

**Topical Clonazepam for Burning Mouth Syndrome (BMS)**

This prescription is for symptomatic treatment of burning mouth syndrome. Clonazepam is a benzodiazepine and often being used as an anxiolytic, hypnotic and anticonvulsant agent. Clonazepam expresses the analgesic effect in BMS by potentiating the inhibitory gamma-aminobutyric acid (GABA) signalling pathways and antagonise the hyperexcitability of neurotransmission. Clonazepam binding to the GABA<sub>A</sub> receptor acts as a positive allosteric modulator by facilitates the opening of GABA-activated chloride channels and reduce the firing of action potentials. The GABA<sub>A</sub> receptor is widely found in central nervous systems and peripheral tissues. Clonazepam is rapidly absorbed after oral administration, reaching maximum plasma concentrations within 2 to 4 hours. This change may require regular use of clonazepam over two weeks and above. You are advised to review regularly with your doctor to find the right dose for you for optimal analgesic effect and minimal adverse drug reactions.

Clonazepam dosage	Frequency	Instructions
0.25mg	Twice daily or Three times daily; After meal	To suck the tablet and to retain the saliva in the mouth near the pain sites for 3 to 5 minutes  OR To crush the tablet and dilute in water (5-10ml) and to rinse it for 3 to 5 minutes in the mouth  Followed by expectorating of saliva / mouth rinse <b>DO NOT SWALLOW</b>
0.50mg		
1.00 mg		

There is no need to increase the dose further if the pain has settles and may be reduced to twice daily topically usage.

Despite the promising results of clonazepam for pain relief symptoms, there are possible side effects that may occur at low doses. If any of the following side effects continue or become troublesome, you are advised to seek immediate review with your doctor. Below are the reported adverse drug reactions of topical clonazepam (Gremeau-Richard et al., 2004; Kuten- Shorrer et al., 2017).

Adverse Drug Reaction	Symptoms
Drowsiness / Sedation	Decreased in alertness; Feeling sleepy during the day. <b>DO NOT DRIVE A MOTOR VEHICLE OR OPERATE MACHINERY WHEN YOU HAVE THIS SYMPTOM</b>
Dizziness / Ataxia	Loss of balance; Unsteadiness; Instability, Feeling of spinning. <b>DO NOT DRIVE A MOTOR VEHICLE OR OPERATE MACHINERY WHEN YOU HAVE THIS SYMPTOM</b>
Altered mental status/ Euphoric behaviour	Confusion; Altered mood; Anxiety
Burning sensation	Increased in burning feeling
Dry mouth	Feeling of dryness in the mouth but no clinical saliva flow changes.

Adverse Drug Reaction	Symptoms
Gastrointestinal disorder	Nausea; Gastro-oesophageal reflux
Others	Skin reaction, Spasmophilia

Other possible side effects (NICE BNF 2019) are alopecia; concentration impaired; coordination abnormal; increased risk of fall; increased risk of fracture; muscle tone decreased; nystagmus; seizures; tremor; sexual dysfunction; speech impairment; vertigo; vision disorders; withdrawal syndrome.

**References:**

- Gremeau-Richard C, Woda A, Navez ML, Attal N, Bouhassira D, Gagnieu MC, Laluque JF, Picard P, Pionchon P, Tubert S. Topical clonazepam in stomatodynia: a randomised placebo-controlled study. *Pain*. 2004; 108(1-2): 51-7.
- Kuten-Shorrer M, Treister NS, Stock S, Kelley JM, Ji YD, Woo SB, Lerman MA, Palmason S, Sonis ST, Villa A. Safety and tolerability of topical clonazepam solution for management of oral dysesthesia. *Oral Surg Oral Med Oral Pathol Oral Radiol*. 2017; 124(2): 146-151.
- <http://bnf.nice.org.uk>