

# Spice

Spice contains no compensatory substances

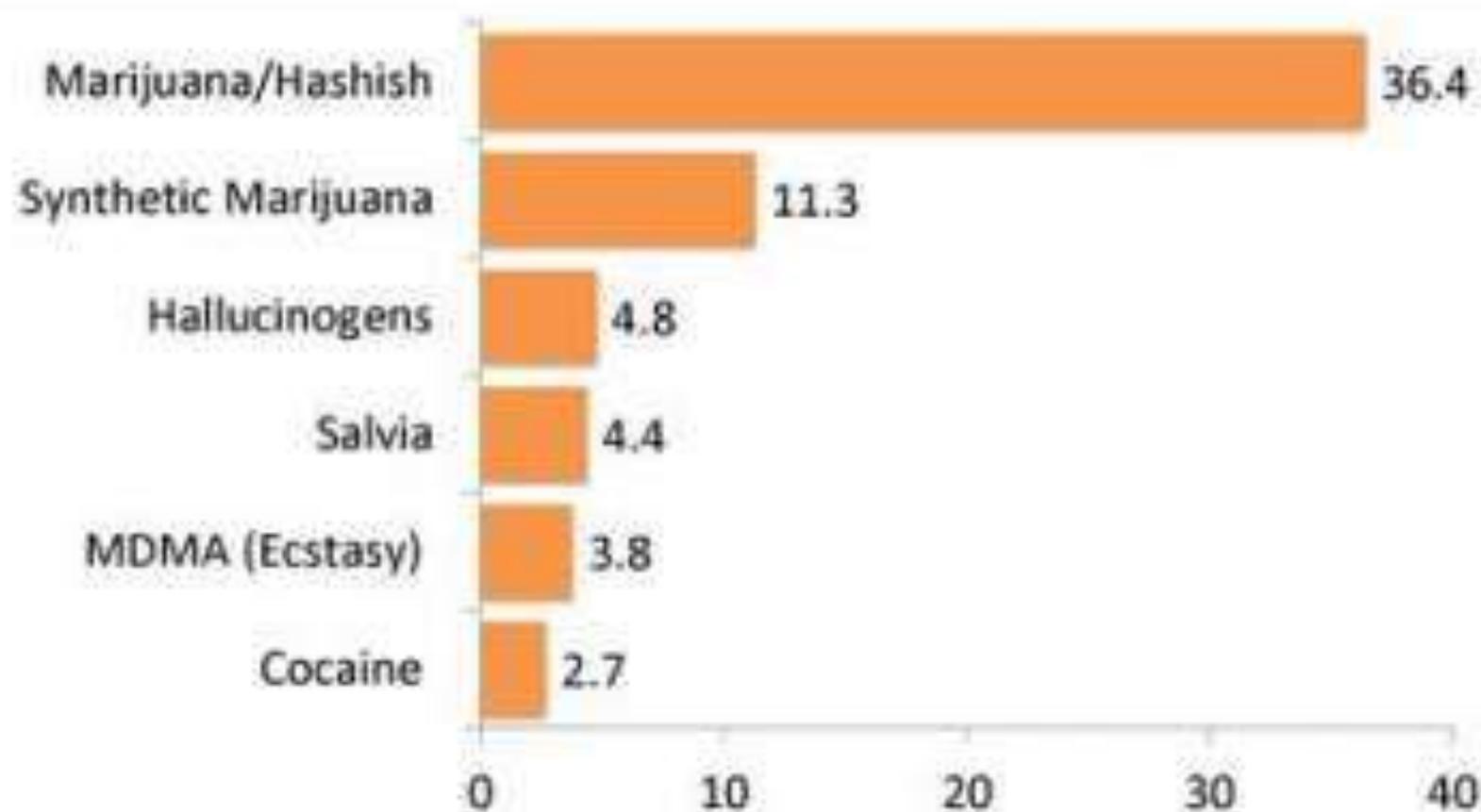
Специи не содержит компенсационные вещества

Spice is a mix of herbs (shredded plant material) and manmade chemicals with mind-altering effects.

It is often called “synthetic marijuana” because some of the chemicals in it are similar to ones in marijuana; but its effects are sometimes very different from marijuana, and frequently much stronger.

It is most often labeled “Not for Human Consumption” and disguised as incense.

## Past-Year Use of Illicit Drugs by High School Seniors (percent)



Source: University of Michigan, 2012 Monitoring the Future Study

# Elimination process

- The synthetic agonists such as THC is fat soluble.
- Probably, they are stored as THC in cell membranes.

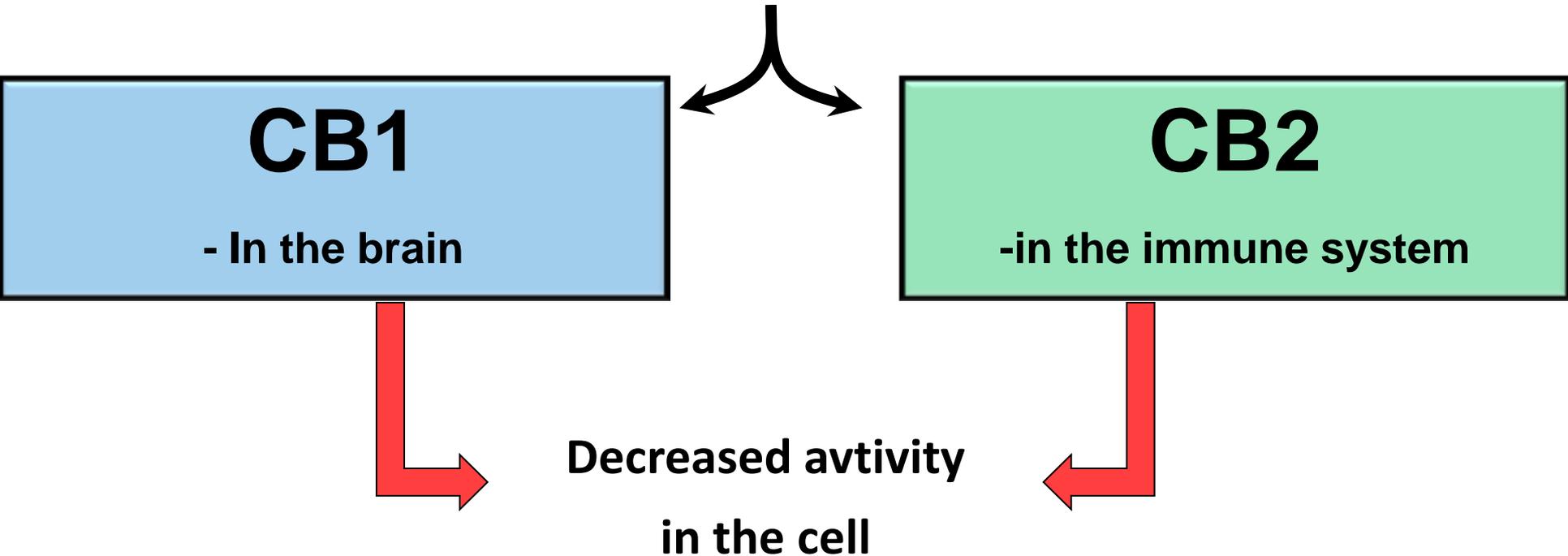
- Some of the chemicals in Spice, however, attach to those receptors more strongly than THC, which could lead to a much stronger and more unpredictable effect.
- Additionally, there are many chemicals that remain unidentified in products sold as Spice and it is therefore not clear how they may affect the user.
- Moreover, these chemicals are often being changed as the makers of Spice alter them to avoid the products being illegal.
- To dissolve the Spice crystals Acetone is used

**THC**

**endocannabinoids**

**synhtetic  
cannabinoids  
CB1 and CB2  
agonister**

**Binds to cannabinoidreceptor**



**CB1**

**- In the brain**

**CB2**

**-in the immune system**

**Decreased avtivity  
in the cell**

Since some of the compounds have a longer toxic effects compared to naturally THC, as reported:

- negative effects that often occur the day after consumption, as a general hangover , but without nausea, mentally slow, confused, distracted, impairment of long and short term memory
- Other reports mention the qualitative impairment of cognitive processes and emotional functioning, like all the oxygen leaves the brain.
- Negative effects up to 7 days after intake, special affecting the associative
- It is reported convulsions and seizures resembling epileptic activity even in people who have not been this late before.

- Some Spice users report feeling relaxed and having mild changes in perception.
- Users also report extreme anxiety, feeling like someone is out to get them (paranoia), and seeing or hearing things that aren't there (hallucinations).
- Spice is a new drug and research is only just beginning to measure how it affects the brain. What is known is that the chemicals found in Spice attach to the same nerve cell receptors as THC, the main mind-altering ingredient in marijuana.

Warning!!!!

Spice addiction, treatment spiking; side effects similar to meth

K2,” “fake weed,” “Bliss,”  
“Black Mamba,” “Bombay  
Blue,” “Genie,” “Zohai,”  
“Yucatan Fire,” “Skunk,” and  
“Moon Rocks”

# The Spice "high"

## Acute effects

They are not well documented,

but coupled with the knowledge that exists about how these substances are meant to serve it is not so hard to figure out that large doses will cause adverse effects that marijuana not is creating

# Acute adverse effects and CB1 agonists

- High blood pressure
- High Pulse
- Chest Pain
- Myocardial infarction
- Unconsciousness
- Convulsions
- Agitation / anxiety
- Anxiety
- Panic Attack
- Acute psychosis and confusion at the former stable mental illness
- The feeling of not getting air

The side effects of Spice include (even at low doses):

- delusions
- elevated blood pressure
- elevated heart rate
- hallucinations
- heart palpitations
- increased agitation
- nausea
- pale skin
- seizures
- vomiting

# The Spice "high"

## Chronic effects

- Personality changes
- Additional Cancer risk
- Oral lesions

## **Spice can be connected with**

- **psychosis,**
- **brain damage and**
- **kidney injure**

# Withdrawal symptoms that occur after prolonged use are:

- Headache
- Anxiety
- Nervousness
- Sleep Disorders
- Reduced concentration
- Nausea
- Depression and
- restlessness
- Irritability
- Sweating
- Strong craving
- Nightmares
- Convulsions
- Cardiac Bank
- Vomiting

- Many clients experience depersonalization when you do not have ingested Spice for a few days,
- others may experience the same feelings the same day, sometimes days, after you have been taking an excessive amount.

## Physical effects

**Spontaneous tactile sensations** - The body high of THJ-018 can be described as a warm and soft pleasurable, all-encompassing tingling sensation that spreads over the body prior to initial ingestion. It maintains a consistent presence that quickly rises with the onset and hits its limit once the peak has been reached before immediately dissipating.

**Sedation** - Generally, the effects on the user's energy levels are primarily sedating. This encourages one to relax, and at higher doses fall asleep. This can however be suppressed by simply forcing oneself to engage in physical activities.

- **Loss of motor control** - This substance causes a partial to moderate suppression of motor control which intensifies proportional to dosage but rarely results in a complete inability to walk and perform basic movements.

- **Appetite stimulation** - As with many other cannabinoids, THJ-018 causes an increase in appetite<sup>[1]</sup>, known colloquially as "the munchies" in popular American and United Kingdom culture. Clinical studies and survey data have found that cannabis increases food enjoyment and interest in food.<sup>[2]</sup> This is thought to be due to the way in which endocannabinoids in the hypothalamus activate cannabinoid receptors that are responsible for maintaining food intake.<sup>[3]</sup>
- **Dehydration**

- **Vasodilation** - Cannabinoids appear to decrease blood pressure by dilating the blood vessels, increasing blood flow throughout the body. The arteries in the eyeball expand from the decreased blood pressure, and the heart rate increases to compensate for the reduction in pressure.
- **Pain relief** - Cannabinoids have been clinically demonstrated to provide pain relief via agonism of cannabinoid receptors CB<sub>1</sub> and CB<sub>2</sub>, which extends to synthetic cannabinoid receptor agonists. [\[4\]\[5\]](#)
- **Increased bodily weight** or **Decreased bodily weight**
- **Changes in gravity** - THJ-018 can cause vertigo with which the environment appears to be spinning or oscillating. At moderate doses, it can spontaneously induce the sensation of falling, which can be overwhelming and uncomfortable.

## **Cognitive effects**

**Enhancement of current mindstate** - The most prominent cognitive component of the cannabinoids is the way in which they enhances the emotions one is already feeling proportional to dosage. This can result in euphoria, extreme laughter, or increased immersion within tasks and activities or it can result in anxiety or paranoia depending on the user's current mind state.

**Anxiety** - Subjectively, THJ-018 is less anxiogenic and stimulating than [Δ9-THC](#), [AM-2201](#), or [5F-UR-144](#), but more so when compared to [JWH-018](#) or [JWH-073](#), it can be described as moderately sedating.

**Paranoia** - All cannabinoids are capable of inducing paranoia at high doses, or with chronic administration.

- **Connectivity of thought**
- **Thought deceleration**
- **Conceptual thinking**
- **Mindfulness**
- **Suppression of information processing**
- **Suppression of dreaming**

## **Visual effects**

**Enhancement of colour**

**Decreased visual acuity**

**Geometry** - As reported with other cannabinoids, THJ-018 can produce closed eye visuals at moderate doses, which can escalate into visual distortions such as a ripples in the field of vision upon continuous administration.

## **Auditory effects**

**Enhancements**

## **Combinational effects**

**Psychedelics** - When used in combination with psychedelics, cannabinoids are capable of intensifying and extending the duration of both the visual and cognitive effects with extreme efficiency. This should be used with caution if one is not experienced with psychedelics.

**Dissociatives** - When used in combination with dissociatives the geometry, euphoria, dissociation and hallucinatory effects are often greatly enhanced.

**Alcohol** - When used in combination with alcohol, cannabinoids can cause feelings of extreme nausea, dizziness and changes in gravity. It is recommended that one smokes before drinking and not the other way around unless they are extremely cautious.

# For a cannabinoid Geek

JWH-018, JWH018, JWH-073, CP47 497 497-C6, CP47 497 497-C7, CP47 497 497-C8, CP47 497 497-C9, HU HU-210

JWH-007, JWH007, JWH-015, JWH JWH-019, JWH JWH-081, JWH-098, JWH-122, JWH-147, JWH-200, JWH-210, JWH-250, JWH250, JWH-398, CP55 940, WIN55 212 212-2, (4 4-metoxifenyl)(1 1-pentyl pentyl-1H 1H-indol indol-3-yl)metanon

JWH-004, JWH004, JWH-016, JWH-018, WH-047, JWH-048, JWH-049, JWH-050, JWH-051, JWH-080, JWH-082, JWH082, JWH-096, JWH-116, JWH-133, HU133, HU-211, HU-308 m.fl.

AM-2201, MAM-2201 som är en hybrid av JWH-18 och AM-2201, RCS-4, AB-001, AM-694

**From magic molecules**

A-41988

AM-087

AM-4030

AM-411

AM-855

AM-905

AM-906

AM-919

AM-938

AMG-1

AMG-3

AMG-36

AMG-41

BAY 38-7271

BAY 59-3074

BML-190

CP 47,497 (identifierad i några rökmixar i Spice-serien.)

CP 50,556-1 (Levonantradol)

CP 55,244

CP 55,940

CP-945,598 (Otenabant)

DMHP (Dimethylheptylpyran)

HU-210 (identifierad i några rökmixar i [Spice](#)-serien.)

HU-308

Ibipinabant

JTE-907

JWH-015

JWH-018 (identifierad i några rökmixar i Spice-serien.)

JWH-030

JWH-051

JWH-073

JWH-081

JWH-133

JWH-147

JWH-171

JWH-200

JWH-250

JWH-307

JWH-359

MK-9470

Methanandamide

NESS-0327

Nabilone

Nabitan

Nonabine

O-1057

O-1125

O-1238

O-2545

O-2694

O-806

O-823

Parahexyl

Pravadoline

Sativex

Surinabant

THC-O-acetate

THC-O-phosphate

VCHSR

WIN 55,212-2

= 60 compounds

Ny generation med inriktning på CB2R

[AB-PINACA](#)

[ADB-FUBINACA](#)

[ADBICA](#)

[APICA](#)

[APINACA](#)

[Benzydamine](#)

[NESS-040C5](#)

[PF-03550096](#)

## Development of tolerance

- **AB-FUBINACA**
- Potent agonist on cannabinoidreceptorerna
- with  $K_i$  values of 0.9nM at  $CB_1$  and 23.2nM at  $CB_2$ .
- Was developed by Pfizer 2009 as a potential painkiller substances, but it was never tested on humans
- 2012, in Japan together with AB-Pinaca, newly developed.
- January 2014, **AB-FUBINACA** was declared illegal in USA

# CB 2 receptor

- The presence of functional cannabinoid CB2 receptors in the CNS has provoked considerable controversy over the past few years.
- Formerly considered as an exclusively peripheral receptor, it is now accepted that it is also present in limited amounts
- and distinct locations in the brain of several animal species, including humans.
- Furthermore, the inducible nature of these receptors under neuroinflammatory conditions, in contrast to CB1, makes them attractive targets for the development of novel therapeutic approaches.
- In fact, the undesired psychoactive effects caused by CB1 activation have largely limited the clinical use of cannabinoid-related compounds that act on these receptors.

# cont.

- More recently, additional
- studies have further corroborated the in vivo link between
- chronic neuroinflammation and CB2 upregulation in animal
- models of pain (Beltramo et al., 2006),
- Inflammation (Mukhopadhyay et al., 2006) and ischaemia-induced hypoxia (Ashton et al., 2007).
  
- In medicine, **ischemia**, also spelled as **ischaemia** or **ischæmia**<sup>[a]</sup> (/iˈskiːmiə/[1][2]), is a restriction in blood supply to tissues, causing a shortage of oxygen and glucose needed for cellular metabolism (to keep tissue alive).

# cont.

- in the human CNS, CB2 receptors seem to
  - follow a similar pattern of inducible expression as that
  - described in animal models.
- 
- REFERENS:
  - Cannabinoid CB2 receptors in human brain inflammation  
C Benito, RM Tolón, MR Pazos, E Núñez, AI Castillo, and J Romero.  
British Journal of Pharmacology (2008) 153, 277–285  
& 2008 Nature Publishing Group All

## cont.

- It should be noted that
- this glial expression also affects other elements of the ECS,
- such as, for example, fatty acid amide hydrolase (FAAH).
- Albeit the expression of FAAH in microglia is negligible
- (Stella, 2004), it seems to play a significant role in astrocytic Function (a role in the repair and scarring process of the brain and spinal cord following traumatic injuries).

# Psychosocial Treatment

Ask for positive and negative symptoms

Use your cannabis knowledge

Look for symptoms that you do not understand

Work with the seven cognitive functions

Use the three different phases in the HAP but with a faster process

Have a metacognitive technique

# Questions to be asked

- Given that synthetic cannabinoids reduce the transport of oxygen in the brain, so is the headache a theme. How does it express itself? Sometimes known that he is not getting enough air?
- Does he need to increase the dose to get the effect?
- How long are you in the acute intoxication? Has that time decreased as the abuse continued?
- When he occasionally smoked too much, what symptoms he had then?
- How long has it taken to recover (compare with normal HAP)?
- Worrying symptoms first few weeks.

