about 120,000 deaths a year in the UK and from alcohol around about 40,000 deaths a year, death from drug use pales into insignificance. But if you are one of those 2000, then it is particularly important for you. One of the reasons why I am particularly interested in this subject is because in the Radio 1 target audience, drug use is especially prevalent. Younger age group are involved and being brought into the drug scene. They are the ones that will get involved from an early age and the age group seems to be getting younger and younger.

When I was growing up in a small town in Northern Ireland, alcohol and smoking were the only two drugs that were available to me. My little boy is now five. I have to understand the drug scene especially in a big city like Manchester where I live now because he is going to be going to school, hanging out with his friends as he gets older and all these drugs are going to be made available to him. I need to know what is going on.

According to government sources, about fifty percent of all crime is reportedly drug related. I don't know whether they include alcohol in that statistic. If they were, I would suggest that the figure should be higher. But I think it is well accepted that we need to take a holistic approach to drugs, because it is not just the drugs themselves and the health problems they cause, but the social implications of drug abuse. It contributes to the poverty circle that people are trapped in; drugs are sometimes used to escape from their lives; it just makes things worse and it barrel rolls from there. I think we must take a holistic approach to the drug scene as well. It is very important that we don't just narrow it down to specific drugs and specific problem users.

It is estimated that there may be over two million users of recreational or illegal drugs in the UK and of those about a hundred to two hundred thousand could be described as problem users. So it is important to realise that not everybody who uses a drug will necessarily have a problem. To carry on from what Dr Jones said earlier, it is prevention that counts; intervention at an early stage will not just have health care implications for improving health but also social implications for improving society and greater efficiency of the financial resources that are available for this type of treatment and intervention. But at the same time, recognising that alcohol and tobacco are still the main drug problems that we have to deal with.

When you think of a drug user, you may have a particular stereotype or image as to what a drug user may be or might look like. These are a few examples but you could walk down the street, even in this lecture theatre you could look around and it could be any body. Drug users do not have a stereotypical image and that is the first thing that it is important to realise. Professionals like ourselves use recreational drugs as well as the stereotypical images that you will see.

Overall, it is accepted that it is the poorest members of society that have more problems with drugs. Certainly they are the more problem users but it is not exclusive to that group who have lower employment rates and lower standards of education. It is vitally important to realise that it affects every sector of society and every aspect of society, and again the drugs themselves can develop sub-cultures of users. So heroin and crack users will tend to be more associated with crime, with criminal activity to pay for the expense of their habit, and that will be seen more in the most deprived sections of society. It is not just drug use that is the problem, it is also the user's social situation.

Another group are the 'clubbers' who tend to favour particular drugs such as ecstasy, ketamine, and GHB. Other drugs such as cannabis and cocaine will try and transcend that. Amongst this group you will find some clubbers taking cocaine and cannabis, others with a major heroin problem will also be taking some cocaine and cannabis. So even amongst 'clubbers', there are a lot of sub-groups and interactions. So when the media reports on the drugs problem, it is a blanket term that dilutes the understanding of the so-called drug problem.

Following on from what Dr Jones was saying, people that are actually using drugs are the least likely to listen to any intervention. There have been a number of studies; at an international meeting held biannually hosted by Liverpool University, they looked into the interventions that are available or have been used. People who need to understand or need the help for their drug problems are the people we need to target. The type of campaign used years ago aimed at children does not have an impact on the people who need it most. Those types of campaigns tend to have an impact only on people who probably would not take drugs or reinforce reasons why they would not use drugs. I wanted to stimulate some thought as to how you would counsel a patient attending your practice who was using or having a problem with ecstasy or cocaine or cannabis. How would you go about trying to change their way of thinking or help them? The four A's suggested by Dr Jones provide a very positive method of reinforecement rather than the negative route where you tend to just meet a brick wall.

To illustrate that, ketamine is a very popular club drug; if you were to talk to people about the effects which are inability to speak or to co-ordinate yourself, this is actually what the drug user wants from the experience. In a recent study, 91 percent of people who use ketamine found that they could not co-ordinate themselves. 69 percent were unable to speak and 40 percent thought that it was a positive effect. Two thirds were unable to move and 40 percent again thought that was a positive effect. So concentrating on those adverse effects will have no impact on trying to change the behaviour of a certain drug user. It is also important for health care workers in understanding the culture to know that poly-drug use is absolutely the norm. It is particularly important working in Accident and Emergency to understand that you may be having to counteract the effect of a number of drugs because the average night out for a clubber may start with a few spliffs, followed by a wrap of coke, ending with a couple of Es before going into the club where they start drinking.

Talking about conspiracy theories, there was a big drive for alcohol to be brought back or to be pushed in clubs over the last decade because especially in Manchester when the scene became huge, people were just drinking water and the profits of the alcohol industry were falling. They then introduced alcopops and that is, cynically I think, why they have become such big business nowadays. Other examples of multiple drug use include taking rocks of crack cocaine and then using diazepam to bring you down off that immense high. Some might smoke heroin and then use cannabis to mellow the effects or combine the effects so the user achieves the experience that they want. In fact users of drugs are probably the best pharmacists for understanding the interactions between these drugs. They have a huge reservoir of knowledge that is currently being left untapped.

Recent trends indicate that cocaine is becoming extremely popular. It was Sigmund Freud who introduced it to western society; at the turn of the twentieth century it was pushed as a tonic and as a pick me up for all sorts of ailments. A tincture of cocaine was taken on the South Pole expeditions. It was quite widely used and accepted until they started to realise that it was addictive and then the drug was made illegal. Use of cannabis and ecstasy continued to grow slowly. Heroin use is remaining steady while amphetamine use is becoming less popular. LSD a drug that was very popular in the sixties and was in fact was used to treat schizophrenia during the sixties has dropped off the scene in recent years.

Overall, prices are falling. Inflation does not influence price but purity varies widely. In recent years, heroin purity has increased; as we say in accident and emergency, when you hear of a new batch, a new very pure batch coming in, you can trace from that source across the country the number of admissions to accident and emergency for heroin overdose. Because the user has their normal 'bag', they inject and find that the purity is much greater than they were expecting and they end up going into respiratory arrest. Cocaine, ecstasy and amphetamine purity is decreasing in the UK and crack cocaine has probably the lowest purity ever seen for a long time. Despite all the research in this field, there is still no evidence to suggest that starting on a hit turns use of soft drugs into hard drugs. Not even drugs such as cannabis or ecstasy will lead onto harder drugs such as cocaine or heroin. In fact the research does seem to suggest that the gateway drug, in other words the drug that people might start on to lead them into a wider world of drug use is probably smoking, just plain and simple tobacco.

It is a particular concern that ketamine and GHB are being much more widely used by clubbers. Both ketamine and GHB were originally anaesthetics and you don't need to be well versed on

clubbing to realise that using an anaesthetic is going to cause problems. The other concern is the emergence of meth-amphetamine, also known as crystal meth or ice. It was previously considered a contaminant; now it is being intentionally used particularly amongst the gay scene in Manchester, London and other major cities in the UK.

Just watching the news, reading the newspapers, seeing programmes on TV would suggest that recreational drug use is no longer considered an underground activity; in fact it has become more socially accepted. The music scene, and in particular music that is now prevalent in clubs would not have existed without the emergence of ecstasy. So it is filtering into the main stream and something that we probably have not realised is significant. Drug use is woven into the fabric of society and is no longer a separate entity.

It is the younger age group that I generally work with. There has been a significant increase in drug use in the 16-29 age group. But in much younger age groups, between 1 in 8 to 1 in 10 are using recreational drugs. This for me emphasises why it is important that we understand and think laterally about how to approach this phenomena. Breaking down the drugs that they tend to enjoy using in younger age groups, the main one is cannabis and there is a steady growth in its use. Cocaine use is also quite prevalent amongst the younger age group and increasing in popularity, and ecstasy is showing a steady increase in use.

Cannabis is being covered by a later speaker. Most of the arguments and debates about cannabis have been brought into the public domain. Most of you will be well aware that cannabis is being seen as a drug that people use as commonly as they would have a drink in the pub. Many people argue that the law should be changed so that cannabis users should not be treated as criminals. But there is a whole culture of canabbis use; it is no longer an underground activity but it is in our working lives, daily lives and may even be in our personal lives. I will leave further discussion to my colleague Megan later on.

The most increasingly popular drug is cocaine. We have seen plenty of high profile media cases and maybe that is one reason to suggest why the European observatory has seen this is as such a huge hike in popularity. It is much more fashionable now, whether amongst media types, young professionals or amongst people who might be seen in Salford Accident and Emergency, the more deprived area of society. It has no boundaries. In terms of health problems, again the European observatory is predicting that it will become a greater problem than heroin. We use heroin dia-morphine in clinical practice for the control and treatment of severe pain. Heroin has predictable side effects and it is something that we can manage where as an increased use or overdose with cocaine can lead to serious problems. The vaso-constrictive effect of cocaine is very potent and it can have an impact on the heart. It was used as one of the first local anaesthetics and it is still used in ENT surgery for that reason. Cocaine can cause heart attacks and death especially when mixed with alcohol. Cocaine related deaths are increasing; an increase of eight percent in one year across Europe is a very significant statistic.

There is now far greater awareness of the risks of sharing needles and blood born infections. But not many people have discussed the other theoretical risk of sharing straws, in other words the rolled up newspaper, the rolled up bank note that people use to snort the cocaine. Thirty percent, a third of all users will have a nose bleed and most of them will actually share that straw amongst the group so therefore there is a theoretical risk of passing on something like HIV, hepatitis B or C. I don't think this risk has even been brought into the main stream of health education and we need to be considering this issue for future health care. Cocaine is often impure, and cut with amphetamine, milk powder, other local anaesthetics or ground glass. The dealer or distributor will get his bag of pure heroin and then as it gets passed down through the distribution network it will get cut with an equal amount of anyone of these products so by the time it gets to the user, it may be less than fifty percent or less than twenty percent of cocaine.

According to the clubbers monthly magazine's annual survey, the estimate for ecstasy is about half to one and a half million users per week. In the early nineties a pill might cost twenty pounds; nowadays it costs two or three pounds because of impurity and use. Poly-dose uses are the norm so whereas one pill a night was the norm in the early nineties, the average is now twelve pills a night. I have heard of over twenty ecstasy tablets being used in one night; this is a huge dose of a potent psychoactive drug.

Pill testing is a debatable and controversial topic. Drug barons in the UK suggest that pill testing is a false panacea. Pure ecstasy alone will still have the potential to cause health problems but the impurities mixed with ecstasy are unpredictable and can have even worse side-effects. In Holland they seem to be more pro-active in drug use with pill-testing available free or for a small charge outside a lot of clubs. After introducing testing, they recorded what happened to the purity of the drug; there was a marked rise in purity rising to ninety percent within the space of six months. This did not take away the effect of ecstasy but reduced the effects of impurities. It also allows the user to know exactly what they are taking. One of the side effects of ecstasy is teeth clenching. As dentists I am sure this is something that is going to be extremely important in dental health care. PMA is a particularly unpleasant bi-product that is formed when making ecstasy. Production of ecstasy is quite a complicated process, usually carried out in kitchen laboratories with cheap chemical apparatus and little quality control. In Holland, PMA was reduced to less than one percent as a result of pill testing.

The difficulty with drug research is that because drug use is illegal, it is difficult to get license to study drugs and get good quality research. Most research is done by asking clubbers and users about their experiences, testing them and basing it on their reports. It is unlikely that research which involved giving someone ecstasy and studying the effects would be permitted on ethical grounds; that is ideally the best quality of research. Some of the effects are well recognised and commonly accepted; ecstasy is linked with memory loss, can trigger or create psychiatric problems and cause tooth damage. The side effect of grinding teeth can last for a few days even after the first dose has been taken. I read recently that this is being seen more commonly in dental practices. The claim that ecstasy causes a depletion of serotonin from cranial nerve endings has been recently challenged as the study was found to be flawed. So the claim that future generations of ecstasy users are going to be depressed, non-functioning adults does not seem to be based on theory. But the future is uncertain without evidence on which to base those theories. A recent study suggests that taking cannabis or an SSRI such as Prozac before taking ecstasy might reduce the effect of serotonin depletion. The interaction between Prozac and ecstasy is too unpredictable to even suggest that in clubbing magazines which have been trying to put together the safest ways to take drugs. At the moment it is very hit or miss.

Gamma Hydroxybutyrate (GHB) has become very popular recently. It is usually available as a liquid and also available as a powder. It became illegal in June 2003 being classified as a Class C drug because of the number of collapses associated with it. We have seen many collapses in Accident and Emergency. It became popular as a date rape drug because it is colourless and has a slightly salty taste so it can be mixed unnoticed in drink. Its effect with alcohol is unpredictable and often leads to collapse. A small dose can cause mild dis-inhibition with a larger dose resulting in disorientation. One of the main problems with GHB is the narrow therapeutic window so that the dose required to give mild dis-inhibition could be very close to the dose that causes a collapse. This effect is magnified when taken with alcohol. It has a very unpredictable effect and is associated with unexplained collapses and potential respiratory arrests. A few deaths have occurred from the use of GHB. Breathing difficulties occur in most cases, sweating in over 50% and one in ten will have a convulsion. Muscle spasm is also a frequent side effect. GHB was originally developed as an anaesthetic agent but withdrawn because of uncontrolled side effects. In the 1980s, GHB was used by body builders because it increased the rate of growth hormone which reduce body fat and increase muscle mass. It is similar in structure to the neurotransmitter GABA but there is no evidence to suggest any long term health or negative effects. It is during the acute phase when it is ingested that health problems occur. GHB use is on the increase.

Ketamine was first considered as a contaminant in ecstasy tablets or cocaine powder but now it is more intentionally used. People will actually request ketamine. What we might consider as negative effects are those desired by the user - poor co-ordination and difficulty speaking. It has multiple properties when used in sub-anaesthetic doses. In anaesthetic studies, the use of ketamine does not seem to have any long term effect but in sub-anaesthetic doses, studies on the frontal cortex have been linked with psychotic symptoms which might be seen in schizophrenia. This is an ongoing area of research – it can have an unpredictable effect that is not yet understood.

2CB is a new type of ecstasy pill. It was seen as a contaminant but now it is more intentionally used. The major side effect of 2CB is that with increased use, there is a greater tendency to suffer

hallucinations and quite intense paranoia. PMA is a contaminant previously mentioned in relation to ecstasy. It does not take much for it to cause significant changes in blood pressure, body temperature and heart rate. Many ecstasy deaths that have been media hyped have been due to contamination with PMA. The problem with pill testing is the media reaction that implies that drug use is being condoned. However the message that I want to get across is that pill testing is reducing health risks. It is helping to manage health risks in a logical and non-draconian way.

Meth-amphetamine is becoming more and more popular according to recent issues of Mix Mag. It was originally popular in the US gay scene and is becoming very popular in the UK gay scene. It was reported as being on the rise in Australia because of difficulties with imports of cocaine. What that demonstrates to me is that if a particular drug is not available, it doesn't mean that those users will not use drugs – it simply means that they will look for an alternative, whatever is available. Again I think this demonstrates that it is not the drug that is the problem, it is the users; they are the ones who should be targeted rather than the drugs themselves. Meth-amphetamine was used as a stimulant for American lorry and truck drivers because it just kept them awake on long drives that can be anything from two to sixteen hours. But it is the dis-inhibition, especially the sexual dis-inhibition and rages and mood swings that meth-amphetamine or ice create that give cause for concern. When you see American cop shows where the perpetrator of violence was high on drugs, it is quite often ice or meth-amphetamine that is the cause of this potent rage that can create very unpredictable and uncontrollable behaviour. Of course anything that powerful can have very unpredictable unfortunate side effects - fits, coma and ultimately death.

It is not just the direct effects on the individual user, but there are associated health risks amongst drug users in this society. Promiscuity, dis-inhibition and unprotected sex can lead to sexually transmitted disease and date rape. Rohypnal is another drug associated with date rape but I think the most potent and popular is still alcohol. In a Mix Mag survey, one in three people had unplanned and unprotected sex on ecstasy; seventy percent of gay men in another survey said that drugs affected their judgement on safe sex. These results can be seen as catalysts to risky sexual behaviour. All the messages about awareness of HIV and safe sex go out the window after a pill or two. It is the case that syphilis in the north west was pretty rare; there has been a huge rise in the last decade mainly associated with less condom use.

Trauma is another factor that I would completely associate with the drug scene although I think in terms of violence and fights, alcohol still is the major factor. In the UK there were five thousand glassings, in other words somebody getting stuck in the face with a glass last year alone. It is estimated that forty percent of these incidents are alcohol related and about twenty percent are drug related. Whatever drug is used, there is the potential for falls and road traffic accidents. In clubs you have the potential for ear damage. It is recommended that ear protection is used at ninety decibels but the average level of club music is one hundred and twenty decibels. Two thirds of people recently said that they had temporary hearing deficit after just one evening in a club. So there is a whole range of other health issues. It is not useful just to focus on the drugs themselves, rather to see that the setting, the situation and the other socio-economic factors that are involved.

To promote some thought on legislation, Michael Moore who wrote 'Dude Where's My Country' said that a war against a noun is something that you can't win. He was talking about the war against terrorism but the war against drugs and the war against poverty are just political tools. The so-called war against drugs in the UK is being won by drug users even though they don't even realise that they are in a war. In my opinion, the UK compared to the US is relatively forward thinking; they like to be proactive and logical in tackling situations but not go so far as to awaken the right wing of society. Again in my opinion, Netherlands, France and Spain are quite forward thinking but the US seems to be going backwards in this area. Recently in a New York club, they stationed two ambulances; they were there just in case they were needed as you would at any large event but the local law authority saw this as condoning and promoting drug use so closed the club. So this is the type of media reaction which doesn't help anyone and certainly doesn't help the drug user. Even in American states, things like glow sticks and bottled water which are associated with clubs were seen as drug paraphernalia and banned in a few states.

I consider that the problem with the legislation is that when you do provide information to people, it tends to have a moral agenda and especially with drug users. There is an immediate reaction against it. So it is a question thinking laterally, identifying how we can increase the harm reduction

if that makes sense - improve harm reduction in such a way that we do not see drug use as a criminal issue but more as a health related issue. I can only speak from the perspective of a health care professional but I think that it would be more productive for our society in general, because as I said, we cannot separate something that is woven into the fabric of society. It is an issue that we will all probably be involved in, possibly on a one to one basis either with friends, possibly family and certainly with our patients.

The analogy that I would like to make is with mountain climbing. It is risky behaviour that you can die from but we certainly wouldn't allow people to go mountain climbing with ropes that haven't been tested, that are frayed or being sold from a back alley by somebody who has no qualifications or no understanding of the situation. I don't see very much difference between the two. Pill testing is one idea, maybe balance the media against drug use, balance that with the alcohol and tobacco which society's legally accepted drugs. Alcohol and tobacco are drugs like any other drug; for some reason they are ok yet cannabis and ecstasy are not.

Trying to direct these initiatives with peer groups, allowing clubs to bring in health care providers to train their door staff and have medical staff on site, to have ambulances outside clubs if necessary in a way that is not seen as condoning behaviour but rather reducing the potential harm that can occur. An incident I encountered a few years ago stimulated my concerns. I saw a sixteen year old lad in A and E who had had taken some amphetamine that evening and collapsed; through fear of prosecution, his friends put him to bed for four or five hours by which stage he had an intra-cranial bleed. By the time he reached A and E, he was that close to death. Seeing that and realising that it was actually the legality of drug use that prevented that young lad getting prompt healthcare, has led to my stand on this side of the fence. Prohibition clearly doesn't work and can contribute to these health risks. In the black market there are no standards; none of these drugs have a British kite mark. They are not tested and we don't know what they contain. That is what our friends, our children and our society are using. The black market controls it.

When clubs are raided by the police, a new measure that they want to introduce to give greater powers to the police to close down clubs, this will not just drive people under ground where there is no control, where you cannot identify problems but it also leads to things like swallowing the stash to prevent arrest. There are huge risks of health problems there and of course that reluctance to seek help.

There are no particular areas of medicine or dentistry that deal particularly with drug use, where people can go specifically with drug problems. It links with some areas of medicine, psychiatry and social work; it is shared amongst different groups but there does not seem to be one group of health and social care professionals where people with drug problems can be referred to deal with the whole problem, both social and health issues. In some Scandinavian countries there are shooting galleries for intravenous drug abusers where they have clean needles, where they can inject and dispose of the needle safely. In A and E, we see many children with needle stick injuries; this has wider implications and I wouldn't want you thinking that my liberal stance is in any way encouraging or promoting drug use, rather to try and reduce the problems that drug use cause in society. Whatever alternatives we can think of, I think they need to be explored.

A Holistic Approach to Addiction

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In time honoured fashion I will summarise the content of this presentation. We need to look at the definition of holistic, the relationship between change and stress and the relationship between what I loosely called hormones and pick-me-ups. All the ladies in the audience will know what I mean when I talk about hormones because we blame them for most of the things that go wrong. What do we mean by addictive behaviours? As a psychologist, the thing that I observe most is behaviour. You can only believe what somebody tells you but you can look at how they behave. The next thing to consider is anxiety as the driver in our behaviours, then consider how to reduce stress, some fairly common sense ideas but often ideas that we don't put into practice. Finally I will discuss thought field therapy (TFT).

So what do we mean by holistic? Holistic is not just labelling a person as an addict or having a problem but actually looking at them in a context and it is often the context which is of crucial and fundamental importance. A holistic approach looks at the whole person, not just the person with a problem. We need to be aware of internal stresses. There may be worries and anxieties that we are unaware of because they are not being verbally expressed. We are all very good at wearing a mask, a mask that says we are OK but underneath all sorts of things may be going on. We need to look at external stresses; what's happening around the person that might be having a profound effect on them. We also need to look at inherited characteristics. You may not realise that one in ten inherit a very low stress tolerance. So even everyday life can be quite a problem. Fortunately there is another one in ten who inherit a very high stress tolerance who can withstand all sorts of stresses and are unaffected by stress. Most of the population lie somewhere in the middle but if you are taking a holistic approach, you have to bear in mind the possibility of inherited low stress tolerance.

The body reacts to all sorts of changes whether positive or negative. You could argue that all change is stressful; positive changes can be as stressful as negative changes. Physical changes, even temperature change puts stress on the body and the body tries to rebalance itself. Physical changes, all changes cause hormonal changes. I will loosely refer to positive hormonal changes as happy messengers because they are the hormones that actually make us feel good. Equally we have other hormones which I will loosely refer to as sad messengers. In an ideal world, the two balance themselves out; the balance is critical and it is this that we strive to achieve.

Over stress is when the balance is out of kilter. Some of the general symptoms of feeling over stressed include feeling overwhelmed by things, tiredness. Doctors frequently abbreviate this to TATT, tired all the time. This includes tiredness at bedtime, tiredness on waking, being unable to fall asleep or waking up in the early hours, generalised aches and pains and lack of energy. These are warning signs that we need to look out for either within ourselves and in patients. Anxiety, just general anxiety without feeling anxious about anything in particular is a symptom of stress and most of all is the insidious loss of enjoyment of life.

The causes of overstress can be profound eg the death of a parent, childhood illness, moving house, marital disharmony; these can add to the burden of a heavy workload. Too much work can be just as stressful. Even promotion can be stressful. The results of overstress are imbalance. There are not enough happy messengers floating around. The first tendency if you are feeling over stressed is to eat more sugar, drink alcohol, take drugs; you might be a workaholic and stay high on your own adrenalin, become a shopaholic, gamble or smoke cigarettes. If you do all of these at the same time, you are really giving your body a boost. I label these under the heading of Pick-me-ups. Unfortunately this is only a temporary state that stimulates the production of happy messengers. You need more of what ever it is you are taking to get the same affect. This is true of any of the pick-me-ups. It becomes a roller-coaster ride because blood sugar levels rise and then fall very rapidly. The high is followed by a low so you seek more happy messengers. At a sub-cortical level, we develop cue reactions. For example, men who sit down to watch football automatically reach for a beer or a drink; the link between an action that is taken to get the happy messenger is unconscious.

Addiction starts as tolerance levels increase; a craving could be defined as an addictive urge. The experience of craving drives the urge to do something about it. It might be reaching for a cigarette, having another drink or taking some drugs and it happens subconsciously at a sub-cortical level. In a holistic approach, there is a danger in labelling someone as an addict. The focus needs to be on the individual in their context and the causes of their overstress, taking into account that there is possibly a low stress tolerance. So the problem is to identify the external stresses and the behavioural habits that have developed.

A great deal can be done to reduce stress load. Some examples are just common sense, some fall into the field of therapy which I will come to later. Prevention is obviously better than cure. Strategies include considering a reduction in the pace of life, cutting down on social obligations, getting of the treadmill, saying No more often, delegating work and identifying what is not a priority. All of these can reduce anxiety levels as can a reduction in environmental toxins. Being assertive and saying no is really important to reduce the stress load. Serious thought about diet, sugar intake, alcohol and tobacco consumption form part of the strategy. Dietary advice about eating fruit

and vegetables is about stabilising the system. Exercise is important. Heavy workloads and lots of commitment generally lead to a reduction in exercise and an increase in pick-me-ups. Time for mental rest is also important in managing stress and anxiety. Dance is another very good way of de-stressing and highly recommended.

Another important factor is awareness of the body clock. Shift workers are prone to additional stress because the body clock gets out of kilter. Regular sleep patterns are essential. People on shift work can take up to ten days on the same shift for the body clock to readjust. Shift patterns that change eg a week of morning, a week of afternoons and a week of evening shifts do not allow the body clock to readjust. Shift workers are probably in a state of permanent fatigue. Intercontinental travellers should avoid time zone shifts, and most important is to spend some time in daylight. This is really important to assist the body clock to adjust. The signs of stress are very individual; stress is a very personal thing. It is important to be aware of tell-tale signs, the overstress point and not to ignore that point.

What does this have to do with anxiety and thought field therapy? My argument is that anxiety is the basic driver behind all addictions. Anxiety creates a situation where there are not enough happy messengers; this is what generates cravings. Feeling anxious, feeling that the next fix whatever that is isn't available creates cravings. When we are in that state, when we are in a state of anxiety, it is almost as if we are wearing mental blinkers. Our thought patterns become fixed on what it is we need. I have been known to search the house for that little bit of chocolate that might still be in the fridge somewhere or that the kids might have got in there bedroom and haven't eaten yet. It's a terrible thing to confess to this audience.

So what is thought field therapy? Dr Roger Callaghan, an American was at the forefront in developing cognitive behavioural therapy. It is a very popular therapy at the moment. When the theory was first developed, it was thought that a combination of chemistry and cognition were at the basis of all our disturbed emotions. I use cognitive behavioural therapy when it is appropriate, but have found that thought field therapy is more powerful, much quicker and is something that we can all use; you don't have to be an expert.

So what is thought field therapy? The theory is that thinking generates a thought field just in the same way as when an electrical current is passed through something, it creates an electrical or magnetic field. It is not necessarily visible but it is there. Within this thought field, there are information patterns. So you can imagine that every time you have a thought, in that thought field there is information and that information is used to construct an emotional experience. I have used this therapy successfully for a long time. Whether it is based on fact or not remains to be seen.

Disturbances in the thought field are linked to negative emotions. So a particular thought can automatically lead to a negative emotion. For example, the thought of going to the dentist can generate feelings of dread and anxiety. Treatment is about breaking that link between a particular thought and the associated emotion.

So where do pick-me-ups come in? Pick-me-ups mask the anxiety that drives us. Stress generates anxiety and a pick-me-up temporarily masks that anxiety. The next time you think about whatever it is that is bothering you, you get negative emotions. What is anxiety? Free floating anxiety is not linked to anything in particular. It is a state of feeling anxious all the time, the presence of fear when there is no objective reason to be afraid. So a person who is at risk of becoming addicted to something will generally have an all pervading feeling of anxiety. Pick-me-ups temporarily relieve the anxiety. But as the addiction or this roller-coaster ride continues, so the anxiety builds up. Because tolerance levels increase, it takes more of the pick-me-up substance to get the same effect which generates greater anxiety about acquiring it.

In thought field therapy it is argued that anxiety fuels the craving of the addictive urge. So logically, if the anxiety is removed, the addictive urge is removed. In other words, the driver that generates the behaviour is removed. Thought field therapy is about breaking the link between the thought and the negative emotion. The outcome is that anxiety provoking thoughts do not generate the negative emotion.

What constitutes treatment in thought field therapy? Nordstrom found that there is an electrical circulatory system in our bodies. This has been known in Eastern cultures for many thousands of years. Acupuncture and acupressure were not accepted in Western society for many years and were certainly not accepted by the medical profession but there is more and more evidence that these techniques work. Research involving the injection of a radioactive substance into pressure points used in thought field therapy and acupuncture and injected randomly into controls produced some interesting results; it was found that for the experimental group, the radioactive material flowed along the energy meridians but in control subjects, radioactive material remained at the point of injection. Evidence for the existence of pressure points is increasing; these are important in the field of thought field therapy which use acupuncture pathways and key pressure points. Most of the pressure points are on the face - above the nose, below the eye, under the arm and just under the collar bone. Those are the key pressure points for thought field therapy which aims to restore energy into the system because disturbances in the thought field are the cause of the anxiety.

Therapy is delivered by tapping. The sequence must be in the correct order to break the link between the thought and the emotion, and so the anxiety is removed, the anxiety that drives the craving, the addictive urge is removed. For example, it can have an immediate positive result in tobacco craving.

However there are problems associated with psychological reversal. There is a positive charge at the individual's head and a negative charge at the feet; the difference is minute but exists. This polarity is found to be reversed in people who are ill. What is unclear is whether the individual becomes ill because polarity is reversed or the polarity is reversed because of illness. There is a correlation but the cause is unclear. It is believed that reverse polarity blocks natural healing and prevents thought field therapy treatment from working. Reversing the polarity is therefore necessary for treatment to be successful.

For some problems such as phobias, it only takes one treatment and the individual will be permanently cured of the problem. With an addiction, treatment may have to be carried out several times a day, whenever there is an urge or a craving. The treatment consists of sequential tapping that is easily learnt. There is a problem defined as the apex problem when people attribute the therapeutic effects to other sources. Unfortunately, addictions are the most difficult to treat; it does require motivation on the part of the patient to continue the treatment at home.

To return to the holistic approach, it is essential to view the patient not as an addict but as a whole person in their social context. Internal and external stresses must be considered in managing addiction. It is important to be aware that some patients have very low stress tolerance and that stress tolerance is inherited. There are common sense strategies for reducing and eliminating stress and it is essential to stop the use of pick-me-ups in whatever form when managing addiction. Finally thought field therapy is an effective method of treating addiction. Further information can be found on the internet.

The Use of Cannabinoids in Multiple Sclerosis

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This paper provides an overview of multiple sclerosis (MS) and how it affects individuals because it is important in understanding why cannabis is used in MS. It will also consider some of the supporting evidence for the use of cannabis and a randomised controlled trial recently published on cannabis and spasticity in MS. Finally it will consider practical changes and what that means for health professionals in advising people with MS who are using cannabis or who are considering using it.

MS is the commonest form of neurological disability in young adults. It probably comprises about 20% of the throughput in an outpatient clinic for neurologists at Hope Hospital. It is an autoimmune disease in which the body's own immune system attacks the nervous system. In MS, myelin is stripped away from the affected nerves rather like an electric cable where the insulation has been removed. It is a progressive and life-long disease.

Symptoms typically fluctuate and vary over time; this is hard for us as professionals to grasp but particularly for the people who are living with this disease. Symptoms can vary during a day, and over periods of days and weeks. Individuals experience good and bad periods which are often very difficult to predict; this impacts on all aspects of life. Home life, activities with families and even simple day to day activities such as shopping can become a major expedition for someone with MS. This can lead to social isolation and obviously has a huge impact on employment prospects.

At least 85 thousand people in the UK have MS; the UK has one of the highest incidences in the world. Women are affected twice as often as men. Typically, it is diagnosed in the early twenties to thirties; this is the peak range for diagnosis when people are setting out in life. The image that many people have of a person with MS is as a wheel chair user. However only about a third of people with MS are actually reliant on a wheel chair or are bed bound. Many people with MS are quite well, getting on with their lives and coping very well with it.

In 1998, it was estimated that the annual cost of treatment for a patient with MS was between 5000 and 15000 US dollars. These figures obviously do not take into account things like expensive new disease modifying drugs, social care costs and also loss of earnings for the individual, for partners and for carers.

Most people will experience a variety of the following symptoms throughout their lives. Not everyone with MS will experience all these symptoms and certainly not all at the same time. Fatigue is a common symptom that can be a major problem and can be more disabling than problems with mobility. Fatigue is timeless, out of all proportion to any activity that may have been undertaken.

Visual disturbance is very common with symptoms such as double vision, blurred vision and nystagmus. People often complain about numbness and altered sensation, about feeling as though they are wearing gloves or moon boots. Sexual dysfunction is very common. Cognitive impairment may also occur; it may not be overt but health professionals need to be aware of subtle changes when working with people with MS, of symptoms such as poor memory, difficulty retaining information and difficulty processing information. A slow response to questions may be an indicator of cognitive change. Swallowing difficulties and muscle weakness, not just affecting mobility but also affecting grip are also frequent symptoms.

Pain can be a major factor in MS. Historically MS was thought not to be a painful disease. Neuropathic pain occurs in about 50-60 percent of people with MS at some stage during the progression of this condition. Trigeminal neuralgia is a typical symptom of pain in MS. Bladder and bowel dysfunction are quite common. Tremor also affects simple activities such as putting on spectacles or blowing one's nose. Spasticity and spasm lead to stiffness and involuntary movements. It is the last four symptoms – pain, bladder control, tremor and spasticity that are particularly linked with cannabis.

Cannabis is one of the oldest plants in cultivation; it has been used for thousands of years to make cloth, as fuel, to make paper and to make rope. There are three different species of cannabis; it is cannabis sativa that is being referred to generally when talking about cannabis. It was illegal in the UK until 1928 and was at that time recognised as having medicinal properties. By 1971 however, the misuse of drugs act had classified it as a Class B drug and it was declared that cannabis had no medicinal properties. In terms of availability on prescription, it is currently a schedule one drug which means that possession is only allowed with a home office license.

There are no licensed cannabis medications for MS; the only cannabis based product that is within the formulary is Nabilone. That is prescribed for refractive nausea and vomiting associated with chemotherapy. It is occasionally prescribed outside of that field for people with MS. Anecdotal feedback from people with MS who have been prescribed Nabilone is that it is not as effective as plant derivatives.

Cannabis is the most widely used illegal drug in the UK and is a member of the hemp family. Plants with female flowers have the highest concentration of the cannabinoids, the active component. In 1988, there were 3 million frequent users in the UK. It is available in many different forms and can be smoked with tobacco, baked in food and drunk in tea. Two of the commonest

names for cannabis are hash which is made from the plant resin and comes in lumps, and grass which are the dried leaves of the plant. Grass is more expensive than hash.

Cannabis contains a lot of active compounds. Over 66 different cannabinoids have been identified. Delta nine tetrahydrocannabinol (THC) is the main psychoactive ingredient and most frequently reported in trials. With selective breeding, it has been possible to increase the concentration of Delta 9 THC in the female plant from 1 –3 percent to 6 – 13 percent.

Cannabis has psychoactive properties, inducing mild euphoria. It can cause slight changes in psychomotor and cognitive function; this is obviously of concern in patients with MS who have already experienced cognitive impairment. It is an appetite stimulator. It can increase heart rate and decrease blood pressure. It often causes dry mouth, and/or dizziness. It can occasionally induce feelings of panic, anxiety and paranoia particularly in people who are naturally anxious, and can sometimes exacerbate those feelings. Occasionally, very frequent very heavy users develop an immotivation syndrome with emotional flatness.

Many people with MS are using cannabis and provide anecdotal evidence that it helps. There is evidence to suggest that cannabinoid derivatives inhibit pain receptors within the central nervous system. Animal studies also demonstrate a reduction in tremor and spasticity. A major survey in 2002 was carried out at the National Hospital in London. In a sample of approximately 250 people with MS, a surprisingly high number (45%) reported using cannabis for pain relief and spasm control whereas other studies of people with MS report cannabis use in approximately 4%. 74% of cannabis users in the London study reported that it was beneficial in eliminating or controlling spasms. People with more severe symptoms of MS were most likely to use cannabis; this probably reflects the fact that as people become more severely disabled by MS, there is less and less that can be offered for symptom relief in terms of conventional medicine.

The Cannabis and MS study (CAMS) carried out in Plymouth was published in the Lancet in 2003. Data for each subject was collected over a period of 15 weeks, and data collection was spread over a period of about eighteen months to two years. The primary outcome measure was a change in spasticity score measured on the Ashworth scale. It was a very robust study in terms of its setup.

The role of the MS nurse was in recruiting subjects who were prepared to take part in the trial. Inclusion criteria included a definite diagnosis of MS in adults aged 18 to 64 years of age, who had been stable for the previous six months, and who had moderate to severe spasticity. Many of the subjects recruited were wheelchair users and suffered quite severe spasticity. The exclusion criteria were very strict; these included a history of ischaemic heart disease, pressure sores as a potential source of infection and because they can aggravate spasticity, and other ongoing medical problems. People on disease modifying therapies such as Betaferon, Rebif and Capoxone were all excluded. People with fixed tendon contractions were excluded on the basis that no amount of medication would alleviate the severity of this symptom. Subjects who planned to travel abroad were excluded because of the risk of exporting an illegal substance even though it was part of a clinical trial. Ability to give informed consent excluded subjects with severe cognitive impairment. Because of the link between psychosis and cannabis, subjects with a history of psychotic illness were similarly excluded. Pregnancy and current cannabis use were two further exclusion categories. Many cannabis users who were obtaining symptom relief were reluctant to participate and risk being in the control group taking a placebo. The final exclusion factor was driving; many people with MS retain their independence with adapted vehicles. It was difficult to find subjects who fitted these very strict criteria.

Subjects were randomly assigned to receive the cannabis extract, cannabis placebo, delta 9 THC or matching placebo. Comparisons were made between all four groups. A relatively high dose of cannabis was titrated up to a maximum of 25mg a day. Previous trials used up to 5mg daily. There was a five-week dose titration so the dose was gradually increased over time to suit the needs of the individual. During weeks six to thirteen, subjects remained on the same dose and were assessed on that dose. In week fourteen, medication was discontinued with a final assessment at the end of week fifteen. Visits were restricted to the same time of day because spasticity can vary over the day; subjects were also assessed after fifteen minutes of bed-rest because handling and transferring people from wheelchair to bed can aggravate spasticity. This allowed time for any spasticity caused by transfer to subside. Urine samples were collected

throughout the trial to ensure that subjects were not supplementing the dose with their own supply of cannabis.

There were a number of secondary outcome measures and various mobility measures. This included a timed ten metre walk using aids normally used by the individual and the Barthel index of activities for daily living (ADL) such as washing, dressing and grooming. The GHQ30 is a quality of life index with a series of nine self-reported rating scales. Physiotherapists who had been calibrated were the main assessors for this aspect of the trial. It was not an ideal scale but seemed to be the best available at the time.

The protocol ensured that the assessor, the physiotherapist and the doctor involved in the trial worked separately and did not discuss the patients, doses or results. Assessors were not permitted to see previous assessment scores and post analysis it was shown that assessors had remained blinded throughout the trial. There was however some un-blinding of treating physicians and the patients themselves.

630 subjects were included in the analysis. Demographic analysis showed that the different groups were well matched. However the results were not what was anticipated; there was no evidence of any significant treatment effect on the actual scores. There was no positive effect on any objective measures with regard to reducing spasticity. Sub-group analysis did reveal a significant improvement in the Ashworth score for measuring spasticity for people who were less severely affected or not wheelchair bound but that applied to both treatment and placebo groups. There was a very high placebo response and further work is being conducted to identify why. There was a significant treatment effect on the timed walk, with subjects walking more quickly and reporting that it was easier to walk. Subjects also reported improvement in terms of pain experience, quality of sleep, spasms and spasticity. Subjects did not report any effect on tremor or bladder symptoms.

Some of the side effects of cannabis were very predictable; dizziness, light-headedness, dry mouth, bowel problems and increased appetite were the most common reported side effects. A few subjects had significant problems with side effects and the dose was therefore reduced.

As in any research project, no matter how robust the protocol, there are identifiable problems. There was some un-blinding of patients and doctors. Cannabis administered orally is not absorbed in the same way as if it is smoked or inhaled in other ways. It was not considered ethical to use smoking as a means of delivering the dose. A sub-lingual spray is now available but was not available at the start of the trial. There were also limitations in measurements using the Ashworth scale in lack of sensitivity to smaller changes in function. There was also concern that being on cannabis might affect the subject's perception of symptoms. Thirty-five percent of the placebo group reported a positive response which requires further analysis.

The conclusions drawn from this study was that there was no difference in effectiveness between cannabinoids and Delta 9 THC and there was no significant change in the objective measure of spasticity. There were significant improvements in the ten metre walk times and in patients' reports of pain. One result that requires further investigation is that more subjects in both treatment groups had less hospital admissions than the placebo groups. A sub group of 14 subjects in the CAMS trial were taken for a randomised controlled trial, cross over design to look at upper limb tremor. No significant functional improvement was found in upper limb tremor using the tremor rating scale. A few other sub group trials were also set up.

Psychological function was also monitored as many people with MS already have some cognitive impairment. The results have not yet been published but preliminary results certainly suggest that there is no adverse psychological effect on people with MS. Bladder dysfunction is being studied in other sub-groups and those results look more promising in improving bladder control, reducing frequency and nocturnal frequency.

The results of the CAM trial were not overwhelming in favour of the therapeutic effects of cannabis but they do demonstrate some limited benefit. A great deal more research is needed. There is some evidence in recent biological studies that cannabis may have a role in neuro-protection. If that turns out to be the case, cannabis may have the potential in the future for some therapeutic effect in preventing neurological damage. A great deal of research is being conducted on cannabis

and MS and further research is needed together with more robust outcome measures that have clinical relevance, both to patients and clinicians.

Pharmaceutical companies producing the drugs for the trial are in the process of applying for a licence for prescription. The National Institute for Clinical Effectiveness, NICE began an appraisal in 2003 looking at the use of cannabinoids in MS; that has been suspended until license is granted. However NICE approval for prescription under the NHS is unlikely if a license is not granted.

People with MS continue to use cannabis illegally. Cannabis remains illegal and was reclassified as a Class C drug. It is illegal to own, grow or supply cannabis. The maximum prison sentence for possession has been reduced from five to two years. Conviction for supplying cannabis merits a prison sentence of up to fourteen years; a new offence of aggravated possession involving blatant use of cannabis in public is being considered with a minimum sentence of two years.

Cannabis is smoked in various ways and cooked and eaten in cakes and biscuits. It can be infused in drinks, vapourised and inhaled. A product called Cannachoc is available over the internet; it consists of cannabis that has been incorporated into a chocolate bar. As health professionals, we are in a position to know patients who get relief from using cannabis but that cannabis is illegal. There are other problems apart from the potential for prison sentences associated with its illegality. However by the time that cannabis is being considered, patients will have tried all the conventional medications. Patients are advised about complimentary therapies and often cannabis is perhaps the only possible therapeutic option left open.

When patients ask our opinion about using cannabis or confess that they are already using it, we tend to advise that they will only experience limited relief. It will not eliminate the symptoms but does help some people. We talk about the legal issues, make it clear that it is illegal, about problems with supply, problems with the supplier and what other drugs they may be dealing in, the personal risks associated with getting a supply, and the potential risk of prosecution. Some patients, a small number grow their own cannabis. We also discuss the quality and purity which varies enormously, possible contaminants from spraying or mixing, and consistency of supply which can vary from week to week. We discuss the mode of administration and actively discourage people from smoking. There is some evidence that smoking cannabis is more carcinogenic than smoking tobacco on its own. If a patient is determined to use cannabis, we give advice on baking cookies, mention Cannachoc, advise patients that it can take longer to get a 'hit' and avoid the risk of becoming too high by taking more.

We explain the potential side effects, what sort of things they might experience, and what to look out for. We do not suggest that cannabis is a treatment for MS, would not suggest using it and do not give any information about where to obtain a supply. We fulfil our responsibility by giving them all the information they need to make an informed choice and make it as safe as possible. It is about balancing risk with potential benefits.

In summary, cannabis is illegal and unlicensed for medicinal use. The recent CAM trial showed no improvement in the primary outcome measure but did show significant improvement in more subjective measures. There is some evidence to support its role in neuro-protection; research continues in this area and there is some cause for optimism. People with MS continue to use cannabis and to obtain some relief from using it. We await the conclusions of the NICE review and patient support groups. The MS Trust and the MS Society are both very keen to see it licensed.

Addiction in the Dental Profession

Dr Joe Mee, MBE
Coordinator
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There is no doubt that cannabis, heroin and cocaine have therapeutic benefits. However the abuse of drugs is completely different. Alcohol for example is terrific for celebrations and when used properly, but regular and excessive consumption of alcohol eventually leads to brain damage, liver and kidney damage, and other serious problems frequently resulting in death. Dr Mee's main interest in drug abuse in the health profession stemmed from personal experience of addiction. He studied the subject of addiction in the University of Utah at the Addiction Faculty in Saltlake City.

Studies into addiction in the US are probably about fifteen years ahead of the UK. However as Dr Mee stressed, he had a personal interest in the subject as a recovered alcoholic and therefore felt justified in talking about alcohol and other forms of addiction; in retrospect, he described his relationship with alcohol as an unrequited love affair and was lucky not to have been struck off the register for the poor standard of dental care he provided.

Mankind has used substances of abuse throughout history. In 3000BC, Samarians worshipped the opium poppy as a joy plant which they used for medicinal purposes to get a high. In the Incan civilization, small doses of a plant with a similar effect to cocaine were used by workers to reduce fatigue while working in the fields.

Research has provided an indication of the level of substance use and abuse in the dental profession. 1996, Newcastle University carried out a study on a sample of 3075 students at different faculties in the UK. Normal quantities of alcohol consumption for a male would be approximately 22-28 units per week and 15-21 for a female. Approximately 12 to 20 per cent were drinking at these moderate levels. 15% of male students and 2% of females were consuming 50 units a week, equivalent to 25 pints a week. The study also looked at other drugs. 19.8% reported smoking cannabis regularly, defined as once a week. Fat cells have a terrific affinity for cannabis so with regular smoking, there is a gradual build up in fat cells until they become saturated and subsequent cannabis smoking has an immediate effect. 19.8% is a very high percentage when you consider the effects of cannabis and this is smoking cannabis associated with heavy smoking. LSD was also used as were amphetamines. There is no such drug as ecstasy because of lack of quality control in production but it easily available and widely used.

Data on students in seven medical schools and three dental schools revealed that 12.4 percent of students were drinking over 50 units a week. This may not seem to be excessive but it is certainly the level at which one would expect to lead to addiction. Looked at from an economic perspective, the cost of alcohol consumption at this level over a student's five-year course is approximately £7,500 possibly accounting for the high level of reported student debt. In terms of illicit drugs, 12.4 percent of males and 8.3 percent of females used cannabis regularly. This is a very high incidence that needs to be addressed.

Alcoholism is a primary neuro-biochemical disease that is chronic and in some cases there is a genetic component. Alcohol is an addictive substance; it is less aggressively addictive than hard drugs such as cocaine or heroin but it is an addictive substance. There are genetic, psycho-social and environmental factors that influence its development. In approximately 35 percent, a genetic component can be traced back for up to seven generations. Psycho-social factors are linked to upbringing that induces feelings of inferiority, of lack of self esteem, or lack of self worth in early years. The disease is often progressive and fatal.

It is characterised by continuous drinking, ie top up drinking or periodic drinking and binging. During periods of control over drinking, preoccupation with the drug alcohol affects the individual even when their system is free of alcohol. The nature of an addictive disease is that the sufferer can return to using the addictive substance despite previous disturbances of function or negative consequences. Denial is a form of defence mechanism; minimisation is where the amount and frequency is denied. Chronic alcoholism also leads to social isolation. It is important to remember that the disease is in the person, and not in the drug. Alcohol, if taken properly and in moderation by people who do not have the potentiality for addiction is not a problem.

Alcohol addiction as with many other forms of addiction starts with social use and progresses to abusive use with associated organ damage. There is an increased tendency to exhibit violent behaviour and a socio-economic impact on families with progressive addiction. In extreme addiction, changes take place in the metabolic processes of brain cells so they cease to detect alcohol as a toxin and involve it as a pseudo-normal cellular process where the substance becomes an ingredient of the brain process. At that point it is stamped on the brain cells with what the French call a cellular footprint. If after a period of withdrawal from alcohol, the individual returns to drinking at a later stage, the brain immediately interprets the substance as part of its metabolic process. That is the nature of addiction, and the first people to be affected are the family; their life changes and they become dependant on the mood of the drunk. Then there are changes in social contacts and work is affected. Health and physical status is affected as is job performance.

One of the commonest reasons for using psychoactive substances is for recreational purposes, to get high or fit in with the crowd. Escape from reality is usually a later reason for their use. Psycho-active substances fall into three broad categories: uppers, downers and all-rounders. Uppers include cocaine, amphetamine, diet pills, caffeine and tobacco. Downers include opiates, opioids (synthetic opiates), morphine, codeine and methadone (prescribed as a heroin substitute). LSD, PCT, mescalin, cannabis, magic mushrooms, MDA, MDMA (ecstasy) and various designer drugs with designer names such as 'euphoria' fall into the category of all-rounders. Nitrous Oxide is addictive and taken by inhalation. Steroids including anabolic steroids build muscle bulk but without commensurate development of striated muscle.

With any drug, the intention is usually to get high as quickly as possible. Taking drugs orally is a poor way of getting an immediate hit. Injection is an excellent method producing an effect in 15 to 30 seconds. Snorting and sublingual use permit absorption into the bloodstream more slowly and over a smaller area. Inhalation is one of the most effective methods of getting an immediate response; that is particularly true of crack cocaine. Addiction to cocaine is based on the immediacy of the effect and addiction can develop based on the pleasure after using it for the first time. The inner brain houses emotions and essential services, whereas cognitive function is based in the cortex. Drugs that have a molecular shape similar to neurotransmitters affect the neuro-chemical processes by stimulating the pleasure centre. . For example, endorphins are chemically similar to morphine but four times more potent.

There are other risks associated with substance abuse. The effects of chronic alcoholism are well known although death tends to occur from RTAs or trauma before the development of cirrhosis. Alcohol taken with valium has a synergic effect that clinicians need to be aware of. Cocaine is sometimes taken before a dental appointment in order to relieve anxiety; the risk for dental management is a sudden rise in blood pressure and a number of deaths have been reported. Opium and opioids suppress pain, cause constipation and coughing; in needle users there are the associated risks of septicaemia, viral hepatitis, endocarditis, cotton fever, abscesses at infection sites, embolism and HIV. There is new evidence to suggest that there is a danger of psychosis associated with the use of cannabis.

Addiction is wide-spread and increasing. The dental profession is not immune to this disease. The Dentists Health Support Trust is a registered charity which supports members of the dental profession with health problems associated with drug and alcohol abuse. The first step is to identify the problem. This process of support is not confrontational but attempts to intervene between the sufferer and the problem. Intervention is carried out by people who are themselves in recovery. The Trust provides support and referral for treatment , practical support for the family, and in maintaining the practice by assisting with obtaining a locum. Further support is given on re-entry into employment, together with a programme of education and prevention. It also provides advocacy and representation with legal problems and any issues with the GDC. For further information contact: Ms E Liptrot
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Treating Patients with Chemical Dependency

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Treating patients with chemical dependency requires a knowledge of substance abuse, and how it impacts on general, oral and dental health in order to ensure that dental management is appropriately adapted to the needs of the individual. Chemical dependency is a disease which is likened to a metabolic disorder where the patient is unable to change their behaviour and where they need assistance in changing their behaviour. It is not simply a question of removing the stressful events that may have been implicated in triggering the behaviour, but a need for treatment for the adverse consequences of their disease just like any other metabolic disorder.

The aetiology is complex. There are associated psychological problems and social influences but they are not the cause of the disease. They can affect the onset and course of disease but are not solely responsible for the disease of addiction. The effects of addiction on mental status, residency, family and employment are profound. Social interaction with the community is affected in addition to the impact on personal health. There are not many dental units that provide dental care in high dependency units but patients with addiction will also be treated in primary dental care and by domiciliary dental services. However units are being developed in Glasgow and Edinburgh.

The incidence of substance abuse is on the increase therefore all clinicians will encounter patients with addiction. The role of health professionals is to be able to recognise the problem and support the patent in the process of recovery. The difficulty is that they are not an easy group to identify as information on addiction is unlikely to be revealed. Health professionals must develop a sensitive approach that recognises addiction as a disease rather than as an affliction and by not stigmatising the condition. This will go a long way to making the patient feel that they are not being stereotyped and that the clinician is operating with a knowledge and understanding of the condition.

A distinction must be made between the active addict and the person under treatment. Treatment for withdrawal takes about 4 to 6 weeks. Alcoholics are prescribed disulphuram which causes profound nausea if alcohol is consumed. Methadone is prescribed for treatment of heroin addiction. Patients need significant support during periods of withdrawal and treatment. People with chemical dependency have significant problems that can de divided into three categories – general medical problems, social issues that impact on where and how care can be provided and oral disease which can be very aggressive. People with drug addiction cover a broad spectrum of society. Treatment planning is therefore constantly changing to keep up with the individual's problems. Treatment planning is always based on individual assessment but due to the frequency of aggressive oral disease, treatment plans will need to be constantly modified and reassessed.

General medical problems encountered across the broad spectrum of the population will apply to people with addiction. However they experience additional problems. Malnutrition is a feature which may be exacerbated by financial pressures of maintaining the habit. Patients may be immuno-suppressed due to bone marrow suppression and impaired collagen repair with consequences for delayed healing. There is a greater prevalence of other infectious diseases such TB, pneumonia, and sexually transmitted disease associated with changed behaviour. HIV and viral hepatitis associated with IV substance abuse have medical implications for treatment. The prevalence of infective endocarditis is higher in injecting addicts who develop tricuspid valve endocarditis. Finding a suitable vein for IV antibiotic cover can present difficulties and the patient may even assist with administration of antibiotic cover. Cocaine is associated with convulsions and angina. Cannabis users during acute intoxication can present with a rapid heart beat, motor in-coordination and profuse perspiration. Long-term amphetamine use is associated with acute intra-cranial events. Tobacco has an effect on every system and is closely related to alcoholism; medical problems include ischaemic heart disease, chronic obstructive pulmonary disease, peptic ulceration and malignancies.

The consequences of alcoholism are cirrhosis and peptic ulceration. Severe alcoholics may develop Wernicke's syndrome with short term memory loss associated with thiamine deficiency. In Korsakoff's syndrome, memory loss is a persistent feature and is irreversible. Therefore obtaining informed consent can be problematic. It is advisable to repeat consent and obtain a signature whenever possible. Alternatively it should be recorded that treatment is justified in the best interests of the patient. Although current medical history forms include questions about recreational drug use, tobacco and alcohol consumption, patients may not disclose that information and it is therefore advisable to review the medical history regularly.

Financial constraints imposed by maintaining a habit lead to irregular dental attendance. Social issues include homelessness. There is a tendency only to seek treatment for pain relief and patients are unlikely to return for routine care. Treatment planning may therefore needs to focus on the patient's immediate problem and an assessment of what the patient will accept. Pain management is critical; many patients ask for Codeine and will exhibit dentist hopping to obtain a supply of this drug. Long appointments may not be tolerated. Many patients are anxious and their behaviour may be unpredictable or aggressive; it is important to take measures to allay dental

anxiety although anxiolytics are not recommended for drug addicts. Escorts are helpful in supporting dental attendance but not always available.

There is generally a direct link between the severity and duration of dependency on oral health which is associated with self-neglect, reduced access to oral health care providers, financial constraints and oral mucosal disease. The rate of tooth loss is three times as high as in the general population as emergency treatment for pain relief is sought more frequently than long term preventive care. Xerostomia is a side effect of many addictive drugs. Methadone prescribed as a sugar based syrup increases potential for dental caries. Although sugar free methadone is available, dental caries is still a problem as a sweet drink is often consumed after taking methadone to mask the unpleasant taste.

The incidence of alcohol and substance abuse admissions to maxillo-facial units is very high. Cranio-facial trauma is common. The incidence of osteomyelitis post correction is also higher due to immuno-suppression and impaired healing. Coagulation may be affected in liver disease and with bone marrow suppression, bleeding times can be affected. Acute candida, acute pseudo-membranous candida and angular cheilitis are very persistent, recurrent and very difficult to treat. Inflammation of parotid salivary glands occurs with malnutrition and in chronic alcoholism. Bruxism occurs with the use of psycho-active substances which can lead to bilateral muscle hypertrophy.

Certain drugs are associated with specific oral pathology. Vasoconstriction with ischaemic necrosis of the palate, bruxism and tooth surface loss, erosion and paraesthesia of lips and tongue are symptomatic of cocaine addiction. Hyperkeratinisation, pigmentation within areas of hyperkeratinisation, heavy staining and malignancy are associated with tobacco use. Regular oral cancer screening is recommended for this high risk group. During recovery, there is an increase in aphthous stomatitis which may be due to stress associated with withdrawal.

The dental profession has a role in the management of chemically dependent patients. Patients in recovery are easier to manage but require support to prevent triggering further active abuse. Health professionals have a role in identifying the actively chemically dependent patient; past dental history, infrequent dental attendance or attendance only for pain relief, emotional lability and anxiety are possible indicators. Medical, social and oral problems complicate treatment planning and dental management. Treatment planning must be realistic and flexible, based on individual assessment and on the active or recovering drug status. A sympathetic, non-judgemental and supportive approach is essential.

Janet Griffiths
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