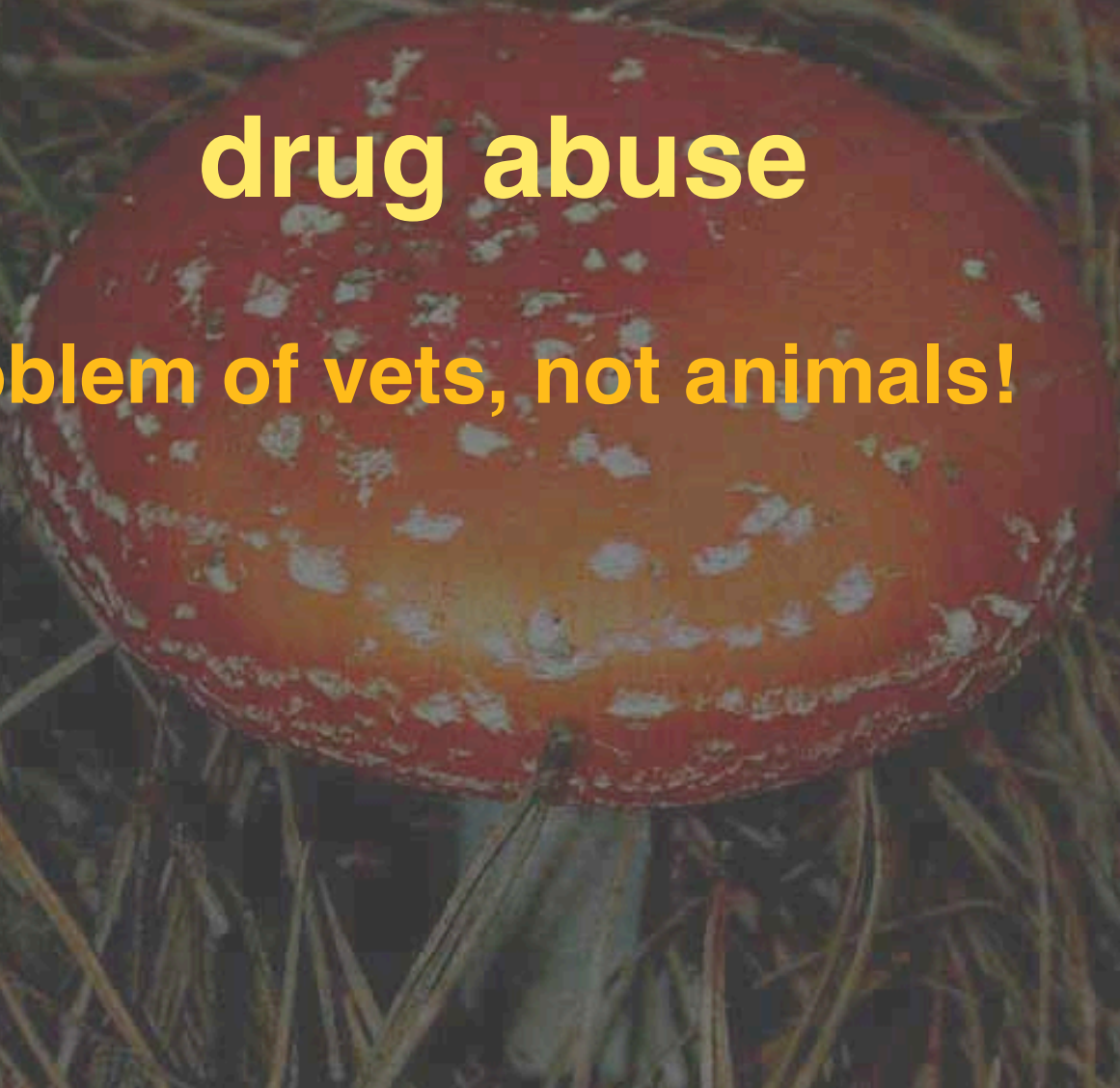


A close-up photograph of a red mushroom with white spots, commonly known as a fly agaric, growing in a field of dry, brown grass. The mushroom's cap is bright red with numerous white, irregular spots. The stem is thick and white. The background is a dense layer of dry grass, creating a textured, natural setting.

Drug Abuse

drug abuse

- a problem of vets, not animals!



drug abuse

A red mushroom with white spots, resembling an Amanita muscaria, is growing in a field of dry, yellowish-brown grass. The mushroom has a bright red cap with irregular white patches and a thick, white, scaly stem. The background is a dense field of dry grass, creating a textured, natural setting.

- **ethical responsibilities**
- **legal responsibilities**
- **personal health**

drug addiction

- **psychological dependence**
 - desire for drug effects
 - drug must have some reward effects
- **physical dependence**
 - body adapts to drug use – withdrawal symptoms if stopped
 - particularly opioids
- **tolerance**
 - probably less important
 - decreased effect after repeated administration
 - often accompanies dependence

A large, red mushroom with white spots is centered in the background. The text is overlaid on this image.

group

drugs

**dependence
liability**

opioids

morphine

high

heroin

depressants

ethanol

moderate

barbiturates

benzodiazepines

stimulants

amphetamines

high

cocaine

high

caffeine

low

nicotine

moderate

psychotomimetics

LSD

low

cannabis

abused drugs

- freely available
- prescription drugs
- illegal drugs



A red mushroom with white spots, likely an Amanita muscaria, is growing in a field of dry grass. The mushroom has a bright red cap with numerous white, irregular spots. The stem is white and appears to have a slight constriction at the base. The background is a dense field of dry, yellowish-brown grass.

freely available

- **coffee**
- **alcohol**
- **tobacco**
- **(GSL medicines)**

A photograph of a red mushroom with white spots, likely an Amanita muscaria, growing in a field of dry, brown grass. The mushroom is the central focus, with its bright red cap and white spots contrasting sharply with the dry, textured background. The lighting is natural, highlighting the texture of the mushroom's cap and the surrounding grass.

coffee

- **caffeine**
 - **A2 antagonist**
 - **lots of peripheral side effects**

alcohol

- **CAGE**

- Have you ever felt you should cut down on your drinking?
- Have people annoyed you by criticising your drinking?
- Have you ever felt guilty about your drinking?
- Have you ever had a drink first thing in the morning to steady your nerves or to get rid of a hangover?

alcohol

- 4.5 pints beer
- = 2 moles ethanol
- = 570g morphine



alcohol

- **blocks calcium channels**
- **enhances GABA**
- **blocks NMDA receptors**
- **similar to inhalation anaesthetics?**

alcohol effects

- neuronal degeneration
 - dementia
 - peripheral neuropathies
 - caused by thiamine deficiency??
- foetal alcohol syndrome
- liver cirrhosis
- car crashes!
- inability to do your job

A close-up photograph of a red mushroom with white spots, likely an Amanita muscaria, growing in a field of dry grass. The mushroom is the central focus, with its bright red cap and white spots contrasting sharply with the dry, brownish-yellow grass. The lighting is natural, highlighting the texture of the mushroom's cap and the surrounding vegetation.

but

- **low dose alcohol helps protect against fatal heart disease**

A red mushroom with white spots, likely an Amanita muscaria, is growing in a field of dry grass. The mushroom has a bright red cap with numerous white, irregular spots. The stem is white and appears to have a slight constriction at the base. The background is a dense field of dry, yellowish-brown grass.

freely available

- **coffee**
- **alcohol**
- **tobacco**
- **(GSL medicines)**

controlled drugs

A red mushroom with white spots, resembling a fly agaric, growing in a field of dry grass. The mushroom is the central focus of the image, with its bright red cap and white spots contrasting sharply with the dry, brownish grass. The text 'controlled drugs' is overlaid on the top half of the image in a bold, yellow font.

- **morphine**
 - pethidine etc
- **benzodiazepines**
- **barbiturates**

controlled drugs

- **keep minimal amounts**
- **keep records strictly**
 - **independent auditor**
- **should not be handled by lay staff except under strict supervision**
- **should only be supplied to client under exceptional circumstances**

prescription drugs

A red mushroom with white spots, resembling a fly agaric, is growing in a field of dry grass. The mushroom is the central focus of the image, with its bright red cap and white spots contrasting sharply with the dry, brownish-yellow grass. The text 'prescription drugs' is overlaid on the top half of the image in a bold, yellow font.

- antidepressants
- ketamine
- (inhalation anaesthetics)
- (propofol)
- (anabolic steroids)

other drugs

- hyoscine
- nutmeg
- solvents
- etc, etc







other drugs

- hyoscine
- nutmeg
- solvents
- etc, etc



illegal drugs

A red mushroom with white spots, resembling a fly agaric, growing in dry grass. The mushroom is the central focus of the image, with its bright red cap and white spots contrasting sharply with the dry, brownish grass. The text 'illegal drugs' is overlaid on the top right of the image.

- **cannabis**
- **heroin**
- **MDMA**
- **amphetamines**
- **LSD**
- **cocaine**



cannabis

A red mushroom with white spots, resembling an Amanita muscaria, is growing in a field of dry grass. The mushroom has a bright red cap with numerous white, irregular spots and a thick, white, ringed stem. The background is a dense field of dry, yellowish-brown grass.

- active ingredient THC
- endogenous ligand anandamide
- G protein receptor system

A red mushroom with white spots on a grassy background. The mushroom is the central focus, with its cap showing a pattern of white spots. The background is a dense field of dry, yellowish-brown grass.

cannabis

- weakly / not addictive?
 - aversive to rats
- relatively safe?
 - short term memory loss
- but still illegal
- metabolites in urine for weeks
- impairs ability to drive!
- (nabilone)

heroin

- typical opioid
- very lipid soluble
- severe withdrawal syndrome
- often contaminated
- comes from Afghanistan

LSD

A large, red mushroom with white spots, likely Amanita muscaria, is the central focus of the image. It is growing in a field of dry, yellowish-brown grass. The mushroom's cap is convex and covered in numerous white, irregular spots. The stem is thick and appears to have a similar pattern. The background is a dense field of dry grass, creating a textured, natural setting.

- **mescaline & psilocybin similar?**
 - several NZ fungi
- **5HT2 agonist?**
- **very long acting**
- **can induce schizophrenia**
- **aversive in rats!**

MDMA

A red mushroom with white spots, resembling a fly agaric, growing in dry grass. The mushroom is the central focus of the image, with its bright red cap and white spots contrasting sharply with the dry, brownish grass. The text 'MDMA' is overlaid on the upper part of the mushroom cap.

- **ecstasy**
- **amphetamine effects**
- **short acting (hours)**
- **binges can cause acute schizophrenia**
- **can cause severe depression after**
- **hypertension**
 - **arrhythmias**
 - **stroke**

amphetamines & cocaine

- **stimulants**
- **adrenergic agonists**
- **cause depression in some people**
- **hypertension**
 - **arrhythmias**
 - **stroke**

problems arise when

- **the desire to use the drug dominates the lifestyle**
- **the habit causes harm to the individual or the community**

risk factors

A large, red mushroom with white spots, resembling an Amanita muscaria, is the central focus of the image. It is growing in a field of dry, brown grass. The mushroom's cap is bright red with numerous white, irregular spots. The stem is thick and appears to have a similar pattern, though it is less visible. The background is a dense field of dry grass, creating a textured, natural setting.

- **drug**
 - availability
 - cost
 - purity / potency
- **user**
 - heredity
 - psychiatric symptoms
 - prior experience
 - likes taking risks
- **environment**
 - social
 - work
 - availability of other sources of pleasure

A red mushroom with white spots, resembling a fly agaric, is growing in a field of dry, yellowish-brown grass. The mushroom is the central focus of the image, with its bright red cap and white spots contrasting sharply with the dry, textured background of the grass. The lighting is soft, highlighting the texture of the mushroom's cap and the dry blades of grass.

coping with stress

- **time management**
- **talk to people**
- **do something unrelated to work for relaxation**
- **forget about your student loan!!**



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Work issues**

**Grief
Drug & alcohol issues
Change**



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OF NEW ZEALAND**

Te Kaunihera Rata Kararehe o Aotearoa

consequences

- legal
- professional
- social



what would you do?

- some bottles of pethidine have gone missing
- one of your colleagues has been behaving strangely for several months