

# Studi e case report

Ultima modifica: 22 maggio 2018

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# Nausea e vomito - Chemioterapia

## Studi controllati

### Dronabinol

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- Frytak S, Moertel CG, O'Fallon JR, Rubin J, Creagan ET, O'Connell MJ. Delta-9-tetrahydrocannabinol as an antiemetic for patients receiving cancer chemotherapy. A comparison with prochlorperazine and a placebo. Annals of Internal Medicine 1979;91:825-830.
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- Levitt M, Wilson A, Bowman D, Faiman C, Kemel S, Krepart G. Dose vs response of tetrahydrocannabinol (THC) vs prochlorperazine as chemotherapy antiemetics. Proceedings of the American Society for Clinical Oncology 1981;22:422.
- McCabe M, Smith FP, Goldberg D, Macdonald J, Woolley PV, Warren R. Efficacy of tetrahydrocannabinol in patients refractory to standard anti-emetic therapy. Investigational New Drugs 1988;6:243-246.
- Neidhart JA, Gagen MM, Wilson HE, Young DC. Comparative trial of the antiemetic effects of THC and haloperidol. International Journal of Clinical Pharmacology Research 1981; 21: 38-42S.
- Orr LE, McKernan JF, Bloome B. Antiemetic effect of tetrahydrocannabinol. Compared with placebo and prochlorperazine in chemotherapy-associated nausea and emesis. Archives of Internal Medicine 1980;140:1431-433.

- Sallan SE, Cronin C, Zelen M, Zinberg NE. Antiemetics in patients receiving chemotherapy for cancer. A randomized comparison of delta-9-tetrahydrocannabinol and prochlorperazine. *New England Journal of Medicine* 1980;302:135-138.
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- Ungerleider JT, Andrysiak T, Fairbanks L, Goodnight J, Sarna G, Jamison K. Cannabis and cancer chemotherapy. A comparison of oral delta-9-THC and prochlorperazine. *Cancer* 1982;50:636-645.
- Ungerleider JT, Sarna G, Fairbanks LA, Goodnight J, Andrysiak T, Jamison K. THC or compazine for the cancer chemotherapy patient—the UCLA study. Part II: patient drug preference. *American Journal of Clinical Oncology* 1985; 8: 142-147.
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### **Cannabis (fumata)**

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### **Nabilone**

- Ahmedzai S, Carlyle DL, Clader IT, Moran F. Anti-emetic efficacy and toxicity of nabilone, a synthetic cannabinoid, in lung cancer chemotherapy. *British Journal of Cancer* 1983;48:657-663.
- Chan HS, Correia JA, MacLeod SM. Nabilone versus prochlorperazine for control of cancer chemotherapy-induced emesis in children: a double-blind, crossover trial. *Pediatrics* 1987; 79: 946-952
- Crawford SM, Buckman R. Nabilone and metoclopramide in the treatment of nausea and vomiting due to cisplatin: a double blind study. *Medical Oncology and Tumor Pharmacotherapy* 1986; 3: 39-42.
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- Dalzell AM, Bartlett H, Lilleyman JS. Nabilone: An alternative antiemetic for cancer chemotherapy. *Archives of Disease in Childhood* 1986;61:502-505.
- Einhorn LH, Nagy C, Furnas B, Williams SD. Nabilone: an effective antiemetic in patients receiving cancer chemotherapy. *Journal of Clinical Pharmacology*. 1981 Aug-Sep;21(8-9 Suppl):64S-69S.
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- Levitt M. Nabilone vs placebo in the treatment of chemotherapy-induced nausea and vomiting in cancer patients. *Cancer Treatment Reviews* 1982; 9(suppl B): 49-53.
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- Niiranen Aila, Mattson K. A cross-over comparison of nabilone and prochlorperazine for emesis induced by cancer chemotherapy. *American Journal of Clinical Oncology* 1985;8:336-340.
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- Priestman SG, Priestman TJ, Canney PA. A double-blind randomised cross-over comparison of nabilone and metoclopramide in the control of radiation-induced nausea. *Clinical Radiology* 1987; 38: 543-544.
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### **Levonantradol**

- Citron ML, Herman TS, Vreeland F, Krasnow SH, Fossieck BE, Jr. Antiemetic efficacy of levonantradol compared to delta-9-tetrahydrocannabinol for chemotherapy-induced nausea and vomiting. *Cancer Treatment Reports* 1985;69:109-112.
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### **Delta-8-THC**

- Abrahamov A, Abrahamov A, Mechoulam R. An efficient new cannabinoid antiemetic in pediatric oncology. *Life Sciences* 1995;56:2097-2102.

### **Cannabis (fumata)**

- Vinciguerra V, Moore T, Brennan E. Inhalation marijuana as an antiemetic for cancer chemotherapy. *New York State Journal of Medicine* 1988;88:525-527.
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### **Dronabinolo**

Hernandez SL, Sheyner I, Stover KT, Stewart JT. Dronabinol Treatment of Refractory Nausea and Vomiting Related to Peritoneal Carcinomatosis. *Am J Hosp Palliat Care*. 2015;32(1):5-7.

### **Case report, Indagini**

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## **Nausea e vomito – Radioterapia**

### **Studi controllati**

#### **Dronabinol**

- Ungerleider JT, Andrysiak TA, Fairbanks LA, Tesler AS, Parker RG. Tetrahydrocannabinol vs. prochlorperazine. The effects of two antiemetics on patients undergoing radiotherapy. *Radiology* 1984;150(2):598-9.

#### **Levonantradolo**

- Lucraft HH, Palmer MK. Randomised clinical trial of levonantradol and chlorpromazine in the prevention of radiotherapy-induced vomiting. *Clinical Radiology* 1982; 33: 621-622.

#### **Dronabinol**

- Côté M, Trudel M, Wang C, Fortin A. Improving Quality of Life With Nabilone During Radiotherapy Treatments for Head and Neck Cancers: A Randomized Double-Blind Placebo-Controlled Trial. *Ann Otol Rhinol Laryngol*. 2016;125(4):317-24.

## **Nausea e vomito – metastasi**

### **Studi non controllati**

#### **Dronabinol**

- Zutt M, Hanssle H, Emmert S, Neumann C, Kretschmer L. [Dronabinol for supportive therapy in patients with malignant melanoma and liver metastases] [Article in German]. *Hautarzt* 2006;57(5):423-7.

## **Case report, Indagini**

### **Dronabinol**

- Gonzalez-Rosales F, Walsh D. Intractable nausea and vomiting due to gastrointestinal mucosal metastases relieved by tetrahydrocannabinol (dronabinol). *Journal of Pain and Symptom Management* 1997;14(5):311-314.

# **Nausea e vomito – Chirurgia**

## **Studi controllati**

### **Dronabinol**

- Layeeque R, Siegel E, Kass R, Henry-Tillman RS, Colvert M, Mancino A, Klimberg VS. Prevention of nausea and vomiting following breast surgery. *Am J Surg* 2006;191(6):767-72.

### **Nabilone**

- Lewis IH, Campbell DN, Barrowcliffe MP. Effect of nabilone on nausea and vomiting after total abdominal hysterectomy. *British Journal of Anaesthesia* 1994; 73: 244-246.
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# **Nausea e vomito – HIV/AIDS**

## **Studi non controllati**

### **Cannabis (fumata)**

- de Jong BC, Prentiss D, McFarland W, Machekano R, Israelski DM. Marijuana use and its association with adherence to antiretroviral therapy among HIV-infected persons with moderate to severe nausea. *J Acquir Immune Defic Syndr* 2005;38(1):43-6.

## **Case report, Indagini**

### **Cannabis (fumata)**

- Woolridge E, Barton S, Samuel J, Osorio J, Dougherty A, Holdcroft A. Cannabis use in HIV for pain and other medical symptoms. *J Pain Symptom Manage* 2005;29(4):358-67.
- Sidney S. Marijuana use in HIV-positive and AIDS patients: Results of a an anonymous mail survey. *J Cannabis Ther* 2001;1(3-4):35-43.
- Corless IB, Lindgren T, Holzemer W, Robinson L, Moezzi S, Kirksey K, Coleman C, Tsai YF, Sanzero Eller L, Hamilton MJ, Sefcik EF, Canaval GE, Rivero Mendez M, Kempainen JK, Bunch EH, Nicholas PK, Nokes KM, Dole P, Reynolds N. Marijuana Effectiveness as an HIV Self-Care Strategy. *Clin Nurs Res* 2009;18(2):172-93.



## **Nausea e vomito – Terapia dell'epatite C**

### **Studi non controllati**

#### **Dronabinol, Nabilone**

- Costiniuk CT, Mills E, Cooper CL. Evaluation of oral cannabinoid-containing medications for the management of interferon and ribavirin-induced anorexia, nausea and weight loss in patients treated for chronic hepatitis C virus. *Can J Gastroenterol* 2008;22(4):376-80.

#### **Cannabis (fumata)**

- Sylvestre DL, Clements BJ, Malibu Y. Cannabis use improves retention and virological outcomes in patients treated for hepatitis C. *Eur J Gastroenterol Hepatol* 2006;18(10):1057-63.

## **Nausea e vomito – Gravidanza**

### **Case report, Indagini**

#### **Cannabis (fumata)**

- Curry W-NL. Hyperemesis gravidarum and clinical cannabis: To eat or not to eat? *J Cannabis Ther* 2002;2(3-4):63-83.
- Westfall RE, Janssen PA, Lucas P, Capler R. Survey of medicinal cannabis use among childbearing women: patterns of its use in pregnancy and retroactive self-assessment of its efficacy against 'morning sickness'. *Complement Ther Clin Pract* 2006;12(1):27-33.

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## **Nausea e vomito – Chinetosi**

### **Studi non controllati**

#### **Volo parabolico (senza sostanza)**

- Choukèr A, Kaufmann I, Kreth S, Hauer D, Feuerecker M, Thieme D, Vogeser M, Thiel M, Schelling G. Motion sickness, stress and the endocannabinoid system. *PLoS One* 2010;5(5):e10752.

## **Nausea e vomito – Altre cause**

### **Case report, Indagini**

#### **Dronabinol**

- Merriman AR, Oliak DA. Use of medical marijuana for treatment of severe intractable nausea after laparoscopic Roux-en-Y gastric bypass surgery: case report. *Surg Obes Relat Dis* 2008;4(4):550-1.

#### **Cannabis (orale, sublinguale)**

- Adhiyaman V, Arshad S. Cannabis for intractable nausea after bilateral cerebellar stroke. *J Am Geriatr Soc.* 2014 Jun;62(6):1199.
- Bleckwenn M, Weckbecker K, Voss S. Beneficial Effect of Medical Cannabis in the Treatment of a Pharmacoresistant Nausea Associated with a Somatoform Disorder in a Patient with Post-Polio Syndrome. *Dtsch Med Wochenschr.* 2018;143(5):344-348.

# Nausea e vomito – Soggetti sani

## Studi controllati

### Cannabis (fumata)

- Soderpalm AH, Schuster A, de Wit H. Antiemetic efficacy of smoked marijuana: subjective and behavioral effects on nausea induced by syrup of ipecac. *Pharmacology, Biochemistry and Behavior* 2001;69(3-4):343-50.

# Perdita dell'appetito – HIV/AIDS

## Studi controllati

### Dronabinol

- Struwe M, Kaempfer SH, Geiger CJ, Pavia AT, Plasse TF, Shepard KV, Ries K, Evans TG. Effect of dronabinol on nutritional status in HIV infection. *Annals of Pharmacotherapy* 1993;27:827-831.
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- Abrams DI, Hilton JF, Leiser RJ, Shade SB, Elbeik TA, Aweeka FT, Benowitz NL, Bredt BM, Kosel B, Aberg JA, Deeks SG, Mitchell TF, Mulligan K, Bacchetti P, McCune JM, Schambelan M. Short-term effects of cannabinoids in patients with HIV-1 infection: a randomized, placebo-controlled clinical trial. *Ann Intern Med* 2003;139(4):258-66.
- Haney M, Rabkin J, Gunderson E, Foltin RW. Dronabinol and marijuana in HIV(+) marijuana smokers: acute effects on caloric intake and mood. *Psychopharmacology (Berl)* 2005;181(1):170-8.
- Haney M, Gunderson EW, Rabkin J, Hart CL, Vosburg SK, Comer SD, Foltin RW. Dronabinol and marijuana in HIV-positive marijuana smokers. Caloric intake, mood, and sleep. *J Acquir Immune Defic Syndr* 2007;45(5):545-54.
- Bedi G, Foltin RW, Gunderson EW, Rabkin J, Hart CL, Comer SD, Vosburg SK, Haney M. Efficacy and tolerability of high-dose dronabinol maintenance in HIV-positive marijuana smokers: a controlled laboratory study. *Psychopharmacology (Berl)* 2010;212(4):675-86.

### Cannabis (fumata)

- Abrams DI, Hilton JF, Leiser RJ, Shade SB, Elbeik TA, Aweeka FT, Benowitz NL, Bredt BM, Kosel B, Aberg JA, Deeks SG, Mitchell TF, Mulligan K, Bacchetti P, McCune JM, Schambelan M. Short-term effects of cannabinoids in patients with HIV-1 infection: a randomized, placebo-controlled clinical trial. *Ann Intern Med* 2003;139(4):258-66.
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Syndr 2007;45(5):545-54.

## **Studi non controllati**

### **Dronabinol**

- Gorter R, Seefried M, Volberding P. Dronabinol effects on weight in patients with HIV infection. *AIDS* 1992;6:127.
- Plasse TF, Gorter RW, Krasnow SH, Lane M, Shepard KV, Wadleigh RG. Recent clinical experience with dronabinol. *Pharmacology, Biochemistry and Behavior* 1991;40:695-700.
- Plasse T, Conant M, Gorter R, Shepard KV. Dronabinol stimulates appetite and causes weight gain in HIV patients. *International Conference on AIDS* 1992;8(3):122 (abstract no. PuB 7442).
- Beal JE, Olson R, Lefkowitz L, Laubenstein L, Bellman P, Yangco B, Morales JO, Murphy R, Powderly W, Plasse TF, Mosdell KW, Shepard KV. Long-term efficacy and safety of dronabinol for acquired immunodeficiency syndrome-associated anorexia. *Journal of Pain and Symptom Management* 1997;14(1):7-14.
- Dejesus E, Rodwick BM, Bowers D, Cohen CJ, Pearce D. Use of dronabinol improves appetite and reverses weight loss in HIV/AIDS-infected patients. *J Int Assoc Physicians AIDS Care* 2007;6(2):95-100.

## **Case report, Indagini**

### **Cannabis (fumata)**

- Prentiss D, Power R, Balmas G, Tzuang G, Israelski DM. Patterns of marijuana use among patients with HIV/AIDS followed in a public health care setting. *J Acquir Immune Defic Syndr* 2004;35(1):38-45.
- Woolridge E, Barton S, Samuel J, Osorio J, Dougherty A, Holdcroft A. Cannabis use in HIV for pain and other medical symptoms. *J Pain Symptom Manage* 2005;29(4):358-67.
- Sidney S. Marijuana use in HIV-positive and AIDS patients: Results of an anonymous mail survey. *J Cannabis Ther* 2001;1(3-4):35-43.
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# **Perdita dell'appetito – Cancro**

## **Studi controllati**

### **Dronabinol**

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### **Studi non controllati**

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## **Spasticità – Lesioni del midollo spinale**



## Studi controllati

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[Epub ahead of print]

## Spasticità – Altre cause

### Studi controllati

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### Case report, Indagini

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### Studi non controllati

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### Case report, Indagini

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# Dolore – Cronico, Neuropatico / Sclerosi multipla

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### **Cannabidiolo**

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### **CT-3 (acido ajulemico)**

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### **ASP8477**

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## **Studi non controllati**

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# Dolore – Acuto, Chirurgia

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### Cannabis

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## **Dolore – Acuto, Soggetti sani**

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### **Studi non controllati**

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#### **Cannabis (fumata)**

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## Cefalea / Emicrania

### Studi non controllati

#### Cannabis

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## HIV/AIDS

### Studi non controllati

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### Case report, indagini

### **Cannabis (fumata)**

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## **Sclerosi laterale amiotrofica**

### **Studi controllati**

#### **Dronabinol**

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### **Case report, Indagini**

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#### **Cannabidiolo**

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## **Disfunzioni vescicali**

### **Studi controllati**

#### **Dronabinol**

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#### **Cannabis (orale, sublinguale)**

- Brady CM, DasGupta R, Dalton C, Wiseman OJ, Berkley KJ, Fowler CJ. An open-label pilot study of cannabis-based extracts for bladder dysfunction in advanced multiple sclerosis. *Multiple Sclerosis* 2004;10(4):425-33.
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## Studi non controllati

### Cannabis (orale, sublinguale)

- Maniscalco GT et al. THC/CBD oromucosal spray in patients with multiple sclerosis overactive bladder: a pilot prospective study. *Neurol Sci.* 2018;39(1):97-102.

## Reflusso gastroesofageo

### Studi controllati (sperimentali in soggetti sani)

#### Dronabinol

- Beaumont H, Jensen J, Carlsson A, Ruth M, Lehmann A, Boeckstaens GE. Effect of Delta(9)-tetrahydrocannabinol, a cannabinoid receptor agonist, on the triggering of transient lower oesophageal sphincter relaxations in dogs and humans. *Br J Pharmacol* 2009;156(1):153-62.

## Colon irritabile, diarrea

### Studi controllati (sperimentali in soggetti sani)

#### Dronabinol

- Esfandyari T, Camilleri M, Busciglio I, Burton D, Baxter K, Zinsmeister AR. Effects of a cannabinoid receptor agonist on colonic motor and sensory functions in humans: a randomized, placebo-controlled study. *Am J Physiol Gastrointest Liver Physiol* 2007;293(1):G137-45.
- Klooker TK, Liefeld KE, Van Den Wijngaard RM, Boeckstaens GE. The cannabinoid receptor agonist delta-9-tetrahydrocannabinol does not affect visceral sensitivity to rectal distension in healthy volunteers and IBS patients. *Neurogastroenterol Motil* 2011;23(1):30-5, e2.
- Wong BS, Camilleri M, Busciglio I, Carlson P, Szarka LA, Burton D, Zinsmeister AR. Pharmacogenetic Trial of a Cannabinoid Agonist Shows Reduced Fasting Colonic Motility in Patients with Non-Constipated Irritable Bowel Syndrome. *Gastroenterology*, 28. Juli 2011 [in stampa]

#### Palmitoiletanolamide

- Cremon C et al. Randomised clinical trial: the analgesic properties of dietary supplementation with palmitoylethanolamide and polydatin in irritable bowel syndrome. *Aliment Pharmacol Ther.* 2017;45(7):909-922.

## Disturbi Gastrointestinali

### Studi controllati

#### Cannabis

- Naftali T, Bar-Lev Schleider L, Dotan I, Lansky EP, Sklerovsky Benjaminov F, Konikoff FM. Cannabis induces a clinical response in patients with Crohn's disease: a prospective placebo-controlled study. *Clin Gastroenterol Hepatol.* 2013;11(10):1276-1280.

#### Cannabidiolo

- Naftali T, Mechulam R, Marii A, Gabay G, Stein A, Bronshtain M, Laish I, Benjaminov F, Konikoff FM. Low-Dose Cannabidiol Is Safe but Not Effective in the Treatment for Crohn's Disease, a Randomized Controlled Trial. *Dig Dis Sci.* 2017;62(6):1615-1620.
- Irving PM et al. A Randomized, Double-blind, Placebo-controlled, Parallel-group, Pilot Study of

Cannabidiol-rich Botanical Extract in the Symptomatic Treatment of Ulcerative Colitis. *Inflamm Bowel Dis.* 2018;24(4):714-724.

## **Studi non controllati**

### **Cannabis**

- Lahat A, Lang A, Ben-Horin S. Impact of cannabis treatment on the quality of life, weight and clinical disease activity in inflammatory bowel disease patients: a pilot prospective study. *Digestion.* 2012;85(1):1-8.
- Ravikoff Allegretti J, Courtwright A, Lucci M, Korzenik JR, Levine J. Marijuana Use Patterns Among Patients with Inflammatory Bowel Disease. *Inflamm Bowel Dis* 2013;19(13):2809-14.

## **Ustioni**

### **Case Report, Indagini**

#### **Cannabis (storico)**

- Williams F, Chrisco L, Nizamani R, Cairns B, Jones S. Marijuana Use is Protective in Burns. *Journal of Burn Care & Research* 2018;39, Issue suppl\_1, Pages S198–S199.

## **Morbo di Crohn**

### **Case report, Indagini**

#### **Cannabis**

- Lal S, Prasad N, Ryan M, Tangri S, Silverberg MS, Gordon A, Steinhart H. Cannabis use amongst patients with inflammatory bowel disease. *Eur J Gastroenterol Hepatol* 2011;23(10):891-6.

### **Studi non controllati**

#### **Cannabis**

- Naftali T, Lev LB, Yablekovitz D, Half E, Konikoff FM. Treatment of Crohn's disease with cannabis: an observational study. *Isr Med Assoc J* 2011;13(8):455-8.

## **Colite ulcerosa**

### **Case report, Indagini**

#### **Cannabis**

- Lal S, Prasad N, Ryan M, Tangri S, Silverberg MS, Gordon A, Steinhart H. Cannabis use amongst patients with inflammatory bowel disease. *Eur J Gastroenterol Hepatol* 2011;23(10):891-6.

## **Ostetricia e Ginecologia**

### **Case report, Indagini**

#### **Cannabis (storico)**

- Russo E. Cannabis treatments in obstetrics and gynecology: A historical review. *J Cannabis Ther* 2002;2(3-4):5-35.



# Tremore

## Studi controllati

### Dronabinol

- Clifford DB. Tetrahydrocannabinol for tremor in multiple sclerosis. *Annals of Neurology* 1983;13:669-671.

### Cannabis (orale, sublinguale)

- Fox P, Bain PG, Glickman S, Carroll C, Zajicek J. The effect of cannabis on tremor in patients with multiple sclerosis. *Neurology* 2004;62(7):1105-9.

# Distonia

## Studi non controllati

### Nabilone

- Fox SH, Kellett M, Moore AP, Crossman AR, Brotchie JM. Randomised, double-blind, placebo-controlled trial to assess the potential of cannabinoid receptor stimulation in the treatment of dystonia. *Movement Disorders* 2002;17(1):145-149.

### Cannabidiolo

- Snider SR, Consroe P. Treatment of Meige's syndrome with cannabidiol. *Neurology* 1984;34(Suppl):147.
- Sandyk R, Snider SR, Consroe P, Elias SM. Cannabidiol in dystonic movement disorders. *Psychiatry Research* 1986;18:291.
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# Discinesia indotta da L-dopa (Discinesia tardiva)

## Studi controllati

### Nabilone

- Sieradzan KA, Fox SH, Dick J, Brotchie JM. The effects of the cannabinoid receptor agonist nabilone on L-DOPA induced dyskinesia in patients with idiopathic Parkinson's disease (PD). *Movement Disorders* 1998;13(Suppl 2):29.

## Case report, Indagini

### Cannabis (fumata)

- Beckmann Y, Seçil Y, Güngör B, Yiğit T. Tardive Dystonia and the Use of Cannabis. *Turk Psikiyatri Derg* 2010;21(1):90-91.

### Dronabinol

- Beckmann Y, Seçil Y, Güngör B, Yiğit T. Tardive Dystonia and the Use of Cannabis. *Turk Psikiyatri Derg* 2010;21(1):90-91.

# Singhiozzo

## Case report, Indagini

### Cannabis (fumata)

- Gilson I, Busalacchi M. Marijuana for intractable hiccups. *Lancet* 1998; 351(9098): 267.

# Sindrome di Tourette

## Studi controllati

### Dronabinol

- Müller-Vahl KR, Schneider U, Koblenz A, Jobges M, Kolbe H, Daldrup T, Emrich HM. Treatment of Tourette's syndrome with Delta 9-tetrahydrocannabinol (THC): a randomized crossover trial. *Pharmacopsychiatry* 2002;35(2):57-61.
- Müller-Vahl KR, Schneider U, Prevedel H, Theloe K, Kolbe H, Daldrup T, Emrich HM. Delta 9-tetrahydrocannabinol (THC) is effective in the treatment of tics in Tourette syndrome: a 6-week randomized trial. *Journal of Clinical Psychiatry*. 2003;64(4):459-65.

### Cannabis

- Abi-Jaoude E, Chen L, Cheung P, Bhikram T, Sandor P. Preliminary Evidence on Cannabis Effectiveness and Tolerability for Adults With Tourette Syndrome. *J Neuropsychiatry Clin Neurosci*. 2017;29(4):391-400.

## Studi non controllati

### Dronabinol

- Müller-Vahl KR, Schneider U, Kolbe H, Emrich HM. Treatment of Tourette-Syndrome with delta-9-Tetrahydrocannabinol. *American Journal of Psychiatry* 1999;156:495.

## Case report, Indagini

### Dronabinol

- Deutsch SI, Rosse RB, Connor JM, Burket JA, Murphy ME, Fox FJ. Current status of cannabis treatment of multiple sclerosis with an illustrative case presentation of a patient with MS, complex vocal tics, paroxysmal dystonia, and marijuana dependence treated with dronabinol. *CNS Spectr* 2008;13(5):393-403.
- Müller-Vahl KR, Schneider U, Emrich HM. Combined treatment of Tourette syndrome with delta-9-THC and dopamine receptor agonists. *J Cannabis Ther* 2002;2(3-4):145-54.
- Hasan A, Rothenberger A, Münchau A, Wobrock T, Falkai P, Roessner V. Oral delta9-tetrahydrocannabinol improved refractory Gilles de la Tourette syndrome in an adolescent by increasing intracortical inhibition: a case report. *J Clin Psychopharmacol* 2010;30(2):190-2.
- Brunauer A, Segmiller FM, Volkamer T, Laux G, Müller N, Dehning S. Cannabinoids improve driving ability in a Tourette's patient. *Psychiatry Res*, 9 June 2011 [im Druck]
- Jakubovski E, Müller-Vahl K. Speechlessness in Gilles de la Tourette Syndrome: Cannabis-Based Medicines Improve Severe Vocal Blocking Tics in Two Patients. *Int J Mol Sci*. 2017;18(8).

### Cannabis (fumata)

- Müller-Vahl KR, Kolbe H, Schneider U, Emrich HM. Cannabinoids: Possible role in pathophysiology of Gilles de la Tourette-syndrome. *Acta Psychiatrica Scandinavica* 1998;97:1-5.
- Sandyk R, Awerbuch G. Marijuana and Tourette's Syndrome. *Journal of Clinical Psychopharmacology* 1988;8:444-445.
- Hemming M, Yellowlees PM. Effective treatment of Tourette's syndrome with marijuana. *J Psychopharmacol* 1993; 7: 389-91.
- Abi-Jaoude E, Chen L, Cheung P, Bhikram T, Sandor P. Preliminary Evidence on Cannabis Effectiveness and Tolerability for Adults With Tourette Syndrome. *J Neuropsychiatry Clin Neurosci.* 2017;29(4):391-400.
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## **Disturbo da movimento ipercinetico**

### **Studi controllati**

#### **Cannabis (orale, sublinguale)**

- Cooper RE, Williams E, Seegobin S, Tye C, Kuntsi J, Asherson P. Cannabinoids in attention-deficit/hyperactivity disorder: A randomised-controlled trial. *Eur Neuropsychopharmacol.* 2017;27(8):795-808.

### **Case report, Indagini**

#### **Dronabinol**

- Farooq MU, Ducommun E, Goudreau J. Treatment of a hyperkinetic movement disorder during pregnancy with dronabinol. *Parkinsonism Relat Disord* 2009;15(3):249-51.

## **Sindrome da iperattività / Deficit di attenzione**

### **Studi non controllati**

#### **Cannabis (fumata)**

- Aharonovich E, Garawi F, Bisaga A, Brooks D, Raby WN, Rubin E, Nunes EV, Levin FR. Concurrent cannabis use during treatment for comorbid ADHD and cocaine dependence: effects on outcome. *Am J Drug Alcohol Abuse.* 2006;32(4):629-35.

### **Case report, Indagini**

#### **Dronabinol**

- Stroheck-Kuehner P, Skopp G, Mattern R. [Fitness to drive in spite (because) of THC] [Article in German]. *Arch Kriminol* 2007;220(1-2):11-9.

#### **Cannabis (fumata)**

- Stroheck-Kuehner P, Skopp G, Mattern R. [Fitness to drive in spite (because) of THC] [Article in German]. *Arch Kriminol* 2007;220(1-2):11-9.

- O'Connell TJ, Bou-Matar CB. Long term marijuana users seeking medical cannabis in California (2001-2007): demographics, social characteristics, patterns of cannabis and other drug use of 4117 applicants. *Harm Reduct J* 2007;4:16.

## Disturbo ossessivo-compulsivo

### Case report, Indagini

#### Dronabinol, Cannabis (fumata)

- Schindler F, Angheliescu I, Regen F, Jockers-Scherubl M. Improvement in refractory obsessive compulsive disorder with dronabinol. *Am J Psychiatry* 2008;165(4):536-7.
- Cooper JJ, Grant J. Refractory OCD Due to Thalamic Infarct With Response to Dronabinol. *J Neuropsychiatry Clin Neurosci.* 2017;29(1):77-78.

## Tricotillomania

### Studi non controllati

#### Dronabinol

- Grant JE, Odlaug BL, Chamberlain SR, Kim SW. Dronabinol, a cannabinoid agonist, reduces hair pulling in trichotillomania: a pilot study. *Psychopharmacology (Berl)*, 19 May 2011 [im Druck]

## Morbo di Parkinson

### Studi controllati

#### Cannabis (orale, sublinguale)

- Carroll CB, Bain PG, Teare L, Liu X, Joint C, Wroath C, Parkin SG, Fox P, Wright D, Hobart J, Zajicek JP. Cannabis for dyskinesia in Parkinson disease: a randomized double-blind crossover study. *Neurology* 2004;63(7):1245-50.

#### Cannabidiolo

- Chagas MH, Zuardi AW, Tumas V, Pena-Pereira MA, Sobreira ET, Bergamaschi MM, dos Santos AC, Teixeira AL, Hallak JE, Crippa JA. Effects of cannabidiol in the treatment of patients with Parkinson's disease: an exploratory double-blind trial. *J Psychopharmacol.* 2014;28(11):1088-98.

### Studi non controllati

#### Cannabis (fumata)

- Frankel JP, Hughes A, Lees AJ, Stern GM. Marijuana for Parkinsonian tremor. *Journal of Neurology, Neurosurgery and Psychiatry* 1990;53:436.
- Lotan I, Treves TA, Roditi Y, Djaldetti R. Cannabis (medical marijuana) treatment for motor and non-motor symptoms of Parkinson disease: an open-label observational study. *Clin Neuropharmacol.* 2014;37(2):41-4.

### Case report, Indagini

#### Cannabis (fumata)

- Shohet A, Khlebtovsky A, Roizen N, Roditi Y, Djaldetti R. Effect of medical cannabis on thermal quantitative measurements of pain in patients with Parkinson's disease. *Eur J Pain*. 2017;21(3):486-493.
- Balash Y, Bar-Lev Schleider L, Korczyn AD, Shabtai H, Knaani J, Rosenberg A, Baruch Y, Djaldetti R, Giladi N, Gurevich T. Medical Cannabis in Parkinson Disease: Real-Life Patients' Experience. *Clin Neuropharmacol*. 2017;40(6):268-272.
- Kindred JH, Li K, Ketelhut NB, Proessl F, Fling BW, Honce JM, Shaffer WR, Rudroff T. Cannabis use in people with Parkinson's disease and Multiple Sclerosis: A web-based investigation. *Complement Ther Med*. 2017;33:99-104.

## Corea di Huntington

### Studi controllati

#### Cannabidiolo

- Consroe P, Laguna J, Allender J, Snider S, Stern L, Sandyk R, Kennedy K, Schram K. Controlled clinical trial of cannabidiol in Huntington's disease. *Pharmacology, Biochemistry and Behavior*. 1991;40(3):701-8.

### Studi non controllati

#### Nabilone

- ❖ Müller-Vahl KR, Schneider U, Emrich HM. Nabilone deteriorates choreatic movements in Huntington's disease. *Movement Disorders* 1999b;14:1038-40.

#### Cannabinoidi

- Saft C, von Hein SM, Lücke T, Thiels C, Peball M, Djamshidian A, Heim B, Seppi K. Cannabinoids for Treatment of Dystonia in Huntington's Disease. *J Huntingtons Dis*. 2018 Mar 16. [Epub ahead of print]

### Case report, Indagini

#### Dronabinol/Cannabis (fumata)

- Beckmann Y, Seçil Y, Güngör B, Yiğit T. Tardive Dystonia and the Use of Cannabis. *Turk Psikiyatri Derg* 2010;21(1):90-91.

## Lesioni cerebrali traumatiche

### Studi controllati

#### Dexanabinol

- Maas AI, Murray G, Henney H 3rd, Kassem N, Legrand V, Mangelus M, Muizelaar JP, Stocchetti N, Knoller N; Phamos TBI investigators. Efficacy and safety of dexanabinol in severe traumatic brain injury: results of a phase III randomised, placebo-controlled, clinical trial. *Lancet Neurol* 2006;5(1):38-45.

#### KN38-7271

- Firsching R, Piek J, Skalej M, Rohde V, Schmidt U, Striggow F; the KN38-7271 Study Group. Early Survival of Comatose Patients after Severe Traumatic Brain Injury with the Dual Cannabinoid

CB1/CB2 Receptor Agonist KN38-7271: A Randomized, Double-Blind, Placebo-Controlled Phase II Trial. *J Neurol Surg A Cent Eur Neurosurg.* 2012 Aug;73(4):204-16.

## **Studi non controllati**

### **Cannabis**

- Nguyen BM, Kim D, Bricker S, Bongard F, Neville A, Putnam B, Smith J, Plurad D. Effect of marijuana use on outcomes in traumatic brain injury. *Am Surg.* 2014;80(10):979-83.

## **Acufeni**

### **Case report, Indagini**

#### **Dronabinol/Cannabis (fumata)**

- Raby WN, Modica PA, Wolintz RJ, Murtaugh K. Dronabinol reduces signs and symptoms of idiopathic intracranial hypertension: a case report. *J Ocul Pharmacol Ther* 2006;22(1):68-75.

## **Prurito**

### **Studi non controllati**

#### **Crema agli endocannabinoidi**

- Szepietowski JC, Szepietowski T, Reich A. Efficacy and tolerance of the cream containing structured physiological lipids with endocannabinoids in the treatment of uremic pruritus: a preliminary study. *Acta Dermatovenerol Croat* 2005;13(2):97-103.
- Ständer S, Reinhardt HW, Luger TA. [Topical cannabinoid agonists: An effective new possibility for treating chronic pruritus.] [Article in German]. *Hautarzt* 2006;57(9):801-7.

### **Case report, Indagini**

#### **Dronabinol**

- Neff GW, O'Brien CB, Reddy KR, Bergasa NV, Regev A, Molina E, Amaro R, Rodriguez MJ, Chase V, Jeffers L, Schiff E. Preliminary observation with dronabinol in patients with intractable pruritus secondary to cholestatic liver disease. *Am J Gastroenterol* 2002;97(8):2117-9.

## **Sudori notturni**

### **Studi non controllati**

#### **Nabilone**

- Maida V. Nabilone for the treatment of paraneoplastic night sweats: a report of four cases. *J Palliat Med* 2008;11(6):929-34.

## **Epilessia**

### **Case Report**

#### **Cannabis**

- Hegde M, Santos-Sanchez C, Hess CP, Kabir AA, Garcia PA. Seizure exacerbation in two patients with

focal epilepsy following marijuana cessation. *Epilepsy Behav* 2012;25(4):563-6.

### **Cannabidiolo**

- Warren PP, Bebin EM, Nabors LB, Szaflarski JP. The use of cannabidiol for seizure management in patients with brain tumor-related epilepsy. *Neurocase*. 2017;23(5-6):287-291.

## **Studi controllati**

### **Cannabidiolo**

- Cunha JM, Carlini EA, Pereira AE, Ramos OL, Pimentel C, Gagliardi R, Sanvito WL, Lander N, Mechoulam R. Chronic administration of cannabidiol to healthy volunteers and epileptic patients. *Pharmacology* 1980;21(3):175-85.
- Tzadok M, Uliel-Siboni S, Linder I, Kramer U, Epstein O, Menascu S, Nissenkorn A, Yosef OB, Hyman E, Granot D, Dor M, Lerman-Sagie T, Ben-Zeev B. CBD-enriched medical cannabis for intractable pediatric epilepsy: The current Israeli experience. *Seizure*. 2016;35:41-4.
- Devinsky O, Cross JH, Laux L, Marsh E, Miller I, Nabbout R, Scheffer IE, Thiele EA, Wright S; Cannabidiol in Dravet Syndrome Study Group. Trial of Cannabidiol for Drug-Resistant Seizures in the Dravet Syndrome. *N Engl J Med*. 2017;376(21):2011-2020.
- Devinsky O. et al. Randomized, dose-ranging safety trial of cannabidiol in Dravet syndrome. *Neurology*. 2018;90(14):e1204-e1211.
- Thiele EA. et al. Cannabidiol in patients with seizures associated with Lennox-Gastaut syndrome (GWPCARE4): a randomised, double-blind, placebo-controlled phase 3 trial. *Lancet*. 2018;391(10125):1085-1096.

## **Studi non controllati**

### **Cannabis (fumata)**

- Consroe PF, Wood GC, Buchsbaum H. Anticonvulsant nature of marijuana smoking. *JAMA* 1975;234(3):306-7.

### **Cannabis (orale, sublinguale)**

- Press CA, Knupp KG, Chapman KE. Parental reporting of response to oral cannabis extracts for treatment of refractory epilepsy. *Epilepsy Behav*. 2015;45:49-52.

### **Cannabidiolo**

- Ames FR, Cridland S.: Anticonvulsant effect of cannabidiol [letter]. *South African Medical Journal* 1986;69:14.
- Trembly B, Sherman M. Double-blind clinical study of cannabidiol as a secondary anticonvulsant. Conference on Cannabis and Cannabinoids, Kolympari/Crete, July 1990, cited according to: Consroe P, Sandyk R. Potential role of cannabinoids for therapy of neurological disorders. In: Murphy L, Bartke A, eds. *Marijuana/Cannabinoids, Neurobiology and Neurophysiology*. Boca Raton: CRC Press 1992, 459-524. [**Commento:** nessun effetto del cannabidiolo (300 mg/giorno) in 10 pazienti]
- Trembly B, Sherman M. Double-blind clinical study of cannabidiol as a secondary anticonvulsant. Conference on Cannabis and Cannabinoids, Kolympari/Crete, July 1990, cited according to: Consroe P, Sandyk R. Potential role of cannabinoids for therapy of neurological disorders. In: Murphy L, Bartke A, eds. *Marijuana/Cannabinoids, Neurobiology and Neurophysiology*. Boca Raton: CRC Press 1992, 459-524. [**Commento:** riduzione della frequenza delle crisi con il cannabidiolo (900-1200 mg/giorno) in un paziente]
- Devinsky O, Marsh E, Friedman D, Thiele E, Laux L, Sullivan J, Miller I, Flamini R, Wilfong A, Filloux F, Wong M, Tilton N, Bruno P, Bluvstein J, Hedlund J, Kamens R, Maclean J, Nangia S, Singhal NS, Wilson

CA, Patel A, Cilio MR. Cannabidiol in patients with treatment-resistant epilepsy: an open-label interventional trial. *Lancet Neurol*. 2016;15(3):270-8.

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- Hausman-Kedem M, Menascu S, Kramer U. Efficacy of CBD-enriched medical cannabis for treatment of refractory epilepsy in children and adolescents - An observational, longitudinal study. *Brain Dev*. 2018 Apr 16. [Epub ahead of print]

## **Case report, Indagini**

### **Cannabis (fumata)**

- Corral VL. Differential effects of medical marijuana based on strain and route of administration: A three-year observational study. *J Cannabis Ther* 2001;1(3-4):43-59.
- Mortati K, Dworetzky B, Devinsky O. Marijuana: an effective antiepileptic treatment in partial epilepsy? A case report and review of the literature. *Rev Neurol Dis* 2007;4(2):103-6.
- Hamerle M, Ghaeni L, Kowski A, Weissinger F, Holtkamp M. Cannabis and other illicit drug use in epilepsy patients. *Eur J Neurol*. 2014;21(1):167-70.
- Massot-Tarrús A, McLachlan RS. Marijuana use in adults admitted to a Canadian epilepsy monitoring unit. *Epilepsy Behav*. 2016;63:73-78.

### **Cannabidiolo**

- Gofshteyn JS, Wilfong A, Devinsky O, Bluvstein J, Charuta J, Ciliberto MA, Laux L, Marsh ED. Cannabidiol as a Potential Treatment for Febrile Infection-Related Epilepsy Syndrome (FIRES) in the Acute and Chronic Phases. *J Child Neurol*. 2017;32(1):35-40.
- Aguirre-Velázquez CG. Report from a Survey of Parents Regarding the Use of Cannabidiol (Medicinal cannabis) in Mexican Children with Refractory Epilepsy. *Neurol Res Int*. 2017;2017:2985729.
- Neubauer D, Perković Benedik M, Osredkar D. Cannabidiol for treatment of refractory childhood epilepsies: Experience from a single tertiary epilepsy center in Slovenia. *Epilepsy Behav*. 2018;81:79-85.

## **Sindrome di Isaacs**

### **Case Report**

#### **Dronabinol**

- Meyniel C, Ollivier Y, Hamidou M, Péréon Y, Derkinderen P. Dramatic improvement of refractory Isaacs' syndrome after treatment with dronabinol. *Clin Neurol Neurosurg* 2011;113(4):323-4.

## **Pressione endo-oculare – glaucoma**

### **Studi controllati**

#### **Cannabis (fumata)**

- Crawford WJ, Merritt JC. Effects of tetrahydrocannabinol on arterial and intraocular hypertension. *International Journal of Clinical Pharmacology and Biopharmacy* 1979;17(5):191-196.



- Merritt JC, Crawford WJ, Alexander PC, Anduze AL, Gelbart SS. Effect of marijuana on intraocular and blood pressure in glaucoma. *Ophthalmology* 1980;87(3):222-8.

#### **Dronabinol**

- Tomida I, Azuara-Blanco A, House H, Flint M, Pertwee RG, Robson PJ. Effect of sublingual application of cannabinoids on intraocular pressure: a pilot study. *J Glaucoma* 2006;15(5):349-353.

#### **Cannabidiolo**

- Tomida I, Azuara-Blanco A, House H, Flint M, Pertwee RG, Robson PJ. Effect of sublingual application of cannabinoids on intraocular pressure: a pilot study. *J Glaucoma* 2006;15(5):349-353.

## **Studi non controllati**

#### **Cannabis (fumata)**

- Hepler RS, Frank IM, Petrus R. Ocular effects of marijuana smoking. In: Braude MC, Szara S, eds. *The pharmacology of marijuana*. Raven Press: New York: 1976;815-828.

## **Case report, Indagini**

#### **Cannabis (fumata)**

- Russo EB, Mathre ML, Byrne A, Velin R, Bach PJ, Sanchez-Ramos J, et al. Chronic cannabis use in the Compassionate Investigational New Drug Program: An examination of benefits and adverse effects of legal clinical cannabis. *J Cannabis Ther* 2002;2(1):3-57.

## **Somministrazione topica**

#### **Dronabinol**

- Merritt JC, Perry DD, Russell DN, Jones BF. Topical delta 9-tetrahydrocannabinol and aqueous dynamics in glaucoma. *Journal of Clinical Pharmacology* 1981;21(8-9 Suppl):467S-471S.

# **Pressione endo-oculare – Soggetti sani**

## **Studi controllati**

#### **Dronabinol**

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#### **Delta-9-THC, Delta-8-THC, 11-OH-THC, CBD, CBN**

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## **Studi non controllati**

### **Dronabinol**

- Plange N, Arend KO, Kaup M, Doehmen B, Adams H, Hendricks S, Cordes A, Huth J, Sponsel WE, Remky A. Dronabinol and retinal hemodynamics in humans. *Am J Ophthalmol* 2007;143(1):173-4.

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## **Visione notturna**

### **Studi controllati**

#### **Dronabinol**

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#### **Cannabis (fumata)**

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## **Asma**

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#### **Dronabinol**

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### **Studi non controllati**

#### **Dronabinol**

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#### **Cannabis (fumata)**

- Tashkin DP, Shapiro BJ, Frank IM. Acute effects of smoked marijuana and oral delta9-tetrahydrocannabinol on specific airway conductance in asthmatic subjects. American Review for Respiratory Diseases 1974 Apr;109(4):420-8.

## **Broncodilatazione – Soggetti sani**

### **Studi controllati**

#### **Dronabinol**

- Gong H Jr, Tashkin DP, Simmons MS, Calvarese B, Shapiro BJ. Acute and subacute bronchial effects of oral cannabinoids. Clinical Pharmacology and Therapeutics 1984;35(1):26-32.
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#### **Nabilone**

- Gong H Jr, Tashkin DP, Calvarese B. Comparison of bronchial effects of nabilone and terbutaline in healthy and asthmatic subjects. Journal of Clinical Pharmacology 1983;23(4):127-133.

## **BPCO (Broncopneumopatia cronica ostruttiva)**

### **Studi controllati**

#### **Cannabis (orale, sublinguale)**

- Pickering EE, Semple SJ, Nazir MS, Murphy K, Snow TM, Cummin AR, Moosavi S, Guz A, Holdcroft A. Cannabinoid effects on ventilation and breathlessness: A pilot study of efficacy and safety. Chron Respir Dis 2011;8(2):109-18.
- Morris MA. et al. Marijuana Use Associations with Pulmonary Symptoms and Function in Tobacco Smokers Enrolled in the Subpopulations and Intermediate Outcome Measures in COPD Study. Chronic Obstr Pulm Dis. 2018;5(1):46-56.

### **Studi non controllati**

### **Cannabis (fumata)**

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## **Pressione sanguigna/Ipertensione**

### **Case Reports, Indagini**

#### **Cannabis (fumata)**

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### **Studi controllati**

#### **Cannabidiolo**

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## **Cancro**

### **Studi non controllati**

#### **Dronabinol**

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### **Case Reports, Indagini**

#### **Cannabis (fumata)**

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#### **Cannabis (topica)**

- Maida V. Medical Cannabis in the Palliation of Malignant Wounds—A Case Report. *J Pain Symptom Manage*. 2017;53(1):e4-e6.

## **Morbo di Alzheimer**

### **Studi controllati**

#### **Dronabinol**

- Volicer L, Stelly M, Morris J, McLaughlin J, Volicer BJ. Effects of dronabinol on anorexia and disturbed behavior in patients with Alzheimer's disease. *International Journal of Geriatric Psychiatry*

1997;12:913-919.

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## **Studi non controllati**

### **Dronabinol**

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### **Nabilone**

- Passmore MJ. The cannabinoid receptor agonist nabilone for the treatment of dementia-related agitation. *Int J Geriatr Psychiatry* 2008;23(1):116-7.

## **Neuroprotezione**

### **Case Reports, Indagini**

#### **Cannabis (smoked)**

- Jacobus J, McQueeney T, Bava S, Schweinsburg BC, Frank LR, Yang TT, Tapert SF. White matter integrity in adolescents with histories of marijuana use and binge drinking. *Neurotoxicol Teratol* 2009;31(6):349-55.

## **Schizofrenia**

### **Studi controllati**

#### **Cannabidiolo**

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## **Studi non controllati**

### **Cannabidiolo**

- Zuardi AW, Morais SL, Guimarães FS, Mechoulam R. Antipsychotic effect of cannabidiol. *Journal of Clinical Psychiatry* 1995;56:485-486.

### **Cannabis (fumata)**

- Waterreus A, Badcock JC, Di Prinzio P, Martin-Iverson M, Morgan VA. The impact of current cannabis use on general cognitive function in people with psychotic illness. *Schizophr Res*. 2017;190:164-171.
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## **Case Reports, Indagini**

### **Dronabinol**

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### **Cannabidiolo**

- Boggs DL et al. The effects of cannabidiol (CBD) on cognition and symptoms in outpatients with chronic schizophrenia a randomized placebo controlled trial. *Psychopharmacology (Berl)*. 2018 Apr 5. [Epub ahead of print]

### **Cannabis (fumata)**

- Schwarcz G, Karajgi B, McCarthy R. Synthetic delta-9-tetrahydrocannabinol (dronabinol) can improve the symptoms of schizophrenia. *J Clin Psychopharmacol* 2009;29(3):255-8.
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# Disturbo bipolare

## Studi non controllati

### Cannabis (fumata)

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## Case report, Indagini

### Cannabis (fumata)

- Grinspoon L, Bakalar JB. The use of cannabis as a mood stabilizer in bipolar disorder: anecdotal evidence and the need for clinical research. Journal of Psychoactive Drugs 1998;30(2):171-7.
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# Autismo

## Studi non controllati

### Anandamide

- Karhson DS, Krasinska KM, Dallaire JA, Libove RA, Phillips JM, Chien AS, Garner JP, Hardan AY, Parker KJ. Plasma anandamide concentrations are lower in children with autism spectrum disorder. Mol Autism. 2018 Mar 12;9:18.

### Cannabidiolo

- Aran A., Cassuto H., Lubotzky A. Cannabidiol Based Medical Cannabis in Children with Autism- a Retrospective Feasibility Study. Neurology 2018 (in press).

# Depressione

## Studi controllati

### Dronabinol

- Regelson W, Butler JR, Schulz J, Kirk T, Peek L, Green ML, Zalis MO. Delta-9-tetrahydrocannabinol as an effective antidepressant and appetite-stimulating agent in advanced cancer patients. In: Braude MC, Szara S, editors. Pharmacology of marijuana. Vol 2. New York: Raven Press, 1976. p. 763-776.

## Studi non controllati

### Cannabis (fumata)

- Cuttler C, Spradlin A, McLaughlin RJ. A naturalistic examination of the perceived effects of cannabis on negative affect. J Affect Disord. 2018;235:198-205.

## Case report, Indagini

### Cannabis (fumata)

- Ware MA, Adams H, Guy GW. The medicinal use of cannabis in the UK: results of a nationwide survey. *Int J Clin Pract* 2005;59(3):291-5.
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## Ansia

### Studi controllati

#### Cannabidiolo

- Bergamaschi MM, Queiroz RH, Chagas MH, de Oliveira DC, De Martinis BS, Kapczinski F, Quevedo J, Roesler R, Schröder N, Nardi AE, Martín-Santos R, Hallak JE, Zuardi AW, Crippa JA. Cannabidiol Reduces the Anxiety Induced by Simulated Public Speaking in Treatment-Naïve Social Phobia Patients. *Neuropsychopharmacology.* 2011 Feb 9. [Epub ahead of print]
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#### Dronabinolo

- Rabinak CA, Angstadt M, Sripada CS, Abelson JL, Liberzon I, Milad MR, Phan KL. Cannabinoid facilitation of fear extinction memory recall in humans. *Neuropharmacology.* 2013;64:396-402.
- Ballard ME, Bedi G, de Wit H. Effects of delta-9-tetrahydrocannabinol on evaluation of emotional images. *J Psychopharmacol.* 2012;26(10):1289-98.

### Studi non controllati

#### Cannabis (fumata)

- Cuttler C, Spradlin A, McLaughlin RJ. A naturalistic examination of the perceived effects of cannabis on negative affect. *J Affect Disord.* 2018;235:198-205.

## Case Reports, Surveys

### Cannabis (smoked)

- Piper BJ, DeKeuster RM, Beals ML, Cobb CM, Burchman CA, Perkinson L, Lynn ST, Nichols SD, Abess AT. Substitution of medical cannabis for pharmaceutical agents for pain, anxiety, and sleep. *J Psychopharmacol.* 2017;31(5):569-575.

## Disturbo da stress post-traumatico



## Case Reports, Indagini

### Cannabis (fumata)

- Villagonzalo KA, Dodd S, Ng F, Mihaly S, Langbein A, Berk M. The relationship between substance use and posttraumatic stress disorder in a methadone maintenance treatment program. *Compr Psychiatry* 2011;52(5):562-6.
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- Bonn-Miller MO, Babson KA, Vandrey R. Using cannabis to help you sleep: heightened frequency of medical cannabis use among those with PTSD. *Drug Alcohol Depend.* 2014;136:162-5.

## Studi non controllati

### THC (orale, sublinguale)

- Roitman P, Mechoulam R, Cooper-Kazaz R, Shalev A. Preliminary, open-label, pilot study of add-on oral  $\Delta^9$ -tetrahydrocannabinol in chronic post-traumatic stress disorder. *Clin Drug Investig.* 2014;34(8):587-91.

### Nabilone

- Cameron C, Watson D, Robinson J. Use of a synthetic cannabinoid in a correctional population for posttraumatic stress disorder-related insomnia and nightmares, chronic pain, harm reduction, and other indications: a retrospective evaluation. *J Clin Psychopharmacol.* 2014;34(5):559-64.

### Cannabis (fumata)

- Ruglass LM, Shevorykin A, Radoncic V, Smith KM, Smith PH, Galatzer-Levy IR, Papini S, Hien DA. Impact of Cannabis Use on Treatment Outcomes among Adults Receiving Cognitive-Behavioral Treatment for PTSD and Substance Use Disorders. *J Clin Med.* 2017;6(2).

## Studi controllati

### Nabilone

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# Dipendenza da alcool

## Case report, Indagini

### Cannabis (fumata)

- Mikuriya TH. Cannabis substitution. An adjunctive therapeutic tool in the treatment of alcoholism. *Medical Times* 1970;98(4):187-91.
- Mikuriya TH. Cannabis as a substitute for alcohol: a harm-reduction approach. *J Cannabis Ther* 2004;4(1):79-93.
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medical cannabis patients. *Addiction Res Theory* 2013;21(5):435-42.

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## Dipendenza da oppioidi

### Case report, Indagini

#### Cannabis (fumata)

- Hermann D, Klages E, Welzel H, Mann K, Croissant B. Low efficacy of non-opioid drugs in opioid withdrawal symptoms. *Addict Biol* 2005;10(2):165-9.
- O'Connell TJ, Bou-Matar CB. Long term marijuana users seeking medical cannabis in California (2001-2007): demographics, social characteristics, patterns of cannabis and other drug use of 4117 applicants. *Harm Reduct J* 2007;4:16.
- Meng H, Hanlon JG, Katznelson R, Ghanekar A, McGilvray I, Clarke H. The prescription of medical cannabis by a transitional pain service to wean a patient with complex pain from opioid use following liver transplantation: a case report. *Can J Anaesth*. 2016;63(3):307-10.
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- Nugent SM, Yarborough BJ, Smith NX, Dobscha SK, Deyo RA, Green CA, Morasco BJ. Patterns and correlates of medical cannabis use for pain among patients prescribed long-term opioid therapy. *Gen Hosp Psychiatry*. 2018;50:104-110.
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- Bradford AC, Bradford WD, Abraham A, Bagwell Adams G. Association Between US State Medical Cannabis Laws and Opioid Prescribing in the Medicare Part D Population. *JAMA Intern Med*. 2018 Apr 2. [Epub ahead of print]
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### Studi non controllati

#### Cannabis (fumata)

- Raby WN, Carpenter KM, Rothenberg J, Brooks AC, Jiang H, Sullivan M, Bisaga A, Comer S, Nunes EV. Intermittent marijuana use is associated with improved retention in naltrexone treatment for opiate dependence. *Am J Addict* 2009;18(4):301-8.

- Scavone JL, Sterling RC, Weinstein SP, Van Bockstaele EJ. Impact of cannabis use during stabilization on methadone maintenance treatment. *Am J Addict.* 2013;22(4):344-51.

## **Studi controllati**

### **Dronabinolo**

- Jicha CJ, Lofwall MR, Nuzzo PA, Babalonis S, Elayi SC, Walsh SL. Safety of oral dronabinol during opioid withdrawal in humans. *Drug Alcohol Depend.* 2015;157:179-83.

## **Dipendenza da cocaina/crack**

### **Studi non controllati**

#### **Cannabis (fumata)**

- Aharonovich E, Garawi F, Bisaga A, Brooks D, Raby WN, Rubin E, Nunes EV, Levin FR. Concurrent cannabis use during treatment for comorbid ADHD and cocaine dependence: effects on outcome. *Am J Drug Alcohol Abuse.* 2006;32(4):629-35.
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### **Case report, Indagini**

#### **Cannabis (fumata)**

- Dreher M. Crack heads and roots daughters: The therapeutic use of cannabis in Jamaica. *J Cannabis Ther* 2002;2(3-4):121-33.

## **Dipendenza da cannabis**

### **Studi controllati**

#### **Dronabinol**

- Haney M, Hart CL, Vosburg SK, Nasser J, Bennett A, Zubarán C, Foltin RW. Marijuana withdrawal in humans: effects of oral THC or divalproex. *Neuropsychopharmacology* 2004;29(1):158-70.
- Schlienz NJ, Lee DC, Stitzer ML, Vandrey R. The effect of high-dose dronabinol (oral THC) maintenance on cannabis self-administration. *Drug Alcohol Depend.* 2018;187:254-260.

#### **Cannabis (orale, sublinguale)**

- Allsop DJ, Copeland J, Lintzeris N, Dunlop AJ, Montebello M, Sadler C, Rivas GR, Holland RM, Muhleisen P, Norberg MM, Booth J, McGregor IS. Nabiximols as an agonist replacement therapy during cannabis withdrawal: a randomized clinical trial. *JAMA Psychiatry.* 2014;71(3):281-91.

### **Studi non controllati**

#### **Dronabinolo**

- Vandrey R, Stitzer ML, Mintzer MZ, Huestis MA, Murray JA, Lee D. The dose effects of short-term

dronabinol (oral THC) maintenance in daily cannabis users. *Drug Alcohol Depend.* 2013;128(1-2):64-70.

#### **Nabilone**

- Haney M, Cooper ZD, Bedi G, Vosburg SK, Comer SD, Foltin RW. Nabilone decreases marijuana withdrawal and a laboratory measure of marijuana relapse. *Neuropsychopharmacology.* 2013;38(8):1557-65.

## **Case report, Indagini**

#### **Dronabinol**

- Levin FR, Kleber HD. Use of dronabinol for cannabis dependence: two case reports and review. *Am J Addict* 2008;17(2):161-4.

#### **Cannabidiolo**

- Crippa JA, Hallak JE, Machado-de-Sousa JP, Queiroz RH, Bergamaschi M, Chagas MH, Zuardi AW. Cannabidiol for the treatment of cannabis withdrawal syndrome: a case report. *J Clin Pharm Ther.* 2013;38(2):162-4.

## **Dipendenza da Tabacco**

### **Studi controllati**

#### **Cannabidiolo**

- Hindocha C. et al. Cannabidiol reverses attentional bias to cigarette cues in a human experimental model of tobacco withdrawal. *Addiction.* 2018 May 1. [Epub ahead of print]

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