

LETTERS TO THE EDITOR

Gua-sha, Jade Roller, and Facial Massage: Are there benefits within dermatology?

To the Editor,

Gua-sha, Jade Rollers, and facial massages are alternative treatments that improve blood flow and lymphatic drainage resulting in clearer skin. Gua-sha and Jade Rollers originated from ancient China, becoming part of the Western beauty routines during the 1970s. Today, they are popular due to recent social media trends.¹ Gua-sha treatment uses a polished jade stone to scrape skin gently. Jade Rollers resemble a small paint roller made of jade stone used to massage skin. Both methods require an upward and outward motion to reduce inflammation, improve skin complexion, and decrease wrinkles. We aim to compare these techniques and the content of top 10 websites of the respective technique as determined by the Google search algorithm.

Google search was performed using "Gua-sha," "Jade Roller," and "Facial Massage." Top 10 website results were reviewed for content, including proposed benefits, proposed risks, mentioned studies, references cited, and quoted experts. Websites for advertising and selling products were excluded.

The most common websites (Table 1) were beauty websites (11 websites), followed by health websites (10 websites) and news websites (9 websites). Common benefits proposed included reduced inflammation, decreased wrinkles, reduced puffiness, improved blood circulation, improved lymphatic drainage, muscle tension relief, and migraine relief (Table 1). Common proposed risks included bruising, risk of infection, and skin irritation (Table 1). Five websites cited studies, and study types included randomized control trials, systemic reviews, and case reports (Table 1). Experts quoted were aestheticians (27%), dermatologists (16%), Chinese medicine providers

(16%), acupuncturists (11%), healthcare providers (2.3%), massage therapists (2.3%), and 25% did not specify (Figure 1).

Gua-sha, Jade Rollers, and facial massages involves mechanically manipulating the skin to enhance the immune function of the skin. Gua-sha has been shown to increase both blood and lymphatic flow.² Additionally, one study showed that short-term (5 min) facial massaging with a Jade Roller increases blood flow and lymphatics, while long-term use improves the body's vascular dilatation response.³ It may also have anti-aging effects under proper stimulation.⁴ Other proposed benefits of Gua-sha therapy are not well understood, and further research is warranted to evaluate their true effects on the immune, central nervous, and respiratory systems. As alternative medical techniques like Gua-sha increase in the United States, patients interested in these techniques may turn to search engines such as Google for education. However, as this study demonstrates, these websites have proposed many benefits, with very little research to support them. Furthermore, only 30% of websites recognized potential risks that have been described in the literature, such as contact dermatitis, minor burns, and infection.⁵ Thus, to properly educate their patients and ensure their safety, dermatologists should be aware of these techniques, potential benefits, and side-effects, as well as the information on the internet.

Gua-sha, Jade Rollers, and facial massages carry many proposed benefits, few of which have been illustrated in the literature. As these techniques continue to increase, further research into their true benefits is warranted. Dermatologists may contribute to these efforts through research and raising awareness of these techniques' known benefits and risks.

This is an open access article under the terms of the [Creative Commons Attribution](#) License, which permits use, distribution and reproduction in any medium, provided the original work is properly cited.

© 2022 The Authors. *Journal of Cosmetic Dermatology* published by Wiley Periodicals LLC. This article has been contributed to by U.S. Government employees and their work is in the public domain in the USA.

TABLE 1 Google search analysis of top 10 searches for health and beauty/news sites (H/B/N)

Website name ^a	Proposed benefits	Proposed risks	Type of study mentioned ^b
Gua-sha			
Healthline (H)	Reduced inflammation; Relieved symptoms of: Hepatitis B, migraine headaches, breast engorgement, neck pain, tourette syndrome, perimenopausal syndrome	Skin irritation; Bruising, Minor bleeding; Risk of infection	Case study, RCT (Y)
Byrdia (B)	Improved blood circulation and complexion; Decreased wrinkles; Reduced puffiness, inflammation, muscle tension	N/A	N/A (N)
Medical News Today (N)	Relieved muscle tension; Reduced symptoms of: Perimenopause, neck pain and back pain	Bruising; Pain; Swelling; Risk of infection	Systemic review, RCT (Y)
Vogue (N)	Decreased wrinkles and inflammation; Improved lymphatic drainage;	Bruising	N/A (N)
Harper's Bazaar (B)	Reduced inflammation; Improved healing, complexion	Bruising	N/A (N)
NBC news (N)	Improved blood circulation; Decreased wrinkles; Improved lymphatic drainage; Relieved muscle tension	Redness; Bruising	RCT (N)
Cleveland clinic (H)	Relieved muscle tension, fatigue, migraine headaches; Reduced inflammation	N/A	N/A (N)
Today (N)	Improved blood circulation; Relieved muscle tension, migraine headaches, sinus congestion	N/A	N/A (N)
Gua-sha (H)	Anti-inflammatory and immunoprotective; improved pain, fever, chills, cough, wheeze, nausea, and vomiting	N/A	N/A (N)
PureWow (B)	Relieved muscle tension; Improved lymphatic flow, blood circulation; Decreased wrinkles	N/A	N/A (N)
Jade Roller			
Glamour (B)	Improved blood circulation, lymphatic drainage; Relieved migraine headaches, TMJ pain, sinus congestion	N/A	N/A (N)
Harper's Bazaar (B)	Improved lymphatic drainage, blood circulation	N/A	N/A (N)
Washington Post (N)	Improved lymphatic drainage, blood circulations; Decreased wrinkles	Risk of infection; Worsen acne; Skin irritation	N/A (N)
Healthline (H)	Improved lymphatic drainage, blood circulation, product absorption; Reduced puffiness	Skin irritation; Worsen acne; Possible allergic reactions	RCT (Y)
Ipsy (H)	Reduced puffiness; Improved lymphatic drainage, complexion, product absorption; Calmed irritated skin	N/A	N/A (N)
Independent (H)	Reduced puffiness, redness	N/A	N/A (N)
InStyle (H)	Improved blood circulation, lymphatic drainage; Decreased wrinkles; Soothes the mind	Risk of infection	N/A (N)
CNN (N)	Improved complexion, lymphatic drainage, blood circulation; Reduced puffiness	N/A	N/A (N)
Byrdie (B)	Relieved muscle tension; Improved blood circulation	N/A	N/A (N)
The Cut (B)	Reduced puffiness; Improved lymphatic drainage; Relieved muscle tension	N/A	N/A (N)
Facial Massage			
Healthline (H)	Decreased wrinkles; Relieve sinus pressure; Improved acne, TMJ pain, skin blood flow	N/A	RCT (Y)
The Guardian (N)	Improved blood circulation, lymphatic drainage; Reduced puffiness, Decreased wrinkles	Skin irritation	N/A (N)
Huffpost (N)	Improved lymphatic drainage; Reduced inflammation	N/A	N/A (N)
Ipsy (B)	Relieved stress, migraine headaches, sinus congestion, muscle tension; Alleviation of nervous disorders	N/A	N/A (N)
Villa Sport (H)	Improved blood circulation; Reduced puffiness; Decreased wrinkles; Relieved muscle tension	N/A	N/A (N)

(Continues)

TABLE 1 (Continued)

Website name ^a	Proposed benefits	Proposed risks	Type of study mentioned ^b
Encyclopedia.com (H)	Anti-aging; Relieved muscle tension, migraines, and sinus congestion	Skin irritation; Worsen acne, psoriasis, and eczema	N/A (N)
Elle (B)	Relieved muscle tension; Improved blood circulation; Anti-aging	N/A	N/A (N)
PW (H)	Improved blood circulation and complexion; Reduced puffiness	N/A	N/A (N)
Lydia Sarfati (B)	Improved complexion and lymphatic drainage; Decreased wrinkles; Relieves muscle tension	N/A	N/A (N)
Blow LTD (N)	Relieved muscle tension; Improved facial structure and complexion	N/A	N/A

^aReferences cited (Y/N).

^bType of Website (H/B/N) H, Health; B, Beauty; N, News; RCT, Randomized Control Trial; N/A, Not applicable.

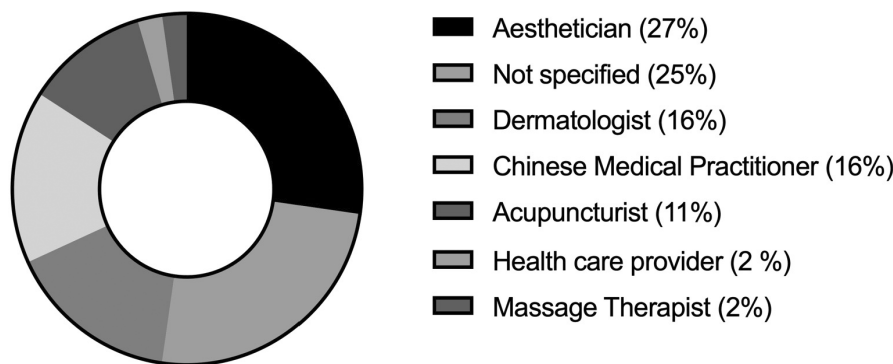


FIGURE 1 Percentage of experts quoted in top 10 searches of Gua-sha, Jade Roller, and Facial Massage for health and beauty/news sites

AUTHOR CONTRIBUTIONS

A.H., J.A., M.L., and J.B.A. performed the research. A.H., J.A., M.L., and J.B.A. designed the research study. C.P., C.R., and R.D. contributed essential reagents or tools. M.L. and J.B.A. analyzed the data. A.H., J.A., M.L., J.B.A., C.P., and C.R. wrote the paper. R.D. provided editing and oversight. All authors have read and approved the final manuscript.

FUNDING INFORMATION

None.

KEYWORDS

aging, alternative medicine, anti-aging, general dermatology, spa therapy

CONFLICT OF INTEREST

None declared.

DATA AVAILABILITY STATEMENT

Data sharing is not applicable to this article as no new data were created or analyzed in this study.

Austin Hamp DO¹

Jarett Anderson DO¹

Melissa R. Laughter MD, PhD²

Jaclyn B. Anderson MD³

Colby L. Presley DO⁴

Chandler W. Rundle MD⁵

Robert P. Dellavalle MD, PhD, MSPH⁶

¹Arizona College of Osteopathic Medicine, Midwestern University, Glendale, Arizona, USA

²Transitional Year Residency, The University of Texas at Austin Dell Medical School, Austin, Texas, USA

³Department of Pathology, Stanford University, Stanford, California, USA

⁴Division of Dermatology, Lehigh Valley Health Network, Allentown, Pennsylvania, USA

⁵Department of Dermatology, Duke University Hospital, Durham, North Carolina, USA

⁶Dermatology Service, US Department of Veterans Affairs Rocky Mountain Regional Medical Center, Aurora, Colorado, USA

Correspondence

Robert P. Dellavalle, Professor of Dermatology and Public Health, University of Colorado School of Medicine, Colorado School of Public Health, Dermatology Service, US Department of Veterans Affairs, Eastern Colorado Health Care System, Cochrane Skin, Dermatology Service, Rocky Mountain Regional VA Medical Center, 1700 N Wheeling St, Rm E1-342, Aurora, CO 80045, USA.
Email: robert.dellavalle@cuanschutz.edu

ORCID

Austin Hamp  <https://orcid.org/0000-0002-1350-9733>

Jarett Anderson  <https://orcid.org/0000-0002-9604-5638>

Melissa R. Laughter  <https://orcid.org/0000-0001-7010-7901>

Colby L. Presley  <https://orcid.org/0000-0002-3646-7732>

REFERENCES

1. Palma P. Unexpected healers: Chinese medicine in the age of global migration (Lima and California, 1850-1930). *Hist Cienc Saude-Manguinhos*. 2018;25:13-31. doi:10.1590/S0104-59702018000100002
2. Chen T, Liu N, Liu J, et al. Gua Sha, a press-stroke treatment of the skin, boosts the immune response to intradermal vaccination. *PeerJ*. 2016;4:e2451. doi:10.7717/peerj.2451
3. Miyaji A, Sugimori K, Hayashi N. Short- and long-term effects of using a facial massage roller on facial skin blood flow and vascular reactivity. *Complement Ther Med*. 2018;41:271-276. doi:10.1016/j.ctim.2018.09.009
4. Caberlotto E, Ruiz L, Miller Z, Poletti M, Tadlock L. Effects of a skin-massaging device on the ex-vivo expression of human dermis proteins and in-vivo facial wrinkles. *PLoS One*. 2017;12(3):e0172624. doi:10.1371/journal.pone.0172624
5. Vashi NA, Patzelt N, Wirya S, Maymone MBC, Kundu RV. Dermatoses caused by cultural practices: Cosmetic cultural practices. *J Am Acad Dermatol*. 2018;79(1):19-30. doi:10.1016/j.jaad.2017.06.160