

# Petrol Sniffing

**Authors:** Part 1: Craig San Roque (Psychologist, Intjartnama Aboriginal Corporation Petrol Sniffing Project, previously Petrol Link Up); Marcus Tabart.  
Parts 2 and 3: Craig San Roque

**Topic Reviewers:** Parts 1 and 2: Dr Rob Parker; Monica Ostigh (RAN, Jabiru); Kaz Knudsen (RAN, WA); Vivien (RAN, Amata); Jane Kollner (RAN, Ampilatwatja); Teresa Bowmen (RAN, Papunya).  
Part 3: Dr Rob Parker.

## Part 1: Clinical aspects

### Origins

In Australia prior to World War II there was no evidence of petrol sniffing. It had been reported as a practice among children and adolescents in the USA as early as 1934.<sup>1</sup>

Brady reported the first documented use of petrol amongst Top End Aboriginals in 1950 at two sawmills, whilst in Central Australia the practice seemed to have begun in the 1940s. Brady was unable to find any evidence that US Army personnel introduced the practice.<sup>2</sup>

### Prevalence and pattern of use

The prevalence of petrol sniffing amongst young Aboriginal people should be seen in a wider context of adolescent mental health problems, adolescent risk-taking and experimentation, and the widespread volatile substance abuse amongst some sections of the general population.

The Victorian Parliamentary Inquiry into Inhalation of Volatile Substances<sup>3</sup> it stated that:

'Volatile substance abuse (VSA) occurs in association with a number of different substances, each of which require a range of categorically different interventions:

- Average young people who experiment with VSA
- VSA associated with delinquent behaviour and low socioeconomic status
- VSA in urban and rural Aboriginal communities
- Petrol inhalation in remote Aboriginal communities
- VSA amongst disadvantaged and homeless adults
- Abuse of anaesthetic gases by professional groups
- Abuse of amyl and butyl nitrites by those in the gay communities.'

The Mental Health of Young People in Australia 2000 survey found that 9% of the adolescent population had abused volatile substances in their life. It was further found that those with substance abuse backgrounds were more likely to have mental health problems.<sup>4</sup>

Rose observed, '[t]hose engaged in VSA reported significantly less family support and lower self-esteem, and significantly more lifetime thoughts of suicide and suicide attempts and lower perceived school ability as compared to non-users. In clinical groups and those within the justice system, solvent users had higher rates of emotional symptoms (mostly depressive) and abundance of adverse life events, family dysfunction and higher rates of relatives who have attempted suicide'.<sup>5</sup>

There are many parallels between Aboriginal petrol sniffers and the widespread increase in adolescent volatile substance abuse in urban communities, though there are also important differences.

Some studies have found that Aboriginal youth are more likely to use petrol more intensively and for longer periods of time than non-Aboriginal urban VSAs.<sup>3,6-9</sup>

Indeed, Brady and Torzillo found that 50% of teenagers who began sniffing as 10-14-year-olds were still sniffing at age 25-29.<sup>8</sup> The greater majority of urban VSAs, however, engage in no more than brief periods of experimentation, use generally declines significantly by the age of 18 and often reflects a shift to another substance of abuse.<sup>3</sup>

Petrol sniffing is thought to occur principally amongst remote Indigenous communities throughout the world, though all this may mean is that we do not know enough about VSA in urban communities.

The prevalence is hard to quantify. It is often a clandestine activity and occurs at night. Brady (in 1992) reported that it was present in 56 out of 837 Aboriginal communities throughout Australia.<sup>2</sup> Its usage tends to come and go in communities; a chronic sniffer may collect recruits and then be moved on by the community, imprisoned for delinquent behaviour or an intervention occurs and the practice is temporarily extinguished.<sup>2,6,9</sup> Mosey estimated that there were almost 200 users sniffing in Central Australia in 1997.<sup>9</sup> The age of users is from 8-30 years, though there are anecdotal reports of children as young as four inhaling petrol. Males are more likely to sniff than females (3:1).

Overall, it appears that since 1994 there has been a reduction in intensity in some areas, particularly Central Australia where it has been common, although it is still common in some communities. This reduction has occurred at the same time as its use has sprung up in other Aboriginal communities.<sup>6,9</sup>

### **Aetiology**

There are many theories that attempt to explain the existence of this phenomenon. Burns<sup>1</sup> summarises some of these theories.

- As a feature of adolescent risk-taking and experimentation
- Peer group influences in a setting that often provides little in the way of meaningful activity
- Rejection of and rebellion against significant role models
- Desire to be autonomous and seeking self-identity
- Pharmacological characteristics of the petrol itself. It has a rapid onset of action inducing a sense of euphoria which encourages psychological dependence. It is cheap and readily available
- Indigenous aspects of child rearing and patterns of personal autonomy within Aboriginal culture may be relevant
- Recent history of colonisation, assimilation and cultural dislocation may be conducive to the genesis and perpetuation of the problem
- Such a history of social, economic, educational disadvantage and disruption of the ability of parents to exert control over children may have increased susceptibility to use harmful drugs.

Brady noted that communities associated with the pastoral industry seemed to be less likely to have petrol sniffing epidemics.<sup>2</sup> Poverty as a factor has not been adequately explored. It has been demonstrated that it is a factor in adolescent substance abuse in urban areas.<sup>3,4</sup>

### **Clinical effects**

Petrol is a mixture of c4-c12 hydrocarbons (including benzene, toluene, n-hexane) and organic lead (tetraethyl lead). The hydrocarbons have both an anaesthetic and narcotic effect whilst the lead also has intoxicant properties. Leaded petrol is the preferred vehicle of abuse. Unleaded petrol only contains 0.013 g/L lead and

is made up of 70% volatile hydrocarbons, though both leaded and unleaded petrol contain similar amounts of toluene (13%). Toluene is well known as a cause of cognitive and neurological deficits.<sup>10,12</sup>

The adverse health effects of lead exposure are well established. In children exposed to lead it has been found that the higher the lead level the greater the deficit in IQ points.<sup>11</sup>

The volatile hydrocarbons are highly lipophilic and are rapidly absorbed, distributed through the body and cross the blood-brain barrier. The half-life in the body of the hydrocarbons is between 7-24 hours, whilst lead can persist in the brain with a biological half-life of over 500 days.<sup>1</sup>

Fifteen to twenty inhalations of petrol will cause euphoria and an intoxication much like alcohol. This acute intoxication will last for three to six hours. Excitement, restlessness, elation, misperceptions, illusions, or even visual hallucinations; a sense of invulnerability as if 'fear dissolves', disinhibition and aggression (often), increased libido (so there is a higher level of STIs in this group) and slurred speech and gait problems are features of acute intoxication.

Prolonged inhalation or rapid inhalation of a highly concentrated vapour may lead to violent excitement, ataxia, visual hallucinations (often of demons, snakes, spirits), confusion and delirium; paranoia; loss of consciousness, coma, seizures and death.

Sudden sniffing death has been recorded, but is rare and it is thought that the volatile hydrocarbons cause cardiac sensitisation to catecholamines that are released during physical exertion or stress.<sup>1,12,13</sup>

#### Petrol sniffing encephalopathy

Mostly occurs following acute intoxication in chronic users but it has been reported to occur, more rarely, in the absence of chronic usage. Encephalopathy is associated with nausea, vomiting, excitement, hallucinations, disorientation, clouding of consciousness, seizures, cerebellar ataxia and occasionally other psychotic symptoms.<sup>14</sup>

In Goodheart's study of 25 patients with encephalopathy 20 were chronic users and eight died. The deaths were attributed to sudden cardiac arrest or respiratory failure due to aspiration pneumonia. Autopsies found neuronal loss in the cerebral cortex, cerebellum, reticular formation, brainstem and in particular Ammon's Horn.<sup>13,14</sup>

This study also highlighted that in the survivors only one patient was functionally independent at the time of discharge.<sup>14</sup>

#### The chronic sequelae of petrol sniffing

Includes neurobehavioural changes with lethargy, irritability, anorexia and weight loss; movement disorders, cerebellar ataxia, peripheral neuropathy; myoclonus and neurocognitive defects in the areas of attention, psychomotor speed; learning new tasks, memory and visuospatial dysfunction.<sup>1,14</sup>

There has been some debate in the literature about the relative contribution of lead and volatile hydrocarbons to the neurocognitive impairments seen in petrol sniffers. A review of the literature would make these summary points:

1. Both lead and the hydrocarbons contribute additively to neural dysfunction particularly in the cortex, cerebellum, and the brainstem areas.
2. The longer the exposure to these neurotoxins, the greater the damage
3. Both sniffers and ex-sniffers are more likely to have neurocognitive deficits than non-sniffers. These deficits occur in those who have not necessarily experienced episodes of acute encephalopathy and the severity of abnormalities is reduced with abstinence.

4. The range of impairment is mild, and reversible changes with cessation of the sniffing to severe and irreversible encephalopathic states resembling dementia that could be fatal.
5. The neurocognitive impairment is more severe in those sniffers who have had episodes of acute encephalopathy.
6. As blood lead levels correlate with mortality<sup>14</sup> unleaded petrol has been introduced into some communities. These have seen a reduction in petrol sniffing related hospital admissions.<sup>1,7</sup>
7. A longitudinal study is required to establish if there is any reversibility in the neuro-toxic effects of petrol.<sup>13</sup>

#### Mortality and morbidity

There is still limited accurate data available about the actual number of petrol-related deaths in Australia. There were 63 deaths reported in Australia between 1981-91, though due to problems with reporting it is likely that this figure is an underestimate.<sup>1</sup> Causes of death include septicemia, cardiac failure, pneumonia and lead poisoning as well as burns and accidents.<sup>8</sup>

Again it is difficult to quantify morbidity but Burns found that petrol sniffing accounted for 4% of all medical conditions in the Northern Territory, and there were 133 admissions to Alice Springs Hospital between 1981-90.<sup>1</sup>

#### Other health effects

These effects are summarised in table 1. There is no evidence that petrol sniffing per se is causative in the development of psychiatric illness, though it is evident that a number of people with mental health illness may sniff petrol. Such usage may precipitate relapses of their underlying illness.

Psychological dependence occurs though true physical dependence is uncommon.<sup>15</sup>

#### Social effects

Very briefly, the social impact on individuals who petrol sniff includes:

- decreased school attendance and hence performance
- alienation from family and community
- ostracisation
- involvement with the juvenile justice system (fortunately mandatory sentencing is now repealed in the NT)
- promiscuity
- increased inter-family conflict
- social disruption
- reduced morale in communities
- flaunting of authority
- property damage.<sup>1,2,5,7</sup>

Table 1: Adapted from Roper 1998<sup>16</sup>

Acute	Prolonged Inhalation	Chronic
Acute encephalopathy hallucinations euphoria delusions dissociation from environment  weightlessness irritability Behavioural emotional/sexual disinhibition  aggression hyperactivity somatic anorexia body pains headache and fatigue Neurological motor incoordination muscle weakness slowed reflexes Cardiac Sudden death	Neurological delirium loss of consciousness decreased respiratory rate seizures  hypoxia coma Sudden death	Neuropathy ataxia tremor nystagmus toxic encephalopathy  peripheral neuropathy Renal metabolic acidosis Haematological disorders myeloid metaplasia  aplastic anaemia respiratory disorders emphysema aspiration pneumonia malnutrition Skin infections STD

**Clinical management**

Health clinics and hospitals are involved in the management of petrol sniffers in acute illness, including the management of seizures, agitation, strange and bizarre behaviour, violence, self-harm behaviour, and accidental injuries such as burns. These are labour intensive tasks which can paralyse clinics for days at a time.<sup>17</sup>

Apart from these acute presentations the general health of this group of chronic sniffers is poor, often due to the indirect effects of their poor nutrition. They are more prone to skin disease, sinus and upper respiratory infections and the like. Fasting or an erratic dietary intake can increase the absorption of lead, so attention to diet is important.<sup>2</sup>

There is no pharmacotherapy per se for petrol sniffer dependence unlike that available for nicotine, alcohol or opiate addiction. The mainspring of care in the acute crisis is protection of the airway and urgent evacuation to a facility with ventilation capacity, especially if encephalopathy is suspected because of the mortality associated with this condition. If sedation is needed for behavioural 'dyscontrol' use a mixture of benzodiazepines and/or antipsychotic medication (see Psychiatric Emergencies protocol). Seizures should be managed as per the Fits protocol.

In hospital attention to hydration, airways support, treatment of sepsis and seizures, intensive nursing care and chelation therapy has been used for more severe cases of encephalopathy and lead intoxication.

## Chelation therapy

Chelating agents are chemical compounds which bind heavy metals such as lead. The use of EDTA, BAL, Penicillamine and Succimer in encephalopathic petrol sniffers assumes that tetraethyl lead is the chief neurotoxic agent in leaded petrol. It is known that both lead and the hydrocarbons contribute to this toxicity.

Evidence for the use of chelating agents in petrol sniffing remains inconclusive. In Goodheart's group chelation lowered lead levels by mobilising inorganic lead within the blood. A reduction in blood lead levels and neurological improvement has followed chelation therapy.<sup>1,13,14,18</sup>

Chelation therapy has not been uniformly used in those hospitals likely to admit petrol sniffers as there has been disagreement as to its effectiveness and safety.<sup>2</sup> In this author's experience chelation therapy is very uncommon in Alice Springs. This year a baby of a chronic petrol sniffer received chelation therapy due to elevated lead levels. Obviously, its effectiveness will be determined in years to come in terms of whether the baby achieves a normal psychological/neurological development (personal communication Dr. Wheaton, Paediatrician, ASH).

While in Darwin Dr. Burrow (Staff Neurologist) described an aggressive management approach that includes oral succimer or EDTA/BAL if unable to tolerate the oral route. He has found that this group had better outcomes than those who had not been chelated. It is also evident that the need for this treatment has declined over the past few years. This may be related to the introduction of unleaded petrol in many of the Top End communities (personal communication<sup>1,12,13</sup>).

Chelation therapy can have serious side effects, including nephrotoxicity, hepatotoxicity and skin reactions. D'Abbs 2000 and Brady 1992 summarise the other concerns with chelation:

1. If exposure to lead continues whilst on penicillamine this may lead to increased lead absorption. Often sniffers return to the practice after discharge from hospital.
2. The literature is equivocal about its effectiveness with organic lead toxicity (i.e. petrol sniffing) compared with the evidence for use with inorganic lead toxicity.
3. In some animal studies using EDTA, although levels in the blood, bone and liver may decrease, the levels in the brain may increase by as much as 100%.
4. It is not known how effective chelation is in removing lead from the brain.
5. There have been no controlled trials to establish its effectiveness.

Despite these cautions the consensus view seems to be that the role of chelation, although limited, may be beneficial in the short term at least.

All agree that primary and secondary intervention strategies have the most potential to reduce petrol sniffing morbidity and mortality.<sup>7</sup>

## Rehabilitation

Rehabilitation is an area generally neglected by the literature. There is inadequate data as to the numbers of sniffers with significant disablement. Mosey (in 1997) reported 59 severely disabled people in the Central Australia region, although she recognised that this figure is likely to be an underestimate. Several of this group required twenty-four hour institutional care, and one cost the Northern Territory \$100 000 per annum for their care.<sup>9</sup>

However, the majority of the burden of care for this group rests with the families who often labour without much support. Most out-station programs are not designed for the severely disabled sniffer, nor are they able to cope with the severely behaviourally disturbed person.

There remains considerable debate about what an effective model of rehabilitation looks like and where it should be.<sup>7,9</sup> NT Government policy has favoured the out-station rehabilitation programs, such as those found at Mt. Theo

and Injartnama (though support is often financially tenuous) rather than urban based programs.

Although:

1. Not all remote communities or urban centres have access to out-station programs.
2. Carers are often exhausted and sometimes request respite options in urban areas where there are more health, educational, recreational and other facilities available.
3. Out-stations often are very isolated and have limited access to health, education facilities or allied health professionals such as physiotherapists or counsellors.
4. Research is required to evaluate the effectiveness of such programs.<sup>7,9</sup>

These out-station programs are popular as they provide respite, an opportunity to dry out, are culturally appropriate and the young are often involved in meaningful activity.

D'Abbs commented of the utility of urban residential programs: 'the limited outcome data available suggests that such a use of resources may be less effective than a program based on recreation, community development and individual and family counselling'.<sup>7</sup>

[Editor: Part 2 of Petrol Sniffing goes into more detail of approaches to rehabilitation and recovery after petrol sniffing induced brain injury (or any other brain injury).]

### **Interventions**

Any successful intervention must address concurrently three characteristics.

1. The pharmacological properties of 'the drug'.
2. 'The set' or particular attributes of people using the drug.
3. 'The setting' or the socio-cultural-political-ecological environment in which the usage takes place.<sup>19</sup>

Without such attention interventions may suffer from being ad hoc, crisis-reactive and discontinuous. These inconsistencies have been a feature of historical approaches to this problem.<sup>7,9</sup>

A summary of interventions is in table 2.

For an excellent summary of the range and efficacy of interventions used, d'Abbs and Maclean's 2000 review is highly recommended.

A summary of the salient points of interventions includes:

1. Any intervention is better than none.<sup>9</sup>
2. For success there needs to be a whole-of-community participation in the devising and implementation of any program and a variety of interventions are required that look to the 'drug, the set and the setting'.<sup>7</sup>
3. d'Abbs believes that the outlook is brighter than a decade ago, possibly due to the introduction of avgas, unleaded petrol and out-station detoxification and rehabilitation programs.
4. Any programs developed need to be supported by the wider community, including whole-of-government, to ensure consistency, encourage sensitive evaluation and the provision of technical support and advice. A coordinated approach is mandatory.<sup>7,8,9</sup>
5. Programs need to reduce the number of adolescents taking up the practice, minimise the exposure to those who use, and provide care to those who are disabled.<sup>8</sup>

6. 'The most effective long-term strategies against petrol sniffing are likely to be those which broadly improve the health and wellbeing of young Aboriginal people, their families and communities'.<sup>7</sup>

Brady agrees that success is not likely to come from drug-related interventions alone but a more holistic approach: 'People abandon their drug use when it begins to interfere with too many other valued aspects of their lives. If there are no other valued aspects to life then there is simply no compulsion to abstain.'<sup>2</sup>

**Table 2: Some petrol sniffing interventions (adapted from d'Abbs 2000)**

<b>Level of intervention</b>	<b>Intervention strategy</b>
<b>Primary:</b> prevent emergence/spread	Education Restricting availability of petrol Adding deterrents to petrol Recreational programs and activities Movement to out-stations Initiations and other ceremonies Outlawing petrol sniffing
<b>Secondary:</b> reduce/halt further progress	Individual and family counselling Skills training Legal punishment and other statutory sanctions Night patrol Community development Harm-reduction including the use of unleaded petrol and avgas
<b>Tertiary:</b> treatment of users	Hospital treatment Rehabilitation

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## **Part 2: Dealing with brain damage after petrol sniffing**

### **The bush mechanics of cognitive skills recovery: some suggestions**

We are thinking about how to develop or rehabilitate cognitive skills of people affected by petrol sniffing or other similar forms of acquired brain damage. The suggestions here are for remote-area workers on the understanding that help for people in that condition will probably be sporadic and unsupervised, and efforts at rehabilitation will probably be carried through outside the institutionalised health service and away from consistent professionalised help. We are talking about bush work.

For the effects of volatile substances on the brain and nervous system, see part one above.

The suggestions given here are really about a set of principles. They are offered based upon the position that the human being, especially young human beings, have remarkable powers of recovery.

When faced with the problem of making up recovery strategies to encourage the rehabilitation of cognitive capacities there are, of course, the basic diagnostic questions to be asked about the person, their history, situation, as well as considering carefully the people and environment where the rehabilitation procedures would have to be carried through.

### **The person**

This is normal diagnosis and prognosis assessment.

- History of the problem and the person.
- Characteristics and the nature of the disabling process.
- The seriousness and chance of recovery.
- The strength of the person's will, purpose and capacity to make effort.

### **The setting**

What actions can be taken to stimulate cognitive development may depend upon the setting of the life situation, e.g. in a community or in some form of supported care. This includes consideration of the family group situation, how the family handles the person and whether all rehabilitation has to be handled by professional input or whether family members can be engaged in carrying out stimulating activities. This has to be realistically assessed. There is no point in making well-meaning suggestions that cannot be followed through. There are factors operating in most remote-area communities which make it difficult to care for disabled people. These factors need to be assessed realistically.

### **Where to begin**

Imaginative therapists give attention to how the local situation can be used for the benefit of the patient by making use of the opportunities around. I remember a creative physio who helped her ex-petrol sniffing patient to recover the use of

muscles by getting him to crawl and then walk through the resistance of deep sand of a desert creek bed. She took advantage of local conditions. Such therapists are attentive to how cognitive skills are normally developed in children and young people in the specific remote-area environments, culture and language group in which they work. The story will be different, for instance, if the injured person has been brought up in, and still lives in, a Top End fishing environment, a central desert settlement or a town camp. Culture and environment help shape the mind and help shape the way specific mental capacities and abilities develop.

After assessing the chances of recovery and what might be 'normal' strategies in a hospital-supported treatment, one might have to consider what will work in an Indigenous bush setting and what opportunities there are to make use of. This may take imagination, patience, and courage by the practitioner, as well as adaptability.

As a rule of thumb framework to help devise such strategies the following principles may help.

1. Cognitive capacities are about our abilities to take in information and impressions through the five senses. Use all five senses.
2. The brain normally works swiftly to put together these impressions, to make order, sense and meaning for specific human purposes. Develop exercises which challenge the brain's capacity to find and make order, sense and meaning in simple systematic stages where a purpose, desire and even a survival need are felt by the patient.
3. Different cultural groups, in order to survive in different environments, have developed the senses in unique or specialised ways and have unique, specialised and agreed ways of considering what order, sense and meaning are. Be aware of and make accurate use of culturally specific challenges based on local survival techniques and culturally supported skills.
4. The concept of Multiple Intelligences is useful. Cognitive skills might regenerate through stimulating exercises across all five senses and across the spectrum of a variety of intelligences which involve skills in handling relationships, kinaesthetic and sensory skills, skills with numbers, language, pattern-making, arts, thinking, logic, improvisation and humour. Cognitive development therefore can take place and be stimulated in many modalities of intelligence. Remember bush mechanics.

You can work out a kind of grid framework for developing exercises in any setting. The patients, family or friends may be prepared to carry them on once the principles are grasped, understood and practised.

The four-sided framework can be set out on paper, or the ground if working in camp, and worked through with family or carers.

1. Set out the five senses. The brain works with these five modalities of perception.
2. Mark out a variety of multiple intelligences (see note below), which you are happy or able to work with. In a systematic way set about devising exercises or challenges in those modalities which will stimulate the patient and the carers and make sense to them.
3. Note what the environment and cultural habits/practices have to offer, both positive and negative.

Select a series of basic activities (from the list below), which are likely to stimulate cognitive capacities through work in any of the five senses and across a variety of intelligence modalities. The selection of modes of intelligence to work with will depend upon what the patient is capable of, or known to be capable of, and what is appropriate and available in that cultural group. These matters have to be thought about in order to make the exercises relevant and sustainable.

I have used the word 'things' here. 'Things' can be any actual or mental objects which can be used, moved around, played with, sorted, joined, recognised,

remembered etc., and include words, sounds, music, smells, colours, stones, paint, body parts and people as well as internal 'things' such as memories, experiences, dream fragments, stories, feelings and thoughts.

The complexity of the things and the complexity of the exercises with them depend upon the degree of damage in the patient and the degree of complexity that the patient and their family can deal with.

4. Basic activities which help the brain do work include variations of:
- Recognising and identifying things
  - Sorting things
  - Linking things
  - Putting things together and into places
  - Pattern making and pattern recognition
  - Remembering things
  - Tracking things
  - Puzzle solving
  - Jokes
  - Play
  - Dexterity/hand/body/eye coordinations
  - Rhythm/dancing/singing
  - Cultural story, pattern/image making, music etc.
  - Family relationship mapping (who is who and where)
  - Country/geographical mapping and memory (who comes from where and who has been where)
  - Animal observation, recognition and mimick-ing.
  - What else?

These are some suggestions to stimulate your own problem solving capacities. Specialist colleagues who work in speech therapy, physiotherapy, etc., will have developed repertoires of techniques which you might call upon to adapt. The suggestions here are made to help anyone whose work might bring them into contact with people whose cognitive abilities may have been affected by sniffing and where no specialists are available.

(The concept of multiple intelligences (Gardiner) is that all people have a general intelligence, but that special capacities may develop in different directions for special purposes. People may have aptitudes with which they are born, such as musical, mathematical or verbal 'intelligence'. Some people are blessed with sensory motor or kinaesthetic physical abilities, which might come out as a skill in football or gymnastics or performance. Different cultural groups may set priorities or favour the development of certain 'intelligences'. Sometimes gender differences and socially constructed gender expectations may come into play here. In remote-area Aboriginal society the notion of multiple intelligences is very significant because the priorities of what is considered intelligent in the dominant, mostly European urban-based society and education system may mean that Aboriginal favoured intelligences are downplayed. Someone working to restore cognitive abilities may wish to check these matters out.)

### **Part 3: Surviving psychic pain**

#### **Social matters, the context of the problem and a summary of local and personal experience**

[Editor: This section gives a more personal account from Craig San Roque, who has many years of experience working with petrol sniffers. It goes over some ground covered in the other parts of this topic and may help practitioners make sense of their role in the broader petrol-sniffing scene.]

Mt. Theo's success [with sniffers] has not been about changing any individual, but changing what's cool and groovy.<sup>1</sup>

## **Introduction**

This background paper is not intended as a review or analysis of the clinical treatment of patients suffering from the misuse of volatile substances. Rather, it looks at social matters, the context of the problem and a summary of local and personal experience. It offers some guidance to the practitioner new to the area so that he/she may get a handle on the complex and elusive behaviour of 'sniffers'. This paper is about attitude, it recognises the distress which the practice causes to people who have to deal with it. There are, as yet, no easy steps toward alleviating what some see as a collective existential trauma but, maybe, getting some help with attitude and history will save the practitioner a few headaches. This paper is written by someone who has spent more than ten years directly involved with the problem in Central Australia. It is unashamedly subjective and attentive to the feelings which sniffing stirs in many persons, Indigenous and non-Indigenous.

### Meeting the problem

#### Psychic pain

Petrol sniffing makes people very upset. It is painful to see, painful to have to put up with. For health professionals who have an instinctive response to relieve pain and to care for people it is particularly frustrating – and even bewildering – to be helpless, unable to do much to intervene in the cycle, let alone stop it.

Sniffing volatile substances is now part of the harsh reality of life in the bush, just as drug use is part of city life, but coming upon it for the first time can be a shock. Faced with sniffers' apparently senseless, self-destructive behaviour you may become puzzled, afraid, angry and hungry for explanation. There may be no satisfying explanation and no satisfying solution. If you are such a person, meeting sniffers for the first time, you may despair at working partners and family members who seem to have given up trying to change sniffers' behaviour. You may wonder if you too could live with sniffers as though they were shadows. You may hear hard, cynical comments about 'useless families' and 'dysfunctional communities'. You may feel a peculiar kind of psychic pain when in the presence of sniffers. You may discover that demonised sniffers are actually quite sweet, naïve and just bit lost – when not intoxicated. You may wonder what all the fuss is about.

#### A sniffing syndrome?

All such reactions are a part of the 'sniffing syndrome'. By 'sniffing syndrome' I mean here not the pattern of symptoms of a disease but that there is a pattern of behaviours and reactions, thoughts and feelings which seem to go with the sniffing. The characteristic pattern can be seen operating among sniffers, among their families, among workers and is also seen in the characteristic way in which the media and community, state and federal governments and agencies react to and respond to 'the problem'.

Describing and analysing the social/cultural aspects of the sniffing pattern is a subject in itself, too big for this paper, but some parts of the pattern of the syndrome include the following:

- repetitive cycles of emotions of frustration and despair and anger
- passive acceptance of terrorist-like behaviour
- paralysis of thought and action
- rejecting or demonising sniffers

- passing the buck, blame and scapegoating of 'family' and hard working individuals or (unsupported) programs for 'not doing anything'
- bewildering funding requirements and requests for yet more reports.

(Fortunately the Commonwealth health service agencies involved seem, in 2001-02, to be moving towards establishing a comprehensive policy framework as evidenced in the Youth Wellbeing projects terms of reference, as evidenced in the Central Australian Youth Link Up project's terms of reference).

It is worth noting, in a professional manner, the way the social aspect of the 'sniffing syndrome' works at a macro level, as well as noting your own micro reactions and changes in perception and attitude. Noting the shifts in the psychological effect of sniffers' behaviours upon yourself, the work team and the mood of the community groups are all part of the diagnostic process. These observations may help in the development of a local holistic response to a haunting, elusive problem.

#### Noting history

Over the past twenty years or so there have been many people, Aboriginal and non-Aboriginal, throughout Australia, who have literally given blood, sweat and tears to help sniffers. They deal with the peculiar aura of anarchic depression which sniffers evoke and carry around as though it were some kind of genie, which comes out of the can.

Unfortunately, and frequently, the experiences of past workers, the way they have described the problem and their contributions are forgotten or blindly criticised or diminished by the new wave of enthusiastic politicians or professionals. This forgetting of what has come before is part of the problem. There is something about the petrol sniffing which attacks links in thought; it is as though gaps are made in human beings' capacity to think. The failure of both Aboriginal and non-Aboriginal people to think through the problem is a problem in itself. Maybe it is the failure to know how to think about it which seems to lead to repetitive paralysis of concerted action.

Despite this there are systematically worked out and documented patterns of response, which have been developed. For instance, the work by: the Healthy Aboriginal Life Team (HALT) in the late 1980s until 1991; Petrol Link Up<sup>2</sup> Intjartnama/San Roque during 1996-99 Western Line project; Yuendumu project throughout the 1990s; NPY Women's Council project 1999-2002; and the South Australian Aboriginal Drug and Alcohol Council.<sup>3</sup> The d'Abbs, Maclean 2000 Review, the Mosey and MacFarland and Roper reports and the substantial consistent work of Maggie Brady all indicate patterns of response.<sup>4-8</sup>

Andrew Spencer Japaljarri, who could now be named as a grandfather of sniffing theory, during his work with the petrol sniffing intervention team HALT, pointed out strategies again and again in conversations and in concept paintings in the HALT posters. In 1993 he summarised his ideas for action in his definitive painting 'Thinking About Young People' (now in the custody of Intjartnama). Unfortunately, most of HALT's reflective work on the problem of 'how to think about sniffers' was brushed aside when the Menzies' evaluation of HALT found fault with and reported criticism of some of their actions and outcomes. This criticism and the way it was taken up and led to the abandonment, not resurrection, of the HALT efforts is a typical instance of the 'sniffing syndrome' in action. The baby went out with the bathwater. However, the inspirational groundbreaking work of HALT (Spencer, Franks and Lowe) remains as a guiding spirit for many.<sup>9</sup>

Top End writers and communities (such as Maningrida) and in other regions must have similar collections of material. It is not possible here to summarise and review Australia-wide projects. However, d'Abbs and Maclean provide leads.<sup>4</sup> But for all the reports and recommendations there is still a mood that nothing much has happened to shift the problem.

An encouraging note of despair

It is a strange experience to walk into the world of petrol sniffing. To some it is like stepping into a black hole where nothing makes sense and every positive effort disappears; to others it is a bewildering labyrinth of grief, lost opportunities and lost ideas. I am reminded of the French existentialist novel *The Plague* by Albert Camus.<sup>10</sup> This is a bleak account of an epidemic which devastates a remote North African desert town. The doctor and the mayor are discussing the problem of disposing of so many accumulated bodies. They take some comfort in having found a solution, if not to the plague, at least to the burial and the paperwork problem.

Dr. Rieux comments: 'Yes, and though the burials (go on and) are much the same, we keep careful records of them. That, you will agree, is Progress.'

At the risk of drawing out the pessimism, but hoping that 'forewarned is fore-armed', it has to be underlined that with the 'petrol plague' there is not much sight of progress, we cannot even pride ourselves that records are carefully kept. The burials go on. The plague has the upper hand. Thus, advice to those entering the sniffer system is often as simple as this:

Study the history; keep expectations measured and low; resist being paralysed; take note of the patterns; write incidents and stories down; keep calm and steady when in the presence of sniffers; do not become isolated; link up with other agencies; advocate positive youth activity groups; insist that thoughtful planning be used, not emotional action and reaction; mind your own psychic pain; and hold on to a sense of humour.

#### **Sniffing: What is it?**

The section below will help get you started. (For a fuller story and leads to other work see the reference lists in d'Abbs, Maclean Review, the ADAC SA manual, the Petrol Link Up Report 1995.<sup>4,2)</sup>

The stuff

Volatile substances common and accessible in bush regions include super and unleaded petrol, solvents, spirit-based glues (especially in tyre repair kits), spirit-based paints, polyurethane, paint spray cans and other aerosols. These are often mixed as chemical cocktails with household cleaners and any other chemical, which might appeal to an inventive mind. Word always passes around.<sup>11</sup>

Volatile substances, when inhaled and used as a drug, change perception, emotion and sensation, in this sense they can be classified as mind and mood altering drugs.

The special ingredients in petrol and glues which affect the human brain are the additives which are intended to make them do their job better. They are not so useful for the human.

The chemical additives include the hydrocarbons, especially toluene and benzene. The hydrocarbons affect the brain chemistry. Some research has been done on how the hydrocarbons, fluorocarbons, methanol, methylene chloride, etc. deal with the brain biochemistry and what the effect and damage is. Useful papers by Ron and Maruff, give a lead into this subject.<sup>12,13</sup> However, the psychopharmacology and the nature of the hydrocarbon/neurochemistry reaction is still rule of thumb business. Or, if there are specialist researches, this information has not been translated into a form which is useable in relationship with people who live in remote-area Indigenous Australia. The Petrol Link Up's 'Brain Story' is an attempt to set out a format for such efforts.<sup>2</sup>

Hydrocarbon/human chemistry reactions do not in themselves seem to be addictive. You can say that sniffers become obsessed with sniffing and dependent on the cult or life style, and will work ingeniously to get their stuff, but it does not seem to be true chemical dependency. Consequently, the withdrawal dynamic

- as found with nicotine, opiates or alcohol - does not apply, so one cannot make comparisons or infer that petrol dependency follows the usual drug withdrawal or overdose patterns. However, one may as well think of petrol sniffing as an addiction because of the persistent reliance by core sniffers on having it around them. People have to keep sniffing to keep high, which is why one sees cans carried permanently as a necklace, ready and available.

In the bush it is mostly the vehicle fuels, the workshop and garage glues and paints, which are easy to get. Despite the use of diesel and the successful promotion and introduction of AVGAS/COMGAS as the preferred remote area fuel (intended to reduce access to the sniffable stuff), ingenious youth bleed local vehicles, look out for tourist vehicles, seek out other likely substances and experiment with volatile mixtures. 'Petrol runners' exist along with the 'grog runners' and 'dope dealers', and even close 'family' will sell petrol to sniffers or be blackmailed to supply them.

Leaded (or 'super') and unleaded petrol both contain the volatile substances, the hydrocarbons. Leaded petrol contains lead, of course, which has a characteristic way of damaging the human brain. Lead is toxic (poisonous), but it is not the lead which makes the 'high', although some kids seem to think so. It is probably the hydrocarbon content, but the lead as well as the hydrocarbons change and damage the brain's delicate system.

Research work has been done at both Alice Springs and Darwin hospitals on lead chelation therapy (i.e. to clean the lead out of the body system). This research may be available through Burns and Currie's useful papers and the hospital libraries.<sup>13</sup> See also Brady, and Brady, Torzillo.<sup>14,15</sup>

Leaded petrol is phasing out (2001). How the new lead-replacement fuel will affect sniffers is open to question.

In general diesel and AVGAS (aviation fuel) are not volatile enough to produce the sniffer's high, but sometimes mixtures are made or kids will experiment and add plastics or polystyrene-based matter to provoke a reaction. It is not clear if the perceived 'high' is a placebo effect or if there is a genuine mind altering reaction. Either way sniffing such mixtures is still dangerous.

There has been a lot of work on the popular drugs, opiates, amphetamines, cannabis, alcohol etc., but not on the volatile substances. Despite media publicity over many years the politicised concerns, the rhetoric and some good foundation material there seems little interest in supporting and updating Australia-specific research that might help set up a systematic and informed procedure for the analysis of volatile substance composition, its effects on the human body systems, the social and cultural systems, the Indigenous perspective and the assessment, intervention and treatment of Indigenous children and youths who are affected by the petrochemical repertoire.

#### The effect

The hydrocarbons are said to 'melt' the fatty tissue, the myelin sheath that protects our neurones, (rather like the insulating plastic on electric cables). Under the impact of the hydrocarbons the neural networks gradually degenerate. The degeneration is gradual, progressive.<sup>3</sup> It is not clear if the degeneration of the nerve material itself has a psychological or altered state effect on perception and sensation or if it is mostly the hydrocarbon chemistry bonding with the brain biochemistry which produces the sought-after euphoria and altered states.

Petrol sniffing does produce a characteristic pattern of reaction. The reactions are also a result of how long and how often and how persistently a person will be inhaling fumes. Sniffers describe changes in their perception of hunger, heat, cold, space, time, movement and the relation between so-called inner and outer realities. Sensory, visual and auditory hallucinations are described. Sniffers might become uninhibited, emotionally tender and friendly like a puppy, lose sense of personal boundaries, lose sense of social or cultural restriction.

At some point the negative social effect sets in and consistent sniffers begin to move into the 'camp of the outsiders'. They may become exiled. They may ignore normal kinship relationships, threaten and offend immediate family, especially women and elders, break sexual and social conventions, become anarchic, psychopathic, paranoid and disturbingly dangerous. The personal negative effects can be simply described as neurological degeneration with consequent psychological degeneration. There is a continuum of this degeneration, it may continue over many years of sniffing, slowly getting worse. On the other hand some chronic sniffers recover, not everyone ends up on death row and threats of 'damnation' are not always fulfilled. If only the picture were so simple.

Persons in the grip of what could be called a 'temporary petrol sniffing derangement' may appear to be psychotic. This is a dangerous state and should be treated as such. When in this state persons may act in a berserk manner. Unpredictable violence is likely. There are many recorded incidents of the sudden use of weapons, setting alight by petrol dousing, accidents and self-harm. The state may pass and the person returns to a normal, even contrite, child or youth again. This change of personality can be bewildering to family. (The change also helps family to excuse their behaviour). In general it is advisable to treat confrontations with a deranged sniffer with all the caution and backup needed in critical incident management.

#### The psychology

While there has been observational and anecdotal work done on behaviour, behaviour management and the community reactions to sniffers which clinic staff may find helpful, the psychological, spiritual and mental aspects are hardly mentioned in the literature even though many Indigenous people speak about sniffing and the experience of sniffers in these terms.

The taboo about speaking about the spiritual and subjective aspects of mental life in the bush is loosening up, however, and there are a few psychologically minded practitioners who do not limit themselves to the constructs of a mainstreamed organic psychiatric framework.

A study of the imagery used by Indigenous people when painting and talking about sniffers will reveal astute psychological observations and family system explanations (e.g. The paintings of Marlene Nampijimpa Ross's 'Lonely Boy Story' canvas; Bertha Nakamarra Dixon and Kumanjai Minutjukur's work for HALT in Anangu Way reveals such complexity of analysis once one learns to read the paintings).

The question of the psychological state of sniffers, both as a pre-existing condition and as a drug induced condition, needs serious research and attention by both Indigenous and non-Indigenous thinkers and practitioners.

In some troublesome and troubled individuals there may be pre-existing psychological or sociopathic states which become amplified by the sniffing effects. Bush clinic workers may have to become alert to look at sniffers who are in trouble from several angles at once.

NPY Women's Council have been supporting a traditional healer's project and some very interesting issues have been raised by some ngangkaris re the treatment of sniffing. The Intjartnama and Yuendumu projects have also contributed here. However, reviews of petrol sniffing projects, even in 2002, seem to ignore the psychological, phenomenological and epidemiological dimensions as well as ignore and fail to consolidate the astute observations made by Indigenous people in their own terms. There is a kind of sidelining which occurs. This deserves more appropriately conducted investigations, especially since the Indigenous view is not adequately represented in mainstream literature or research.

#### A bit about imagery

The petrol sniffing scenes in the film Yolngu Boy are a good enough depiction of the states, behaviours and background dilemmas of a boy in the grip of petrol. The

way the film shows his inner imagery and delusions shows the way things are. You might be interested to hear about an unexpected result of that film. There are rumour stories told by sniffers about the boy (the actor) in the film who has apparently come back from the dead after he passes away in the film. The boy dies in a (suicidal?) fall while under the influence of petrol. You see the boy's death in the film, but later people have seen him (the actor) walking around. This 'proves' that sniffing doesn't kill you. It proves that sniffers can come back to life . . . like Jesus . . .

If you get a chance to listen to sniffers talk it is worth noticing what they say about the images and the symbols. There was a time in one community when each sniffer 'painted up' their cans. In another some sniffers painted themselves up with black ash. Sniffers draw, talk about and remember specific images while under the influence which are similar to those experienced by persons in the grip of paranoid states. They speak of voices, companion spirits, devils and monkeys, distorted animal spirits who communicate with them or instruct them to do this or do that.

The sniffer stops being the agent of his/her own action and passes responsibility over to another. Some sniffers can be sensitive to the feeling of being attacked and may act as though possessed by destructive hero figures whose job it is to attack, destroy and take others to death. This imagery gets mixed up with American film demons, sexual pornography and traditional Indigenous supernatural forces. (e.g, mamus, kadaicha, 'Rambo' and obscene language and body parts mixed up together).

#### Take care

Knowing that sniffers can get into disturbed, dangerous and delusional states, workers and family of sniffers tend to be very careful around them. This partly explains the apparent passivity about stopping sniffers. Some horrific deaths have been inflicted by people who have attacked others when in the grip of drug-induced persecutory fears and delusion. I mention this not to inflame fears or demonise sniffers but to underline that watchful caution is always needed, since the internal experience of sniffers while intoxicated may be quite unpredictable.

Another caution is that the term 'sniffing' is often used loosely. It is not clear how much alcohol, amphetamines, cannabis etc. may have also been taken. Adult drinkers may use petrol as an alternative or supplement drug. Sniffers are not only 'the kids'. One may be dealing with hardened poly drug users whose pre-existing mental states, self control and obedience to social control may be in a permanently disordered condition.

It seems that the volatile substances/hydrocarbon effect stimulates dream-like and nightmare-like states. The inner states are often ignored in favour of immediate symptom treatment or social behavioural control.

It is my suggestion that the inner altered states are sought after for a purpose. The search for the altered state will not cease unless the sniffer is removed from the source and the group and is distracted or satisfied by some other activity or internally satisfying experience. This satisfaction may be as simple as a good meal, attentive love, physical excitement and challenging risk. There may have to be deeper solutions. The so-called deeper solutions may well have to address spiritual crisis, but one also has to be careful of idealising or romanticising the spiritual and cultural solutions.

In general it can be said that sniffers need to be taken care of and care needs to be taken with them. However, the behavioural stance taken by most sniffers when intoxicated means that it is almost impossible to take care of them and to attempt to do so may be frustrating and dangerous, unless one is extremely skilful. The skill can be acquired. And so can weapons; and not even the most experienced worker is invincible when a sniffer has a weapon in their hands and unpredictable imagery in their minds.

## The big picture

In short, habitual sniffers may experience bodily and mental hallucinations, primal fears, feelings of invincibility and contempt for normal respect, love and care for self and others. Despite the presentation of being powerful many sniffers are in fact in a delicate or vulnerable physical and mental state. Some are aggressive and some are quiet, passive and fade away into an internal or introverted world.

The 'sniffing syndrome', as seen in the individual person, includes a combined multifaceted picture. Elements of this picture include, depression, lethargy, loss of appetite, changes in body and timing rhythms, sleeplessness, agitation, emotional lability, euphoric states, sexual promiscuity (with a suggestion of enhanced sexual pleasures or liberation) potential sociopathic brutality, and psychotic like states, even if temporary, along with outlaw gang behaviour. Behaviours may depend on age, maturity of sexual stage and the conventions of the sniffer cohort and gender group.

Mild, occasional or children sniffers might seem playful or innocuous, and their behaviour is sometimes tolerated as experimentation or as keeping them out of 'the family's way'. But most thoughtful and observant Indigenous people agree that sniffing is not 'cute' and not 'cool'.

All in all, sniffing is not a pleasant activity to be around. It is a form of intoxication which tends toward the anti-culture, the rejection of humanity and the morbid seduction of death. The psychic atmosphere of the habitual sniffer is mostly disturbing and has a deadening or vacuous impact upon the social environment. The places where sniffers hang out are recognisable by the trashed and necromantic ambience.

There are many unanswered questions. What, for instance, is the degree of the petrochemical effect on the brain/psyche, and how much is the behaviour a display reaction to the conditions of life in a settlement? As we have already suggested a proper and useable study of Indigenous Australian sniffer's psychological and biological states is long overdue.

Some researchers suggest that the children of marginalised, suppressed, Indigenous or poor minorities tend, worldwide, to be the habitual users of petrol and volatile substances as a drug.<sup>16</sup> This may simply be a matter of cost and ease of availability but there may be other issues.

The essentials of the clinical picture and immediate treatment of the sniffer as an individual 'patient' are presented in the CARPA STM section on sniffing. Prevention and treatment programs which deal with sniffing as a family, community and cultural matter are usefully summarised in D'Abbs & Maclean, 2000 and ADAC SA.4,3

It is beyond the scope of this paper to review and update the situation nationally: the interested reader may have to investigate the situation in one's own area. In Central Australia there are projects with seasoned experience in dealing with sniffing as mentioned above. They include Petrol Link Up (til 1995).<sup>2</sup> A contact point may be through the Northern Territory Government's Alcohol and Other Drugs services. Out-station projects include Intjartnama, near Hermannsburg, and Mt Theo, out of Yuendumu. Aboriginal agencies include NPY Women's Council, Tangentyere Youth projects and Central Australian Aboriginal Congress Youth Services and Waltja Tjutangu Palypai. The Remote Area Night Patrols have gathered a wealth of on-the-ground experience. In Central Australia there is a support network, CAISAN, which acts as a forum for many sniffing-related projects. Forming such a network is part of dealing with the matter. This group has exchanged information, initiated projects, supported colleagues, welcomed and informed newcomers, kept a corporate memory together and persisted. CAISAN lobbied resolutely for the Youth Link Up Service which, based at Tangentyere, began

operation in 2002 and may provide a welcome contact, advocacy and integrating function.

### **The causes**

'Sad Boys are Sniffing'

(Quote taken from a HALT poster)

Why do kids sniff?

Some day, maybe, someone will get the chance to put together a full research-based study on the causes, carefully listening to the young people as well as to their friends, family and elders and written in language(s) and presentable to Aboriginal groups in their own terminology. Until that document comes we have to be content with the various ideas that circulate in popular discussion.

Some ideas are as follows.

- Some people find cause in history, poverty, boredom, alcoholic carelessness, neglect and family breakdown.
- Others suggest that it is a mental problem because Aboriginal and non-Aboriginal people can't quite get their minds around what it is all about.
- Some emphasise that sniffing is a symptom of cultural despair, a part of the history of dispossession and a symptom of the tangled side of the mutually destructive Black/White relationship. Sniffing behaviour, therefore, might be seen as a dramatic acting out by groups of young people of a story about this generation's grief, worry and depression about their situation. No one person is writing the script, but it's the same story in variations all the way from Redfern to Wilcannia, to Alice to Derby.
- Some say the sniffers are part of the emergence of a protest movement of young Black Australia. The revolt is against the elders and tradition. It is also an attack on White culture and property. Anger, envy, contempt or protest? Maybe it's just about not having enough food, love and action.
- Others point out that the sniffing gang, roving day and night, is simply what you will find anywhere in the world, from western Sydney to Los Angeles, 'Guns, drugs, sex, rock and roll' are part of the image conscious adolescent romance of life and death. Others suggest the night-time, roving, whistling hunter bands of young men is a continuation of the old time young male initiatory group behaviour. Changed a bit though. There is a mirroring of the Americans and a continuation of custom, mixed up.
- Some point out that there has to be more understanding about Aboriginal child-raising methods. There are customary reasons why people don't say 'no' which is linked to the time and manner in which boys pass over to becoming men and then have to deal with power, passion, autonomy and responsibility. Some boys make it through to a cultural maturity and some mistake petrol-power and grog-power for the real thing. These matters may be difficult to talk about tact and sensitivity is involved.
- Others say that sniffers are just kids without direction and discipline. It is their parent's fault, or it's the kids copying what they see their parents do, wasting their lives on being drunk. But some parents blame the Whites for bringing grog and petrol in the first place. The circle of blame goes round and round like a strange kind of wrong way payback.
- Others say that all the fancy explanations don't matter a damn, it doesn't matter what the causes might be, kids will sniff just because they want to. And many sniffers don't really care what anyone else says. They say 'It's my body and I'll do what I like.' End of story.

Causes are there to be found and addressed by family, community and government. The cause of petrol sniffing is to be found not only in the sniffers' camp and the sniffer's problems. It is also to be found in the unique way in which Aboriginal minds work, and in the unique way others' minds work and react. We misunderstand,

misinterpret and miscommunicate with each other constantly. Also, unfortunately, our government departments – while expressing a wish to help – often, inadvertently muddle the problem. Workers in the field often lose heart or become resentful when they have to become dependent upon or deal with government agencies which change policy, change direction, change staff, change position and shift goal posts. The non-government or Aboriginal organisations are not necessarily any different, since they reflect the way the dominant government procedures operate and what is expected of them. Community-based players usually feel like they are on the bottom of the pecking order and that no-one supports them and no-one listens. The ones at the bottom are the ones dealing with the sniffers daily and nightly. That might indeed be you and the quietly distraught grandmother of a sniffer who sits in front of you in the clinic.

### **Solutions**

Analysing causes might be a first step in trying to get your mind around a heart-rending problem. You will have seen that sniffing is not just a medical or clinical problem about respiratory failure or 'fitting' or malnutrition or thought disorder or neurological damage. The petrol-affected patient is there as sign and symptom of complex social, communal and psychological matters. Furthermore, the anarchic behaviour of sniffers reacts in a usually disturbing and disintegrating way upon the family groups and living environments. Everyone eventually gets affected and infected: the school staff, the police, the storekeepers, etc. Thus, not only is a sniffer a sign or symptom, he or she is an active agent for increasing stress and turmoil and depression in a family system which may already be under pressure. Sniffers might enact and dramatise the problem of young people in trouble with their culture, their future and their direction, but it is rare for a sniffer to help to become part of the solution.

Understanding the complex causality and knowing the history may lead to inventing unique and specific strategic solutions for your area. However, as a helpful starter, the ADCA SA manual gives a useful and comprehensive survey of the kinds of solutions which most Aboriginal groups are likely to want to try. The thoughtful d'Abbs & MacLean report surveys already tested solutions.<sup>4</sup> There are many and they are put together in different ways, although there is a basic pattern which is usually about removing or stopping access to the petrol, introducing activities, attending to family matters and setting up projects.

As a simplification all solutions are composed out of a mix of six elements: people, ideas, resources, action imagination, containment.

The sixth element is all-important; it means that a Holding System or Container has to be carefully put together in a way that works well enough in that specific community or location. The holding or containing system puts all the other bits together and links people, ideas, resources, action and imagination.

Many petrol prevention projects fall apart because the central container does not hold or is not held by its supporting or funding agencies or the buck keeps being passed to 'someone else'. Nothing holds together and sniffing keeps slipping in through the gaps in the net. The container might be an elder's council, a youth council, an action group, a government agency or a strong individual. Sometimes people expect a health clinic and its connections to be an integral part of the preventative and possible treatment solution. The question clinic staff have to work through is what role the clinic may have in stimulating or partially holding the containment process until something coherent can be up and running.

Unfortunately agencies or individuals often go it alone, so a first step in any solution strategy is to form intercultural partnerships, links and support networks. Out of such a matrix, a sustainable solution might just be found and carried through.

The evasion and resistance to forming such a link-up may come from surprising quarters, so part of a solution strategy includes being aware of the strengths and shapes that resistance will take from within a community, an organisation or a support agency. Some workers say that working hands-on with sniffers is fairly easy compared to the really serious stress, which comes from dealing with the inconsistent demands of bureaucracies, Aboriginal power politics and family dynamics. They speak especially about the stress involved in negotiating between often incompatible perceptions, requirements and fantasies about the problem. Burn-out of sniffing projects is directly related to this and to the absence of structural support for sniffing prevention projects.

At Intjartnama we talk about this problem metaphorically, as though there were a petrol spirit/ mamu which itself works to break down solutions because the mamu wants to keep the sniffers sniffing. The mamu is always up to tricks; the mamu is quite quick to travel to Canberra and make mischief there if it thinks someone is beginning to really support sniffing prevention. The mamu is equally able to get someone to stand up at an Aboriginal community meeting, make wonderful speeches in favour of stopping sniffing and then go and sell petrol to a neighbour's kids.

Its worth restating that the use of intoxicating substances may never be stopped. Too much is invested in it. Chasing intoxication has been a part of the life and death of most cultures of the world from ancient times. Some cultures have developed social and ceremonial control of intoxicants. For others, drug-making and using has become a serious part of economic survival. Chasing grog and drugs (petrol) is a serious pastime within Aboriginal society, just as it is in mainstream Australia.

You may want to inquire within your local family or cultural group if there are any internally-generated ways of intoxication control which allows for moderate use. There may be people, ideas, stories, experiences and traditional dreamings which can indicate a pattern or an approach, which can help local people adapt their attitudes to intoxication and instruct the young. Sometimes the Christian story helps. But if there are no ideas of control within the local culture then people may have to rely on external 'whitefella' controls, the police, the law and external restrictions. With petrol sniffing this is very hard. It may be generations before Indigenous groups set up internal control for alcohol and drug use. Perhaps only bitter experience is the key.

People like being in altered states. Maybe all you can do is keep young people away from the substances which are most dangerous for them and find alternative ways of getting into the altered state.

### **A meditation**

Finally there is a philosophical question to meditate upon which might help one to think about and think around the experience of living with sniffers.

The question is simply this:

What is it that makes us human?

What is it that makes us Anangu, Yanangu, Yappa, Rilla, or Yolngu ?

What is it that makes us who we are?

We all live in mobs, bound by connections and mutual obligations. And each mob may have its answer to this question.

There is something about the way sniffers behave that makes us upset because sniffers seem to break the rules of being human. They break the rules of being anangu, yanangu yappa, rilla or yolngu

The mind of the sniffer seems to slip away from the things that bind us together as humans. They seem to slip away from mutual obligation. They seem to slip away from the connections. We may love the person who sniffs or pity the sad and lonely, the angry boys and girls, but what makes people so upset is the way they slip away and it is so very hard to bring them back.

Did they slip away or were they let go?

If only there were a way to keep these young people human, to keep them anangu, yanangu, yappa, rilla, yolngu.

Thinking about this causes pain. It is a pain which we seem to have to bear and live with.

### **Further reading**

See endnotes for references mentioned above.

There are three available and essential sources of information and references published in Australia with remote-area workers in mind. Look into these three because they have done most of the hunting and gathering of useful and up-to-date material.

All references in the text of this paper can be found there.

1. Cooperative Research Centre for Aboriginal and Tropical Health PO Box 41096 Casuarina NT. <http://www.crc.org.au>.<sup>4</sup>
2. The Petrol Link Up Report.<sup>2</sup>
3. Aboriginal Drug and Alcohol Council of SA Inc. publication. This package also includes the D'Abbs and Maclean Review and an A4 reproduction of Petrol Link Up's 'Brain Story' flip chart.

This excellent and accessible package is well organised, clearly and visually presented, is full of positive ideas and experiences, contacts and leads. Every Aboriginal-oriented clinic or care agency should have one. Contact:

ADAC.SA  
53 King William St  
Kent Town SA 5153  
Phone (08) 8362 0395

### **In addition:**

Intjartnama Out-station near Hermannsburg has a range of material, teaching stories and painted canvasses distilling their experience in caring for sniffers and developing practical interventions for their area. They also act as custodian for paintings and graphic material developed by Petrol Link Up.

Contact [intjartnama@octa4.net.au](mailto:intjartnama@octa4.net.au), but these out-stations are not equipped to be distribution agencies.

Mt Theo Out-station project similarly has unpublished reports and summarised experience of more than ten years effort in the Yuendumu, Warlpiri region. Try as contact [mttheo@bigpond.com](mailto:mttheo@bigpond.com)

NPY Women's Council Youth projects are developing much experience in their region, and in collaboration with Intjartnama have material on the use of out-station/homeland/detox and community strategy development. 'The Never Give Up News' is a newsletter specifically designed to report on petrol sniffing projects and activities. Get it. Contact NPY in Alice Springs.

Useful media reports include Paul Toohey's series in the Australian over 2001-02.

### **Some representative articles and reviews include:**

Understanding Inhalant uses. A summary of Information. On the web has a comprehensive 10 page listing of relevant articles etc. [www.tcada.state.tx.us/research/inhalants/reference.html](http://www.tcada.state.tx.us/research/inhalants/reference.html)

### **Social and historical:**

Nurcombe, Bianchi, Money, Cawte. A hunger for stimuli; the psychosocial background of petrol inhalation. *Brit J Med Psychology* 1970; 43:367-374 (Australian material).

Carlini EA et al. The use of solvents . . . among children and adolescents from a low socio-economic background: a study in Sao Paulo Brazil. *Int J Addictions*, 1988; 23(1):1145-56.

#### **Psycho-neurological:**

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Unfortunately, and despite consistent pleas from front-line workers, there has been very little Australia-specific research into the effects of petrol sniffing on the brain and body and psychology of Aboriginal youth and family systems. An up-to-date study on the toxicology, epidemiology, long-term effects, degenerative process and the treatment of volatile substance use does not appear to be available, so practitioners are advised to be cautious and not assume that the story is complete or known. For all the care we have taken, the CARPA STM cannot present the definitive picture. We would welcome information and advice.

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