

A photograph of a red mushroom with white spots, commonly known as a fly agaric, growing on a bed of dry pine needles. The mushroom is the central focus, with its bright red cap and white spots contrasting sharply with the brown, needle-covered ground. The text 'Drug Abuse' is overlaid in the center of the mushroom's cap.

Drug Abuse

A close-up photograph of a single mushroom with a bright red cap and white, irregular spots. The mushroom is growing out of a dense layer of dry, brown pine needles. The lighting is somewhat dim, giving the scene a slightly somber or naturalistic feel.

drug abuse

- **a problem of vets, not animals!**

A red mushroom with white spots growing in a field of dry grass. The mushroom is the central focus, with its cap showing a vibrant red color and scattered white patches. The background is a dense field of dry, brownish grass, creating a textured and somewhat somber atmosphere. The text is overlaid on the image in a bright yellow color.

drug abuse

- **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

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

A red mushroom with white spots, resembling a fly agaric, is the central focus of the image. It is growing in a field of dry, brown grass. The mushroom has a bright red cap with numerous white, irregular spots. The stem is white and appears to be partially buried in the grass. The overall scene is dimly lit, with a dark, muted background.

- **freely available**
- **prescription drugs**
- **illegal drugs**

freely available

A large, red mushroom with white spots is the central focus of the image. It is growing on a bed of dry pine needles. The mushroom has a convex, slightly flattened top and a thick, white stem. The background is a dense layer of dry, brown pine needles, creating a textured, natural setting.

- coffee
- alcohol
- tobacco
- (GSL medicines)

A photograph of a red mushroom with white spots, likely a fly agaric, growing on a bed of pine needles. The mushroom is the central focus, with its bright red cap and white spots contrasting against the dry, brownish needles. The text 'coffee' is overlaid on the mushroom's cap in a bold, yellow font.

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

A large, red mushroom with white spots is the central focus of the image. It is growing on a bed of dry pine needles. The mushroom has a convex, slightly flattened cap with a vibrant red color and numerous small, irregular white spots scattered across its surface. The stem is thick and appears to be a pale, almost white color. The background is a dense layer of dry, brown pine needles, creating a textured, natural setting.

- 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 a fly agaric, growing on a bed of dry pine needles. The mushroom is the central focus, with its bright red cap and white gills. The background is a dense layer of dry, brown pine needles, creating a textured, natural setting. The lighting is soft, highlighting the texture of the mushroom and the surrounding needles.

but

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

freely available

A large, red mushroom with white spots is growing on a bed of dry pine needles. The mushroom is the central focus of the image, and its vibrant red color contrasts sharply with the brown and tan tones of the surrounding needles. The text 'freely available' is overlaid in yellow on the upper part of the mushroom.

- coffee
- alcohol
- tobacco
- (GSL medicines)

controlled drugs

A large, red mushroom with white spots on its cap, growing on a bed of dry pine needles. The mushroom is the central focus of the image, and the text is overlaid on the left side.

- **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 large, red, spotted mushroom with a white stem, growing in a field of dry grass. The mushroom is the central focus of the image, with its cap showing a vibrant red color and white spots. The stem is thick and white. The background is a dense field of dry, yellowish-brown grass.

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

A photograph of a red mushroom with white spots, likely an Amanita muscaria, growing on a bed of pine needles. The mushroom is the central focus, with its bright red cap and white spots contrasting against the dry, brownish-green needles. The text 'other drugs' is overlaid in yellow on the upper part of the mushroom.

other drugs

- **hyoscine**
- **nutmeg**
- **solvents**
- **etc, etc**





A photograph of a red mushroom with white spots, likely an Amanita muscaria, growing on a bed of pine needles. The mushroom is the central focus, with its bright red cap and white spots contrasting against the dry, brownish-green needles. The text 'other drugs' is overlaid in yellow on the upper part of the mushroom.

other drugs

- **hyoscine**
- **nutmeg**
- **solvents**
- **etc, etc**

illegal drugs

A large, red mushroom with white spots, growing in a field of dry grass. The mushroom is the central focus of the image, with its cap showing a gradient from red to orange and yellow. The background is a dense field of dry, brown grass.

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



A photograph of a red mushroom with white spots, likely a Amanita muscaria, growing on a bed of dry grass. The mushroom is the central focus, with its bright red cap and white gills contrasting against the brown and tan background of the grass. The text is overlaid on the image in a yellow, sans-serif font.

cannabis

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

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)**

A photograph of a red mushroom with white spots, likely a fly agaric, resting on a bed of dry pine needles. The mushroom is the central focus, with its bright red cap and gills contrasting against the brown, needle-covered ground. The text 'heroin' is overlaid on the mushroom's cap in a bold, yellow font.

heroin

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

LSD



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

MDMA

A large, red mushroom with white spots is the central focus of the image. It is surrounded by a dense layer of dry, brown pine needles. The background is a dark, textured surface, possibly a forest floor.

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

amphetamines & cocaine

A red mushroom with white spots on a bed of dry grass. The mushroom is the central focus, with its cap showing a vibrant red color and several white, irregular spots. The stem is a pale, almost white color. The background consists of a dense layer of dry, brownish-yellow grass or straw, creating a textured, natural setting.

- **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

A large, red mushroom with white spots, growing in a field of dry grass. The mushroom is the central focus of the image, with its cap showing a vibrant red color and white, irregular spots. The stem is thick and white. The background is a dense field of dry, brown grass, creating a textured, natural setting. The overall lighting is somewhat dim, giving the scene a slightly somber or mysterious atmosphere.

risk factors

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

coping with stress

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



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Relationship problems
Work issues

Grief
Drug & alcohol issues
Change



NEW ZEALAND
VETERINARY
ASSOCIATION INC



**VETERINARY COUNCIL
OF NEW ZEALAND**

Te Kaunihera Rata Kararehe o Aotearoa

consequences

A large, red mushroom with white spots is the central focus of the image. It is growing in a field of dry, brown grass. The mushroom has a thick, slightly flattened cap and a short, white stem. The background is a dense field of dry grass, creating a textured, natural setting.

- 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