

/https://pubmed.ncbi.nlm.nih.gov/3549808

Deaths occurring during clinical studies of topical minoxidil

J R Spindler. J Am Acad Dermatol. 1987 Mar.

<https://pubmed.ncbi.nlm.nih.gov/3655033/>

Deaths associated with topical minoxidil therapy

J Baral. J Am Acad Dermatol. 1987 Sep.

[/https://pubmed.ncbi.nlm.nih.gov/4044954](https://pubmed.ncbi.nlm.nih.gov/4044954)

Minoxidil and sudden death

J Baral. J Am Acad Dermatol. 1985 Aug.

<https://pubmed.ncbi.nlm.nih.gov/3173816/>

Orthostatic hypotension occurring after discontinuation of long-term minoxidil therapy

H C Noel

/https://pubmed.ncbi.nlm.nih.gov/35060247

Topical minoxidil-induced paresthesia

Mouna Korbi et al. Dermatol Ther. 2022 Apr.

https://www.researchgate.net/publication/317000257_TOPICAL_MINOXIDIL_5_INDUCED_MALE_SEXUAL_DYSFUNCTION

TOPICAL MINOXIDIL 5% INDUCED MALE SEXUAL DYSFUNCTION

- May 2017

DOI: [10.5281/zenodo.580856](https://doi.org/10.5281/zenodo.580856)

Authors:

[Mazen alzo'ubi](#)

<https://pubmed.ncbi.nlm.nih.gov/19323621/>

Fatal toxic epidermal necrolysis associated with minoxidil

Lamis R Karaoui et al. Pharmacotherapy. 2009 Apr.

פולימיאלגיה בעקבות מינוקסידיל טופיקלי

<https://pubmed.ncbi.nlm.nih.gov/2256586/>

[Polymyalgia induced by topical minoxidil]

[Article in French]

R Colamarino et al. Ann Med Interne (Paris). 1990.

שימוש קצר במינוקסידיל טופיקלי ופגיעה פריקרדיאלית

<https://pubmed.ncbi.nlm.nih.gov/12356348/>

Very large pericardial effusion attributable to minoxidil: resolution without drainage of fluid

Arsalan Shirwany et al. Echocardiography. 2002 Aug.

<https://pubmed.ncbi.nlm.nih.gov/21519225/>

Case Reports

Short-term minoxidil use associated with pericardial effusion and cardiac tamponade: an uncommon presentation

<https://pubmed.ncbi.nlm.nih.gov/7750691/>

[Increase of aminotransferase levels during percutaneous minoxidil therapy]

[Article in French]

X Roblin et al. Gastroenterol Clin Biol. 1994.

<https://pubmed.ncbi.nlm.nih.gov/20375958/>

Case Reports

Minoxidil-associated exudative pleural effusion

Atif Siddiqui et al. South Med J. 2010 May.

<https://pubmed.ncbi.nlm.nih.gov/26951281/>

Minoxidil-Associated Pleuropericardial Effusion

Max Brondfield et al. J Gen Intern Med. 2016 Sep

<https://pubmed.ncbi.nlm.nih.gov/37188324/>

Minoxidil-induced lung disease, masquerading as hypersensitivity pneumonitis

Daisuke Takekosh et al. Respir Med Case Rep. 2023.

<https://pubmed.ncbi.nlm.nih.gov/38025251/>

Drug-induced lung disease due to topical minoxidil

Takashi Ishiguro et al. Respir Med Case Rep. 2023.

<https://pubmed.ncbi.nlm.nih.gov/34249570/>

Atypical Case of Minoxidil-Induced Generalized Anasarca and Pleuropericardial Effusion

Wahab A Gbadamosi et al. Cureus. 2021.

Creatinine increase by minoxidil!

<https://pubmed.ncbi.nlm.nih.gov/6156352/#:~:text=Renal%20function%20was%20monitored%20in.disease%20progressed%20to%20require%20hemodialysis.>

Renal function in long-term minoxidil-treated patients

H C Mitchell et al. J Cardiovasc Pharmacol. 1980.

“Renal function was monitored in 20 previously refractory hypertensive patients treated for 2--7 years with minoxidil, sympathetic suppressants, and diuretics. Serum creatinine concentration increased by more than 1 mg/dl in 9 of the 20 patients. In 4 of the 9 patients, renal disease progressed to require hemodialysis. Eleven patients had no progression of renal disease (creatinine increased less than or equal to 1 mg/dl). Three of the 11 had had malignant hypertension with renal failure which was reversed during this triple therapy”

<https://pubmed.ncbi.nlm.nih.gov/8733532/>

Minoxidil, hypercoagulability and thromboembolic disease of the lung

S G Keohane et al. Postgrad Med J. 1996 Apr.

[Free PMC article](#)

[Genotoxic effects of minoxidil](#)

<https://pubmed.ncbi.nlm.nih.gov/3341023/>

Nongenotoxicity of minoxidil in murine hair follicles as determined by the nuclear aberration assay

R N Schop et al. Toxicol Appl Pharmacol. 1988 Jan.

<https://www.sciencedirect.com/science/article/pii/S0022202X15426570>

In the Absence of Streptomycin, Minoxidil Potentiates the Mitogenic Effects of Fetal Calf Serum, Insulin-Like Growth Factor 1, and Platelet-Derived Growth Factor on NIH 3T3 Fibroblasts in a K⁺ Channel-Dependent Fashion

Author links open overlay panel Deborah A. Sanders, Darren M. Thompson, Michael P. Philpott, Terence Kealey, Ian Fiddes¹, Gillian E. Westgate²

[https://www.jaad.org/article/S0190-9622\(12\)01146-2/fulltext](https://www.jaad.org/article/S0190-9622(12)01146-2/fulltext)

Topical minoxidil treatment for congenital alopecia in hypohidrotic ectodermal dysplasia

- Hae-Eul Lee, MD
- In-Kyu Chang, MD
- Myung Im, MD
- Young-Joon Seo, MD
- Jeung-Hoon Lee, MD
- Young Lee, MD

DOI: <https://doi.org/10.1016/j.jaad.2012.10.019>

“Minoxidil has a mitogenic effect on epidermal cells” !!!

Suppression of fibroblast proliferation and lysyl hydroxylase activity by minoxidil.

by S Murad · 1987 · Cited by 98 – Studies with cells in culture have shown that minoxidil exerts a mitogenic effect on keratinocytes (6, 7) and an immunosuppressive effect on lymphocytes ...

<https://www.ncbi.nlm.nih.gov/pmc/articles/PMC7222831/#:~:text=Minoxidil%20is%20a%20cosmetic%20drug,possibility%20of%20perpetuating%20DNA%20damage>.

Effect of High-Dose Topical Minoxidil on Erythrocyte Quality in SKH1 Hairless Mice

[Eduardo Naranjo-Vázquez](#),^{1,2} [María Guadalupe Sánchez-Parada](#),¹ [Belinda Claudia Gómez-Meda](#),³ [Ana Lourdes Zamora-Perez](#),⁴ [Martha Patricia Gallegos-Arreola](#),⁵ [Ana Elizabeth González-Santiago](#),¹ and [Guillermo Moisés Zúñiga-González](#)^{2,*}

“Minoxidil is a cosmetic drug that is recognized as a mitogenic agent, and mitogens are suggested to have carcinogenic and mutagenic potential by inducing cell division and increasing the possibility of perpetuating DNA damage.”

“In this work, excessive doses of a cosmetic drug for topical use in dermatological treatments, known as minoxidil, produced defects in the blood of hairless mice, particularly in red cells, indicating loss of DNA, a situation that may compromise life or the offspring by causing damage to their genetic material. It is important to consider that compounds may be tissue- or species-specific, although we cannot rule out the possibility that similar damage could occur in other animal species. Thus, excessive exposure to this compound should be prevented”

<https://pubmed.ncbi.nlm.nih.gov/2214923/#:~:text=Minoxidil%2C%20at%20concentrations%20ranging%20from,caused%20a%20cytotoxic%20effect.>

[Effect of minoxidil on DNA synthesis in cultured fibroblasts from healthy skin or keloids]

[Article in Spanish]

G Piñol et al. Med Cutan Ibero Lat Am. 1990.

“Minoxidil, at concentrations ranging from 500 to 1,000 microM., caused an increase in DNA synthesis, which was proportional to the initial degree of fibroblast activation. Concentrations higher than 1,000 microM. caused a cytotoxic effect”

<https://pubmed.ncbi.nlm.nih.gov/9610443/>

Minoxidil-induced alteration of corneal topography after radial keratotomy

K M Goins et al. J Cataract Refract Surg. 1998 May.

<https://www.sciencedirect.com/science/article/abs/pii/S0278691523006130>

Toxicological assessment of minoxidil: A drug with therapeutic potential besides alopecia

Author links open overlay panelLismare da Silva

Prado ^a, Ivana Grivicich ^b, Jessica Machado Miri ^b, Mariele Feiffer Charão ^c, Amanda Bonfada ^c, Gabriela Endres da Rocha ^c, Juliana Bondan da Silva ^a, Fernanda Brião Menezes Boaretto ^a, Ana Letícia Hilario Garcia ^{a d}, Juliana da Silva ^{a d}, Jaqueline Nascimento Picada ^a

<https://pubmed.ncbi.nlm.nih.gov/2442156/>

Suppression of fibroblast proliferation and lysyl hydroxylase activity by minoxidil

S Murad et al. J Biol Chem. 1987.

Epidermal growth factor receptor (EGFR) in lung cancer: an overview and update

[Gillian Bethune](#),¹ [Drew Bethune](#),² [Neale Ridgway](#),³ and [Zhaolin Xu](#)¹

[Author information](#) [Article notes](#) [Copyright and License information](#)

<https://www.ncbi.nlm.nih.gov/pmc/articles/PMC3256436/>

Case Reports

Pustular dermatosis of the scalp due to topical minoxidil 5

Ouiam El Anzi et al. Pan Afr Med J. 2018

<https://pubmed.ncbi.nlm.nih.gov/22040279/>

Erosive pustular dermatosis of the scalp from topical minoxidil 5% solution

Claudio Guarneri et al. Int J Dermatol. 2013 Apr.

<https://pubmed.ncbi.nlm.nih.gov/21173334/>

Minoxidil-induced trichostasis spinulosa of terminal hair

Alexander A Navarini et al. Arch Dermatol. 2010 Dec.

https://www.researchgate.net/publication/321639715_Minoxidil_Overdosage_A_Case_Report

Minoxidil Overdosage: A Case Report

- June 2016
- [Makedonski medicinski pregled. Revue médicale macedonienne](#) 70(2)

DOI:[10.1515/mmr-2016-0020](https://doi.org/10.1515/mmr-2016-0020)

<https://pubmed.ncbi.nlm.nih.gov/32778436/>

Signs of early cardiac tamponade induced by Minoxidil

<https://pubmed.ncbi.nlm.nih.gov/29746289/>

Idiosyncratic Pericardial Effusion Associated With Minoxidil

Muhammad Yasin et al. Am J Ther. 2018 Nov/Dec.

Monique Oye et al. Am J Emerg Med. 2021 Feb.

<https://www.semanticscholar.org/paper/Minoxidil-Toxicity-and-Febrile-Illness-in-a-Mukhtar-ALBasarah/9f81aeb573be07c8073c6597265fa7d91a09c0a4>

Minoxidil Toxicity and Febrile Illness in a Pediatric Patient, a Life-Threatening Combination

- [I. Mukhtar](#), [Fadel AlBasarah](#), +3 authors [F. Khudair](#)
- Published 9 October 2020
- Medicine
-

(Non specific effects on matrix cells)

<https://pubmed.ncbi.nlm.nih.gov/28436015/>

The use of topical minoxidil to accelerate nail growth: a pilot study

Kumpol Aiempanakit et al. Int J Dermatol. 2017 Jul.

<https://pubmed.ncbi.nlm.nih.gov/34100376/>

Nitric oxide-dependent vasodilation induced by minoxidil in isolated rat aorta

Soo Hee Lee et al. Gen Physiol Biophys. 2021 May.

<https://www.tandfonline.com/doi/abs/10.3109/10799893.2015.1122041?role=tab&aria-labelledby=full-article&scroll=top&needAccess=true&journalCode=irst20>

The investigation of minoxidil-induced $[Ca^{2+}]_i$ rises and non- Ca^{2+} -triggered cell death in PC3 human prostate cancer cells

[I-Shu Chen](#)

,

[Chiang-Ting Chou](#)

,
[Yuan-Yuarn Liu](#)

,
[Chia-Cheng Yu](#)

,
[Wei-Zhe Liang](#)

,
[Chun-Chi Kuo](#)

, [show all](#)

Pages 1-7 | Received 21 Aug 2015, Accepted 16 Nov 2015, Published online: 16 Jun 2016

<https://pubmed.ncbi.nlm.nih.gov/31907964/>

Skin and hair abnormalities of Cantu syndrome: A congenital hypertrichosis due to a genetic alteration mimicking the pharmacological effect of minoxidil

Kentarō Ohko et al. J Dermatol. 2020 Mar.

<https://pubmed.ncbi.nlm.nih.gov/29112111/>

Pediatric Minoxidil Exposures Reported to Texas Poison Centers

Mathias B Forrester. Pediatr Emerg Care. 2018 Jun.

<https://www.ncbi.nlm.nih.gov/pmc/articles/PMC4502485/>

Frontal Edema Due to Topical Application of %5 Minoxidil Solution Following Mesotherapy Injections

[Şule Güngör](#), [Emek Kocatürk](#), and [İlteriş Oğuz Topal](#)

<https://pubmed.ncbi.nlm.nih.gov/17347980/>

Stevens–Johnson syndrome associated with oral minoxidil: a case report

Erin C Callen et al. J Nephrol. 2007 Jan–Feb.

<https://jamanetwork.com/journals/jamainternalmedicine/article-abstract/589620>

ECG Changes During Long-term Minoxidil Therapy for Severe Hypertension

Donald Hall, MD; Fotis Charocopos, MD; Karl-Ludwig Froer, MD; et al

<https://www.sciencedirect.com/science/article/abs/pii/S0190962203004225>

Pseudoacromegaly induced by the long-term use of minoxidil ☆, ☆ ☆

Author links open overlay panel Kari H. Nguyen MD, James G. Marks Jr MD

<https://www.sciencedirect.com/science/article/pii/S0021925818453045>

Suppression of fibroblast proliferation and lysyl hydroxylase activity by minoxidil.

Author links open overlay panel S Murad, S R Pinnell

<https://www.ncbi.nlm.nih.gov/pmc/articles/PMC6029000/>

Minoxidil Downregulates Interleukin-1 Alpha Gene Expression in HaCaT Cells

[Erkin Pekmezci](#), [Murat Turkoğlu](#),¹ [Hilal Gökalp](#),² and [Zekayi Kutlubay](#)³

<https://www.askapatient.com/mobile/viewrating.asp?drug=20834&name=ROGAINE+EXTRA+STRENGTH+%28FOR+MEN%29>

ROGAINE EXTRA STRENGTH (FOR MEN) Reviews

<https://pubmed.ncbi.nlm.nih.gov/21519225/>

Case Reports

Short-term minoxidil use associated with pericardial effusion and cardiac tamponade: an uncommon presentation

Krishna K Pasala et al. Am J Ther. 2012 Nov.

https://journals.lww.com/pec-online/Abstract/2015/01000/Minoxidil_Topical_Solution__An_Unsafe_Product_for.11.aspx

Minoxidil Topical Solution

An Unsafe Product for Children

Claudet, Isabelle MD, MSc*; Cortey, Caroline MD*; Honorat, Raphaele MD*; Franchitto, Nicolas MD, PhD*

<https://pubmed.ncbi.nlm.nih.gov/1629592/>

Minoxidil overdose with ECG changes: case report and review

S W Poff et al. J Emerg Med. 1992 Jan-Feb.

מכניזם

<https://www.sciencedirect.com/science/article/abs/pii/0738081X88900806>

Effects of minoxidil on human skin fibroblasts in culture ☆

Author links open overlay panel Sheldon R. Pinnell MD, Saood Murad PhD

<https://pubmed.ncbi.nlm.nih.gov/6840945/>

Unusual hair changes with minoxidil therapy

R M Ingles et al. Int J Dermatol. 1983 Mar.
<https://pubmed.ncbi.nlm.nih.gov/1355180/>
Case Reports

Hair loss with minoxidil withdrawal

B J Kidwai et al. Lancet. 1992.

<https://www.sciencedirect.com/topics/biochemistry-genetics-and-molecular-biology/minoxidil#:~:text=Minoxidil%20is%20a%20peripheral%20vasodilator,the%20activation%20of%20calcium%20channels.>

Minoxidil

Oral minoxidil is a potent agent which has significant side effects including pericardial effusion leading to tamponade and angina pectoris.
From: [Drugs for the Geriatric Patient, 2007](#)

<https://www.ncbi.nlm.nih.gov/pmc/articles/PMC5028441/>

Could Topical Minoxidil Cause Non-Arteritic Anterior Ischemic Optic Neuropathy?

[Habibullah Aktas](#),¹ [Sevil Alan](#),² [Elif Betül Türkoglu](#),³ and [Özge Sevik](#)⁴

מכניזם

השפעת המינוקסידיל על הקרטינוציטים שמסבירה את הריבאונד בנסיגה מהתרופה

<https://www.sciencedirect.com/science/article/pii/S0022202X15432610>

Effect of Minoxidil on Cultured Keratinocytes

Author links open overlay panelHoward
P. Baden M.D., Joseph Kubilus Ph.D.

<https://pubmed.ncbi.nlm.nih.gov/32778436/>

Signs of early cardiac tamponade induced by Minoxidil

Monique Oye et al. Am J Emerg Med. 2021 Feb.

<https://pubmed.ncbi.nlm.nih.gov/9580790/>

Minoxidil upregulates the expression of vascular endothelial growth factor in human hair dermal papilla cells

S Lachgar et al. Br J Dermatol. 1998 Mar.

<https://pubmed.ncbi.nlm.nih.gov/22864322/>

Large pericardial effusion induced by minoxidil

Mehmet Çilingiroğlu et al. Turk Kardiyol Dern Ars. 2012 Apr.

<https://pubmed.ncbi.nlm.nih.gov/2792935/>

[Massive pericardial effusion following minoxidil]

[Article in Hebrew]

Y Levy et al. Harefuah. 1989.

A Comparative Study of Minoxidil-Induced Myocardial Lesions in Beagle Dogs and Miniature Swine"

EUGENE H. HERMAN,² VICTOR J. FERRANS,³ ROBERT S. K. YOUNG

השפעת מינוקסידיל בנתיחה לאחר מוות.

[/https://pubmed.ncbi.nlm.nih.gov/18582543](https://pubmed.ncbi.nlm.nih.gov/18582543)

הגברת קרישיות ופגיעה בריאות

[/https://pubmed.ncbi.nlm.nih.gov/8733532](https://pubmed.ncbi.nlm.nih.gov/8733532)

Minoxidil, hypercoagulability and thromboembolic disease of the lung

S G Keohane et al. Postgrad Med J. 1996 Apr.

<https://www.ncbi.nlm.nih.gov/pmc/articles/PMC9478873/>

Pericardial, pleural effusion and anasarca: A rare complication of low-dose oral minoxidil for hair loss

מכניזם:

<https://www.mdpi.com/1422-0067/19/3/691?fbclid=IwAR3P9Sws67lbtwqyXPURlu5plmvYxvykbaTF98TQla58jjy2h9URazGCS>
Minoxidil Promotes Hair Growth through Stimulation of Growth Factor Release from Adipose-Derived Stem Cells

<https://www.jrpp.net/article.asp?issn=2319-9644;year=2018;volume=7;issue=4;spage=210;epage=212;aualast=Gheshlaghi>

Unstable angina: A rare presentation of minoxidil intoxication: A case report and literature review

[Farzad Gheshlaghi](#)

<https://www.sciencedirect.com/science/article/abs/pii/S0735675789900533>

Severe toxicity from ingestion of a topical minoxidil preparation ☆

Author links open overlay panelMary A. McCormick

<https://ejournal2.undip.ac.id/index.php/jbtr/article/view/11681/0>

Diagnostic Value of Vascular Endothelial Growth Factor C (VEGF-C) and CA 15-3 in Breast Cancer

[Ajeng Kurnia Wardhani](#)

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<https://www.sciencedirect.com/science/article/pii/S0022202X15432890?fbclid=IwAR32c5iWn8iFrnSN1NSfHFp2y7XAz47ni4Vq5l3bXSJrGgFs54O8D0nULN0>

Direct Effects of Minoxidil on Epidermal Cells in Culture

Author links open overlay panelRhonna L.

<https://sci-hub.se/10.1097/SMJ.0b013e3181be3415?fbclid=IwAR3P9Sws67IbetwqyXPURlu5plmvYxykbaTF98TQla58jy2h9URazGCSc>

Minoxidil-Associated Exudative Pleural Effusion Atif Siddiqui

[https://www.jaad.org/article/s0190-9622\(20\)33229-1/fulltext](https://www.jaad.org/article/s0190-9622(20)33229-1/fulltext)

Side effects of low-dose oral minoxidil for

מכניזם

<https://pubmed.ncbi.nlm.nih.gov/10942171/#:~:text=Minoxidil%20inhibits%20proliferation%20and%20migration,formation%20after%20balloon%20catheter%20injury>

Minoxidil inhibits proliferation and migration of cultured vascular smooth muscle cells and neointimal formation after balloon catheter injury

<https://pubmed.ncbi.nlm.nih.gov/23973310/>

Minoxidil sulfate induced the increase in blood-brain tumor barrier permeability through ROS/RhoA/PI3K/PKB signaling pathway

Yan-ting Gu et al. Neuropharmacology. 2013 Dec.

<https://ro.co/safety-info/oral-minoxidil/>

Important Safety Information for Oral Minoxidil

<https://www.drugs.com/sfx/minoxidil-side-effects.html>

Minoxidil Side Effects

[Medically reviewed](#) by Drugs.com. Last updated on Mar 22, 2023.

<https://pubmed.ncbi.nlm.nih.gov/37188324/>

Minoxidil-induced lung disease, masquerading as hypersensitivity pneumonitis

Daisuke Takekoshi et al. Respir Med Case Rep. 2023.

<https://karger.com/drm/article-abstract/201/2/183/111297/Leucoderma-Associated-with-the-Use-of-Topical?redirectedFrom=fulltext>

LETTERS | SEPTEMBER 29 2000

Leucoderma Associated with the Use of Topical Minoxidil: A Report of Two Cases

Subject Area: [Dermatology](#) , [Immunology and Allergy](#)

[Subrata Malakar](#);

[Sandipan Dhar](#)

<https://pubmed.ncbi.nlm.nih.gov/7353909/>

Pericardial effusion associated with minoxidil therapy in dialyzed patients

A Zarate,

https://www.sciencedirect.com/topics/biochemistry-genetics-and-molecular-biology/minoxidil?fbclid=IwAR0J9hD28Rk3-JQ3e_JRMptGnStLi8wdlYYugd4qzS7cPE1jqyAA-HLgQek#:~:text=Sodium%20and%20water%20retention%20occur,lack%20of%20an%20antihypertensive%20effect

Minoxidil

Oral minoxidil is a potent agent which has significant side effects including pericardial effusion leading to tamponade and angina pectoris.

From: [Drugs for the Geriatric Patient, 2007](#)

מכניזם אנטי אנדרוגני

<https://www.ncbi.nlm.nih.gov/pmc/articles/PMC4039155/>

Minoxidil may suppress androgen receptor-related functions

[Cheng-Lung Hsu,¹](#)

<https://pubmed.ncbi.nlm.nih.gov/37805090/>

Comparative effects of finasteride and minoxidil on the male reproductive organs: A systematic review of in vitro and in vivo evidence

Francielle de Fátima Viana Santana et al. Toxicol Appl Pharmacol. 2023.

<https://pubmed.ncbi.nlm.nih.gov/27656541/>

Could Topical Minoxidil Cause Non-Arteritic Anterior Ischemic Optic Neuropathy?

Habibullah Aktas

<https://bmcophthalmol.biomedcentral.com/articles/10.1186/s12886-020-01499-6>

Minoxidil induced central serous Chorioretinopathy treated with oral Eplerenone - a case report

- [Ramesh Venkatesh](#)

מכניזם אנטי אנדרוגני נוסף

<https://pubmed.ncbi.nlm.nih.gov/30064598/>

Minoxidil Acts as an Antiandrogen: A Study of 5 α -reductase Type 2 Gene Expression in a Human Keratinocyte Cell Line

Erkin Pekmezci

מכניזם

<https://www.mdpi.com/1422-0067/19/3/691>

Minoxidil Promotes Hair Growth through Stimulation of Growth Factor Release from Adipose-Derived Stem Cells

by



Nahyun Cho

פציעה מתמשכת לאחר הפסקת השימוש
<https://rxisk.org/post-minoxidil-syndrome/>

Post Minoxidil Syndrome

<https://academic.oup.com/bjd/article-abstract/138/3/407/6682880?redirectedFrom=PDF>

Minoxidil upregulates the expression of vascular endothelial growth factor in human hair dermal papilla cells

Get access

S. Lachgar, M. Charveron, Y. Gall, J.L. Bonafe

VEGF גידולים אדרנוקורטיקלים |
<https://pubmed.ncbi.nlm.nih.gov/26475302/>

Role of Endocrine Gland-Derived Vascular Endothelial Growth Factor (EG-VEGF) and Its Receptors in Adrenocortical Tumors

Dorothee Heck

פגיעת מינוקסידיל בלב

<https://pubmed.ncbi.nlm.nih.gov/151152/>

Minoxidil and cardiac enlargement

D S Svahn

<https://www.cureus.com/articles/48654-a-case-of-contact-allergic-dermatitis-to-topical-minoxidil#!>

A Case of Contact Allergic Dermatitis to Topical Minoxidil

פגיעה בלב

<https://pubmed.ncbi.nlm.nih.gov/4090485/>

Minoxidil-associated pericarditis and fatal cardiac tamponade

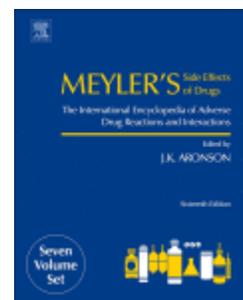
J M Krehlik

<https://www.sciencedirect.com/science/article/pii/B9780444537171010908>

Meyler's Side Effects of Drugs (Sixteenth Edition)

The International Encyclopedia of Adverse Drug Reactions and Interactions

2016, Pages 1053-1056



Minoxidil

Available online 21 October 2015, Version of Record 21 October 2015.

<https://jmedicalcasereports.biomedcentral.com/articles/10.1186/s13256-021-03114-8>

Retinal artery occlusion as a probable idiosyncratic reaction to topical minoxidil: a case report

- [Ramesh Venkatesh](#)

[https://www.reviewofoptometry.com/article/hair-growth-drug-may-increase-risk-of-retinal-artery-occlusion?](https://www.reviewofoptometry.com/article/hair-growth-drug-may-increase-risk-of-retinal-artery-occlusion?fbclid=IwAR32c5iWn8iFrnSN1NSfHFp2y7XAz47ni4Vq5l3bXSJrGgFs54O8D0nULNO#:~:text=Minoxidil%2C%20a%20common%20hair%20growth,topically%20to%20stimulate%20hair%20growth)

fbclid=IwAR32c5iWn8iFrnSN1NSfHFp2y7XAz47ni4Vq5l3bXSJrGgFs54O8D0nULNO#:~:text=Minoxidil%2C%20a%20common%20hair%20growth,topically%20to%20stimulate%20hair%20growth

Minoxidil and VEGF

<https://www.ncbi.nlm.nih.gov/pmc/articles/PMC5796003/>

Minoxidil Induction of VEGF Is Mediated by Inhibition of HIF-Prolyl Hydroxylase

[Soohwan Yum,](#)

VEGF And extracellular matrix degradation

<https://www.sciencedirect.com/topics/neuroscience/vascular-endothelial-growth-factor>

Vascular Endothelial Growth Factor

Vascular endothelial growth factor (VEGF) is an angiogenic factor that regulates angiogenesis by inducing proliferation, migration and permeability of endothelial cells.

From: [Cardiac Regeneration and Repair, 2014](#)

VEGF Effects

https://www.prospecbio.com/vegf_human_hek?qclid=Cj0KCQjwivaYBhDIARIsAO8Pke33OTL3sJffBuX43tIGcPQ3SvLELH02nMpl7T3HOFry4bZTFsboxmAaAJWaEALw_wcB

Vascular endothelial growth factor A, VEGF-A, Vascular permeability factor, VPF, VEGF, MGC70609.

VEGF and heart

https://www.ncbi.nlm.nih.gov/pmc/articles/PMC7432634/#_ftn_sec1title

VEGF-A in Cardiomyocytes and Heart Diseases

[Mariantonia Braile](#)

VEGF And Eyes

[https://pubmed.ncbi.nlm.nih.gov/12597922/#~:text=The%20vascular%20endothelial%20growth%20factor,related%20macular%20degeneration%20\(AMD\)](https://pubmed.ncbi.nlm.nih.gov/12597922/#~:text=The%20vascular%20endothelial%20growth%20factor,related%20macular%20degeneration%20(AMD))

Vascular endothelial growth factors and angiogenesis in eye disease

[A N Witmer](#)

מאגר

אפיון טרנסקריפט של תאי גזע אפיתליאליים

<https://bmccgenomics.biomedcentral.com/articles/10.1186/1471-2164-9-359>

How to monitor systemic Minoxidil

<https://pubmed.ncbi.nlm.nih.gov/3886571/>

Topically applied minoxidil in baldness

[E Novak,](#)

Nitric oxide mechanism:

<https://pubmed.ncbi.nlm.nih.gov/34100376/>

Nitric oxide-dependent vasodilation induced by minoxidil in isolated rat aorta

Soo Hee Lee et al. Gen Physiol Biophys. 2021 May.

<https://pubmed.ncbi.nlm.nih.gov/2568681/>

Pathogenesis of cardiovascular alterations in dogs treated with minoxidil

G M Mesfin et al. Toxicol Pathol. 1989.

<https://pubmed.ncbi.nlm.nih.gov/37921812/>

Low dose oral minoxidil and the conundrum of cardiovascular complications

Marina Kristy Ibraheim et al. Dermatol Online J. 2023.

<https://pubmed.ncbi.nlm.nih.gov/8169836/>

Structural and functional consequences of minoxidil-induced cardiac hypertrophy

C S Moravec et al. J Pharmacol Exp Ther. 1994 Apr.

<https://pubmed.ncbi.nlm.nih.gov/7501961/>

The pharmacologic basis of the cardiovascular toxicity of minoxidil in the dog

G M Mesfin et al. Toxicol Pathol. 1995 Jul-Aug.

2 Reddit (social media) links of sufferers of post Minoxidil syndrome sharing their injuries at

WITHDRAWAL

https://www.reddit.com/r/MinoxidilSideEffects/comments/zusd7t/is_there_any_one_who_got_ed_problem_starts_after/?utm_source=share&utm_medium=android_app&utm_name=androidcss&utm_term=5&utm_content=share_button

https://www.reddit.com/r/MinoxidilSideEffects/comments/12tlug6/what_will_happen_when_i_stop_using_minoxidil/?utm_source=share&utm_medium=android_app&utm_name=androidcss&utm_term=5&utm_content=share_button

<https://pubmed.ncbi.nlm.nih.gov/10584592/>

Overdose of Rogaine Extra Strength for Men topical minoxidil preparation

S E Farrell et al. J Toxicol Clin Toxicol. 1999.

<https://pubmed.ncbi.nlm.nih.gov/22001642/>

[Minoxidil intoxication, the pharmacological agent of a hair lotion]

[Article in French]

A Aprahamian et al. Arch Pediatr. 2011 Dec.

<https://pubmed.ncbi.nlm.nih.gov/30622990/>

Unstable Angina: A Rare Presentation of Minoxidil Intoxication: A Case Report and Literature Review

<https://pubmed.ncbi.nlm.nih.gov/2584470/>

Hair discoloration caused by minoxidil lotion

A Rebora et al. J Am Acad Dermatol. 1989 Dec.

[https://www.jaad.org/article/s0190-9622\(20\)33229-1/fulltext?fbclid=IwAR1bVOI0diS7gPWwLqVcuC7loFXEnESZ6XYiMktjiY5d9BFgNq3OWpzvsWU](https://www.jaad.org/article/s0190-9622(20)33229-1/fulltext?fbclid=IwAR1bVOI0diS7gPWwLqVcuC7loFXEnESZ6XYiMktjiY5d9BFgNq3OWpzvsWU)

Side effects of low-dose oral minoxidil for treating alopecia

- [Renée A.](#)

[How to detect Katp gain of function](#)

<https://iask.ai/?mode=question&q=Katp+gain+of+function+detection+method>

[Look for the answers in this AI platform. These answers for these questions are very important and may explain the persistent injuries \(and even the temporary\).](#)

<https://iask.ai/?mode=question&q=can+minoxidil+cause+cell+metabolic+dependency+%3F>

[Metabolic arrest lead into genotoxicity](#)

<https://iask.ai/?mode=question&q=can+metabolic+dependency+of+cells+lead+into+genotoxicity>