

How DMSO Cures Eye, Ear, Nose, Throat and Dental Disease

Many of those "incurable" conditions respond remarkably to DMSO



A MIDWESTERN DOCTOR

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- DMSO can often significantly improve one's vision, treat conditions such as macular degeneration, retinitis pigmentosa, and at times allow blind individuals to regain their sight. It is also often very helpful for sore and strained eyes and relieve excessive irritation and inflammation, along with many other eye conditions (e.g., cataracts).

- DMSO frequently treats a variety of ear conditions such as tinnitus, hearing loss airplane ear, and a variety of infections inside the ear (e.g., otitis media).

- DMSO often is very helpful for sinusitis and a variety of infections of the nose and throat. Likewise, it is extremely helpful in dentistry, both for cleaning the mouth (e.g., by preventing bleeding gums), and by allowing the mouth to rapidly heal after dental surgeries.

- In this article, I will review the evidence supporting each of those uses, along with the data demonstrating the safety of these methods of DMSO administration and instructions on how to do them.

DMSO is a phenomenally effective medicine that can treat a wide variety of common debilitating, or incurable conditions, which allowed it to rapidly take the country by

storm (as both the public and the medical community saw its results and rapidly embraced it). Unfortunately, the widespread enthusiasm behind something that completely changed medicine and allowed people to care for themselves independently was unacceptable to the FDA. For the next two decades, [the agency went to incredible lengths to suppress it](#) (e.g., it actively defied Congress [for over 16 years](#)) and eventually made DMSO become a Forgotten Side of Medicine.

Note: extensive [data shows that DMSO](#) is a very safe substance with negligible toxicity.

In turn, one of the truly ironic things about this was that many of those who attacked DMSO later needed it. For example, the pioneer of DMSO discusses how Former President Lyndon Johnson sought his help in 1971 —after [his FDA commissioner](#) had just spent almost three years weaponizing the FDA against anyone wishing to use DMSO (which in turn set the stage for many of the police-state tactics the FDA would illegally use against natural medicine in the decades to come).



Note: in the previous article I erroneously stated this conversation took place in 1981 not 1971 (at which point LBJ was deceased).

I have now received hundreds of unbelievable reports from readers (which can be read [here](#)) of what DMSO did for them—many of which are almost identical to what people reported fifty years ago before the FDA wiped DMSO off the map.

For context, the majority of those reports were for the most common uses of DMSO such as chronic pain, acute injuries, and arthritis (discussed further [here](#)). However, as discussed [here](#), DMSO is also immensely valuable for a variety of circulatory and neurological disorders (e.g., varicose veins, hemorrhoids, Down Syndrome, and Parkinson's)—all of which readers here reported significant improvement from. Likewise, (as discussed [here](#)) DMSO also helps various autoimmune conditions.

In this article, I will focus on another group of conditions DMSO was found to be extraordinarily effective—those within the head.

Note: headaches were covered in [a previous article](#) and will not be discussed here.

Cause or Effect?

There are two common ways to view medical problems someone has—as a specific disease process of a particular part of the body or as one manifestation of a systemic issue. Neither approach is entirely correct, as in some cases, you need one more than the other, but our medical system is very much biased towards the first one.

This, I would argue is in part because this makes medicine easier to practice (e.g., a specific set of symptoms goes with a specific drug rather than having to go the extra mile to figure out what is causing a nebulous set of symptoms), and in part because it makes it possible to sell far more patentable medicines (as by viewing each symptom as a different disease, far more diseases exist to market products for). Unfortunately,

this also frequently lends itself to a situation where modern medicine “treats the symptoms rather than the cause.”

I personally believe that most chronic disease processes can have a variety of ways to manifest throughout the body. Typically the manifestation you see is a result of a pre-existing weakness in the body being the first spot to give out after a stressor is put on the entire body (e.g., one of the most common symptoms individuals with COVID vaccine injuries had was a pre-existing site of minor inflammation or an old scar becoming highly inflamed). Similarly, I believe this paradigm answers a critical question medicine never quite addresses—why do some people get so sick from the same thing that others quickly shrug off?

In turn, I’ve tried to focus on the forgotten areas of medicine that I believe often underlie various seemingly unrelated disease processes. For example, I believe that microcirculation is critical for health, but since it is not easy to measure, our focus instead has gone to blood pressure—[which while sometimes useful for determining circulatory health, often is not](#). In turn, I’ve provided a variety of strategies for improving the microcirculation (e.g., [improving the physiologic zeta potential](#)). Beyond cardiovascular health improvement, many readers here who did that reported a variety of other chronic symptoms also having noticeable and unexpected improvement. *Note: all the previous also holds true for [the cell danger response](#)—a defensive mechanism that goes into where their mitochondria shut down [that can only be treated by finding a way to cool the mitochondria out of it](#).*

DMSO is also a systemic agent that has the ability to address some of the common root causes of disease. Because of how dramatically it helps injuries, arthritis, and chronic pain (of which I’ve received many remarkable testimonials from readers you can read [here](#)), those are its typical uses. However before long, many patients on DMSO would report some other chronic issue they never thought could improve also begin getting better (which likewise, [many readers here have noticed](#)). These reports caused the early pioneers of DMSO to begin researching other novel uses of DMSO

In this article, I will look at the variety of remarkable benefits that have been observed for DMSO for conditions within the head. These results, I believe are a product of DMSO:

- Being able to [increase microcirculation and treat circulatory or neurological disorders](#) (e.g., strokes, traumatic head injuries, spinal cord injuries, and dementia or mental disability).
- Being able [to re-awaken cells that were dormant or on the verge of dying](#) due to a previous stressor.
- Being able [to increase parasympathetic activity](#).
- Having [strong anti-inflammatory properties](#).
- Having [anti-bacterial properties](#).
- Being able [to easily pass through biological membranes without harming them](#) and spread throughout the body (while [also carrying anything mixed with it into the body](#)).

DMSO and the Eyes

Many DMSO users have noticed that their vision improved while they used it for something else (e.g., see [this](#), [this](#) and [this](#) testimonial from a reader here), which in turn inspired physicians to begin applying it to the eyes of patients with vision problems (e.g., after Stanley Jacob saw this in several patients being treated for musculoskeletal issues [he referred them to a local ophthalmologist](#) who then conducted years of research in this area)..

Note: the best review paper on DMSO's uses in ophthalmology (which is an excellent resource to provide to physicians who are skeptical of using DMSO for the eyes) can be read [here](#).

Ocular DMSO Distribution

The logic behind putting DMSO in the eyes is that a much stronger dose can get to eyes than what would arise from systemic applications of DMSO. To evaluate DMSO distribution (and that of its metabolic breakdown products), radioactive forms of DMSO (DMSO synthesized from either ^{35}S or ^3H or both) were placed in animals and then their entire bodies were monitored for radiation emissions.

[In one study](#), it was noted that while DMSO tended to distribute evenly throughout the body (typically being at a lower concentration in the tissue than in the blood), in the iris and ciliary body, it matched the blood's concentration, while in the cornea (the surface of the eye), after 2 hours it was 2.2 times higher than the blood in rabbits and 4 times higher in rats. In other words, DMSO specifically concentrates in the cornea when administered into the body (after which it rapidly cleared), suggesting that DMSO is indicated for treating corneal and uveal diseases. Likewise, another study found [DMSO enhances penetration](#) of drugs into the cornea and anterior chamber of rabbits.

Note: [in the first study](#), concentrations did not increase with repeated administrations (indicating DMSO does not accumulate in the body).

More importantly, that study helps to explain why consuming DMSO can often directly impact and improve eye health.

Conversely, [in another study](#), rats' eyes were exposed to DMSO, and it was found regardless of the route of administration or the concentration used, DMSO rapidly cleared from the eyes:

CONCENTRATIONS OF DMSO IN WET OCULAR TISSUE UP TO TWO HOURS AFTER ADMINISTRATION

Length of Time after DMSO Administration	Concentration of DMSO Remaining in Tissue*		
	Group I 50% DMSO by EyeCup Immersion	Group II 50% DMSO by Eye Drops	Group III 100% DMSO by Eye Drops
min	mmol of DMSO $\times 10^{-7}$ /mg tissue		
5	82.7 $\pm$ 42.9†	69.4 $\pm$ 18.3	144.5 $\pm$ 58.1
10	23.7 $\pm$ 9.9	61.9 $\pm$ 26.2	25.8 $\pm$ 3.1
30	8.4 $\pm$ 6.1	10.5 $\pm$ 2.8	16.5 $\pm$ 10.2
60	6.9 $\pm$ 2.9	4.0 $\pm$ 0.7	7.6 $\pm$ 3.1
120	2.3 $\pm$ 0.8	1.6 $\pm$ 0.3	6.4 $\pm$ 1.1

This in turn, suggests that DMSO can rapidly extract things from the eyes that should not be there (e.g., excessive fluid) as whatever is in the eye will be drawn out into the rest of the body with the DMSO that leaves the eyes.

Note: DMSO [has also long been used](#) to [preserve corneas, which will be transplanted to someone else](#), again indicating that DMSO is relatively non-toxic to the cornea.

DMSO Eye Safety

Since the idea of putting DMSO into the eyes understandably makes one uneasy, I've tried to locate all the safety data relating to this. Regarding the systemic administration of DMSO, there was a longstanding concern that DMSO could (temporarily) change the refractive index of the eyes. This finding was found in certain animals at very high doses of DMSO but never, despite extensive evaluation, found in monkeys or humans (e.g., see [this study](#) or [this JAMA publication](#) attesting DMSO had no eye toxicity).

Note: there are [numerous common drugs](#) that are known to transitorily change lens refractive index.

For those interested, I summarized all the data on DMSO induced lens changes [here](#) and the most detailed summary I found of exactly what changed in animal lenses can be found [here](#).

be found [here](#).

Note: [in humans](#), when DMSO was taken each day at 3-30 times the standard dose (achieved by covering the entire body in DMSO), 9% of participants experienced burning or aching eyes. This (like the previously mentioned effects) I suspect is due to the fact DMSO will concentrate in the cornea, but at the same time, realistically will never be an issue for a DMSO user because the effect only appears at very high doses (and has no real consequence besides the temporary irritation).

A few animal studies have been conducted which evaluated the effects of applying DMSO directly to animal eyes. [The most detailed study](#) put various combinations of steroids, 15% DMSO, or a saline placebo into rabbit's eyes. A wide range of parameters inside the eyes were studied (e.g., regular body weights, intraocular pressure, retinoscopy, ophthalmoscopic, and biomicroscopic examinations alongside dissections of the eyes and examinations of their contents) alongside ones outside the eye (e.g., urine volume, urine composition, blood work, autopsies of organs) were then assessed. From this, it was found that 15% DMSO **created no adverse effects**, but did:

- Increase urine volume—DMSO alone increased it by 14.6%, while when added to varying concentrations of fluocinolone acetonide (a steroid), it increased by 4%, 29%, and 58% (which again illustrates that DMSO moves into the bloodstream after being applied to the eyes).
- Cause a slight decrease in urea in the aqueous humor of the eyes (which was small enough that it may have been due to chance).
- Decrease intraocular pressure (which is often quite helpful for the eyes).

TABLE 1
WEEKLY INTRAOCULAR PRESSURE READINGS OF RABBITS RECEIVING
DAILY OCULAR PREPARATIONS OF STEROID AND STEROID WITH DMSO*

Solution	Intraocular Pressure (mm Hg) 0-6 Weeks†						
	0	1	3	3-1/2	4	5	6
Fluocinolone acetoneide, 0.001%	18.9± 1.4	18.8± .6	17.1± 1.7	16.7± 2.3	17.6± 1.6	17.9± 1.2	16.3 1.0
Fluocinolone acetoneide, 0.001% ; DMSO, 15%	18.9± 1.8	19.9± 1.7	21.9± 2.9	21.9± 3.4	21.3± 2.6	17.8± 1.4	17.0 0.0
Fluocinolone acetoneide, 0.025%	19.7± 1.9	18.3± 1.2	23.8± 2.2	19.8± 1.4	20.1± 1.6	17.6± 1.5	16.8 1.9
Fluocinolone acetoneide, 0.025%; DMSO, 15%	20.6± 2.5	19.2± .5	22.4± 4.0	22.0± 1.2	20.4± 2.3	18.1± 1.5	16.5 .9
Fluocinolone acetoneide acetate, 0.001%	17.7± .8	17.9± 1.2	23.9± 1.6	22.0± 1.4	21.3± 2.1	17.6± 1.0	17.5 1.7
Fluocinolone acetoneide acetate, 0.001%; DMSO, 15%	17.7± .8	17.4± 1.1	20.6± 2.9	22.0± 2.5	23.3± 2.5	16.0± 1.2	16.1 1.1
Placebo, DMSO, 15%	18.3± 1.3	19.0± 0.0	20.3± 2.2	19.5± 1.5	19.3± 1.9	14.5± 1.5	14.5 2.5
Placebo, fluocinolone	18.6± .8	18.5± 1.4	21.5± 3.2	22.1± 1.8	18.1± 1.8	14.0± 2.9	17.5 2.2
Water control	17.3± 0.0	17.5± .6	19.3± 3.1	19.2± .5	19.1± 1.7	16.5± .5	16.8 .5

Additionally, this study also applied 30% and 100% DMSO to rabbit eyes. In both cases no evidence of change was seen in any part of the eye (the iris, cornea, lens, retina, conjunctiva, and lids), but 100% DMSO was observed to cause temporary lacrimation (tearing).

[A separate paper](#) on the known toxicology of DMSO also noted that:

- [A Draize eye test](#) (applying DMSO to an animal's eye and keeping it on the eye) resulted in a slight conjunctivitis (eye irritation) which disappeared within 24 hours
- One study found ocular instillation of 0.1 ml of 100% DMSO in rabbits caused reversible irritation of conjunctivae, while another author failed to observe this effect
- Administering high doses of DMSO to rats (14.5g/kg) through the air resulted in hyperemia and eye inflammation.
- In humans, two drops of greater than 50% DMSO applied to the eye caused a temporary burning sensation and vasodilation; concentrations of less than 50% exhibited no toxic effects.
- [Another study](#) found that DMSO gave eye drops at 66% concentration to four patients, and one of the four experienced a temporary burning each time the drops were applied. Likewise, varying degrees of irritation and burning occurred as higher concentrations were used. However, no damage (as shown by a fluorescein stain) occurred to either their eyes or the animals in the study after ocular DMSO applications.

That same study also gave 4 rabbits 90% DMSO to the eyes six times a day, and then after 2 weeks, DMSO at 66% six times a day. At 90%, 2 of the rabbits experienced a temporary severe conjunctival injection (red eyes from swelling and inflammation of the blood vessels in the eye), but no keratitis (inflammation of the cornea) or damage to the lens was observed, and of the 6 total rabbits who received ocular DMSO, 3 had some degree of conjunctival irritation from DMSO.

Note: one Substack author [chronicled an experiment where they repeatedly applied 100% DMSO to their eyes](#) (a concentration much greater than what it typically recommended) and

noted not side effects besides five minutes of irritation (along with a noticeable improvement in vision and floaters largely disappearing).

- [Another study](#) injected 1%, 10%, 50%, or 100% DMSO into rabbit eyes. Single injections produced temporary eye irritation no long-term toxic effect. Transient retinal toxicity was seen 1 hr after injection of DMSO, but cleared completely in 1 month. When DMSO was repeatedly injected into the eyes, cataracts were observed develop in 6-8 weeks.

- Finally, [one study](#) reported giving topical DMSO to 108 patients (for a total of 157 eyes) at a higher concentration than others used. That author noted that no toxicity eye issues were observed (with monitoring periods up to 19 months post treatment) including in patients with pre-existing eye issues (e.g., 8 glaucoma patients who frequently had their intraocular pressure rise when given a steroid did not have it rise from DMSO and likewise 17 patients with pre-existing cataracts did not have them worsen from DMSO).

None of the human eyes treated with topically applied DMSO for periods ranging from approximately one month to fifteen months exhibited any evidence of corneal injury or deposits, as are sometimes seen with certain medications. Varying degrees of conjunctival irritation and complaints of burning occurred with the use of the high concentrations. As a rule those patients who were unable to tolerate the preparation topically discontinued treatment during the first week of trial. Seventeen patients exhibited prior evidence of lens opacities of such a degree as to be considered “clinical cataracts.” None of these were increased appreciably during the period of treatment with DMSO, excepting two with uveitic cataracts. This was thought to be related to the uveitis and not the therapy. None of the patients exhibited ocular changes analogous to those found in animal eyes.

Note: in another unpublished study (detailed in [this 1980 book](#)), a series of 30 German patients (along with 280 more treated for various periods) who were treated with DMSO had no adv

effects detected in their eyes, with one author noting the dosages required to create the effects seen in animals were astronomical compared to what humans took.

Lastly, the existing data shows the toxicity threshold for DMSO to the eyes is much higher than the doses eyes will be exposed to from clinical applications (as the small amounts of DMSO dilute and rapidly pass through the eyes rather than remaining there). For example:

- [Low concentrations](#) of DMSO (0.01%) were not found to subsequently affect retina function, whereas low concentrations of alcohol did.

- A 2004 study demonstrated DMSO had negligible toxicity to the eyes. It found that keeping human retinal pigment epithelial (RPE) cells in 1% DMSO for 48 hours slightly decreased their viability (demonstrated through a reduced optical density), while 2% (after 72 hours) slowed their growth,^{1,2} while [a study on rabbit RPEs](#) showed that 4% DMSO after 48 hours significantly increased apoptosis and enhanced their antioxidant ability.

Note: when I compared this to sustained exposures from other commonly used drugs, similar toxicities were seen at much lower concentrations (typically between 0.24% to 0.00072%).

- [When DMSO was injected intravitreally into rat eyes](#), 0.1–0.2% showed no detectable effects on scotopic b-wave amplitudes, while 0.5% caused mild increases and 1.0% caused significant increases, suggesting 0.2% or less has no functional impairment of retinal ERG. In contrast, other substances tested intravitreally, such as GABA, glycine, or glutamate antagonists, affected b-wave amplitudes (e.g., suppressing it) at concentrations ranging from ~0.0001–0.19%. [In another rat study](#), DMSO injections below 0.6% had no effect on retinal ERGs, but above that, there was a temporary suppression.

Note: DMSO has a low enough toxicity to the eyes that high concentrations of it (e.g., 10%) can be used to cryopreserve corneal and conjunctival cells and prevent otherwise lethal cold from destroying them.^{1,2}

Eye Protection:

[DMSO has been repeatedly shown](#) to protect tissues throughout the body from a variety of damaging or otherwise lethal stressors (e.g., heat, cold, radiation and a loss of blood flow). Results similar to those seen throughout the body have been observed for the eyes:

- [Injecting 1.5% DMSO](#) into the eyes of rats subjected to 90 minutes of retinal ischemia (via optic nerve ligation) was found to reduce the number of ganglion cells that died but not alter internal plexiform layer width, suggesting it offered partial retinal protection from retinal ischemia-reperfusion injuries ([which has also been shown in other studies](#)).
- [In mice](#), DMSO treatment fully protected retinal cells from damage caused by toxic bright light exposure, preserving retinal function and structure (whereas in untreated mice, most retinal cells were damaged or died). [A subsequent study](#) corroborated these results and found DMSO's protective effects were enhanced by tauroursodeoxycholic acid (a neuroprotective and anti-inflammatory compound). Finally, [a third study](#) from another team corroborated these results (finding a 92-93% decrease in retinal function whereas DMSO treated mice had a 30-33% decrease) and noted that DMSO was only protective if given shortly before the light exposure (which was corroborated in [a fourth study](#) by another team).
- DMSO, applied to the eyes of mice 8 minutes before X-ray exposure, [prevented the cataracts which formed in untreated mice](#).

DMSO and Eye Inflammation

Numerous studies have observed DMSO reduces eye inflammation and heals the cornea:

- [In a study of 108 patients](#) (and a total of 157 eyes), 4 severe cases of episcleritis (which had previously failed to respond to the use of corticosteroids) all responded to topical

DMSO (at 7-66%), while 4 cases with chronic corneal edema all exhibited a partial improvement from DMSO. Additionally, other types of eye inflammation were also studied (e.g., conjunctivitis, keratitis, and uveitis), but the responses were much more variable.

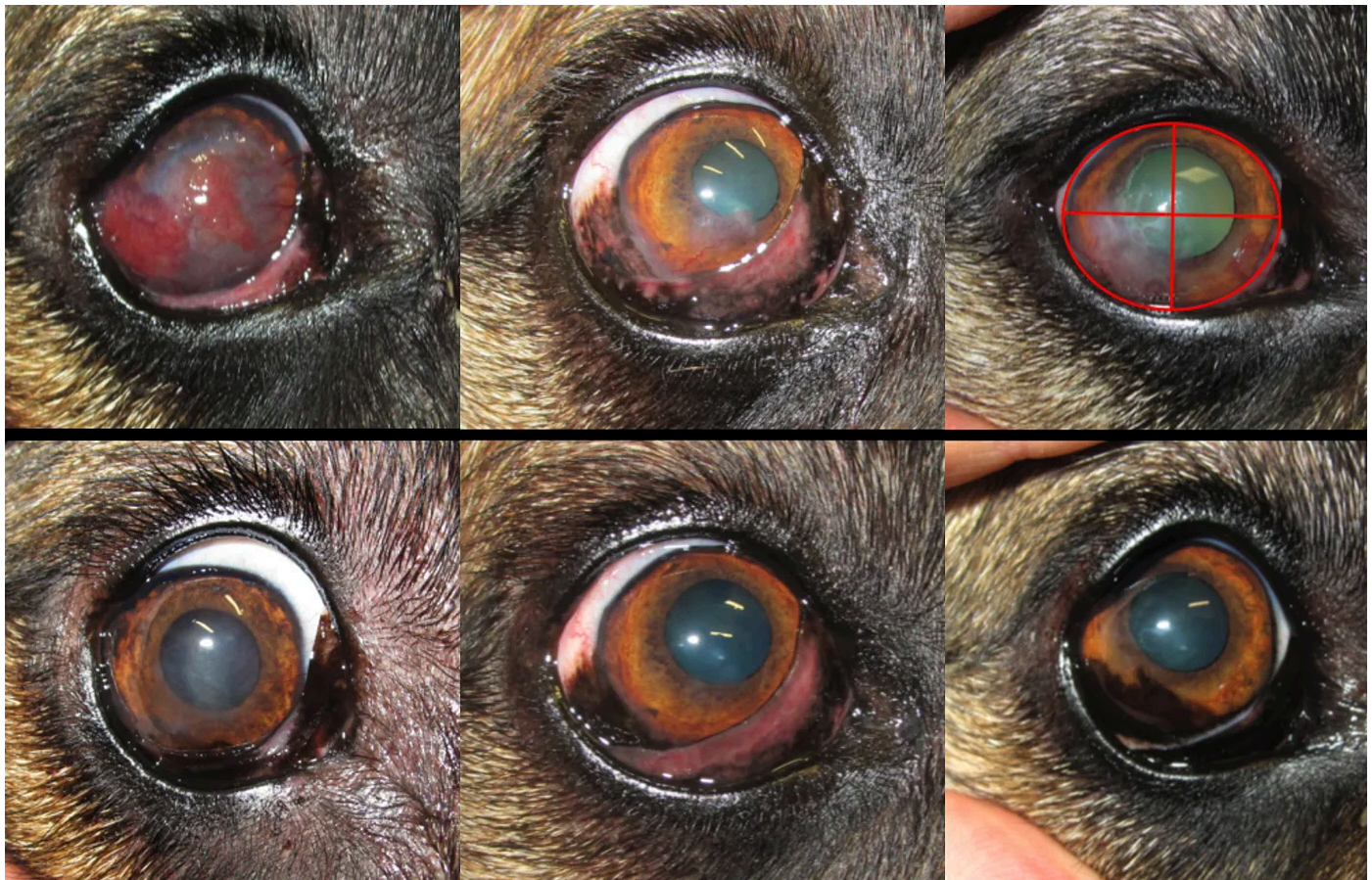
- [A clinical trial](#) found 30% DMSO had anti-inflammatory effects on the eye similar (but less than) 0.01% dexamethasone, while 100% triggered inflammation, and 50% and 70% had no effect (likely because pro and anti inflammatory effects cancelled each other out).

Numerous studies have shown DMSO is an effective treatment for chronic superficial keratitis (CSK) and over longterm, can reduce eye inflammation without any adverse effects to the corneal epithelium^{1,2} and [to be a superior treatment to steroids](#). For example:

- In dogs with CSK, 50% DMSO combined with dexamethasone or prednisolone was found to be a much more effective treatment than either alone (e.g., it effectively reduced corneal inflammation and improved corneal transparency).^{1,2,3,4,5}



- In dogs, DMSO has also been shown [to safely treat CSK in combination with cyclosporine](#). Significant benefit [has also been seen](#) from combining DMSO with bexmethasone and cyclophosphamide (e.g., a 77.9-90.7% reduction in neovascularization, a 45-51% reduction in corneal surface inflammation, 72.9% of corneas had a reduction in pigmentation and 74.3% had an increase of transparency and 95.4% had a repigmentation of the nictating membrane).



• In dogs with CSK, five weeks of 50% DMSO 0.2% tacrolimus eyes drops was found reduce the inflammatory infiltration and neovascularization of the cornea (reducing the affected area from 70% to 44% in one eye and 58.9% to 38.6% in the other), while the 32 cases where corneal pigmentation had occurred, in 14 cases it reduced, while 16 it continued to increase.^{[1](#),[2](#)}

Note: that author [has also used picrolimus](#) with DMSO to reduce CSK.

Other types of eye inflammation also respond to DMSO:

- [In calves](#) with infectious keratoconjunctivitis (significant bacterial eye infections), DMSO combined with penicillin was found to be an effective treatment and as effective as dexamethasone combined with penicillin (but without the risks seen with using steroids in those applications).

- [Topical DMSO and itraconazole](#) was able to resolve chronic keratomycosis in 80% treated horses.

Note: in another case report, a horse with fungal ulcerative keratitis fully recovered 30% DMSO and 0.2% fluconazole.[1,2](#)

- [DMSO was found to reduce swelling](#) and pain in children with eyelid styes. Likewise [in another study](#), DMSO treated inflammatory diseases of the eyelids.

- DMSO (with its delivery was augmented by ultrasound) [was found to treat](#) endogenous iridocyclitis (inflammation around the iris).

- DMSO has been combined with povidone-iodine (PVP) to treat inflammatory eye conditions and in [a retrospective study of 17 patients](#) with blepharitis found all 17 had a partial or complete response to DMSO and PVP after 4-6 weeks and no adverse events were reported. Additionally, those authors published two case reports. [In one](#) 78 year old man with rosacea and blepharoconjunctivitis who had not responded to a dozen different treatments was given DMSO-PVP for his eye, within a had remarkable improvements, a significantly greater improvement at a one month followup and no adverse events. [In another](#), a 95 year old woman with blepharitis from a Demodex infection (which had not responded to other treatments) a similar improvement was seen at one week and one month after using DMSO-PVP.

Note: [in rabbits](#), 44% DMSO combined with 0.5%-1.0% povidone-iodine, applied 4 times a day to their eyes for at least 14 days was found to not cause any adverse effects in the eyes, surrounding skin, or systemically.

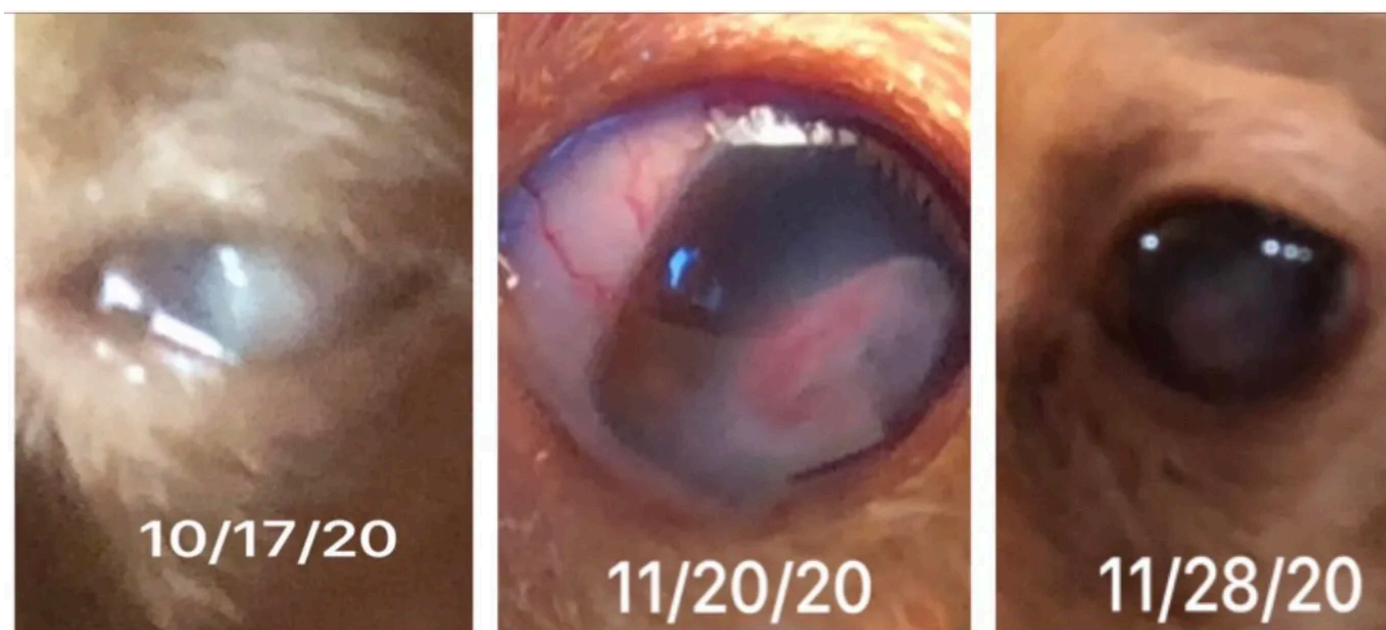
Additionally in animals:

- [In rabbits](#), 3 days, 20% DMSO was found to significantly reduce the corneal opacification and ulcerations which followed alkali burns. Likewise, in multiple studies, DMSO was found to be an effective treatment for corneal acid burns from hydrofluoric acid^{[1,2](#)} (and also for hydrofluoric acid burns [on other parts of the body](#)) [another study](#), DMSO was combined with monomycin [to treat corneal burns](#).

Due to its ability to greatly enhance the limited permeability of drugs applied to the eyes, [authors have proposed](#) utilizing DMSO mixtures to significantly enhance the efficacy of ophthalmologic medications and some formulations have been developed (e.g., with 5-IDU for herpes simplex keratitis or in formulations made by compound pharmacies).

- [DMSO was found to protect the lens](#) of rat eyes from photoperoxidative damage (likely due its ability to reduce oxidative stress).

Note: somewhat similarly, I received [a report](#) of a dog that developed an eye ulcer from a scratch, making the dog blind, and a veterinarian wanting to remove the eye to spare the dog from further suffering. The owner however, went against the vet's advice, and after a month applying DMSO, it was cured and the dog's sight returned.



Note: [DMSO has also been used](#) in conjunction with antibiotics to eliminate organisms from the anterior segment of the eye from patients with inflammatory eye diseases.

Vision Loss

[Retinitis pigmentosa](#) (RP) refers to a group of genetic disorders that cause gradual vision loss (starting in the periphery). It results from rod cells in the eyes not secreting a substance that prevents cone cells in the eye from dying (through apoptosis). It affects 1 in 4,000 people and is thought to be incurable, with the exception of one subtype of RP (comprising between 0.3-1.0% of cases), which [has a \\$850,000 gene therapy](#) that works about half the time (although others are in the pipeline).

Since RP is “incurable,” it immediately caught a few doctor’s attention that their patients with it [had their vision improve while receiving DMSO for something else](#). This prompted a series of clinical studies [a preliminary 1973 investigation](#) that found DMSO did indeed help this condition.

That author then published [a larger 1975 study](#) where he shared:

When his DMSO treatment was started (February 10, 1972), this patient could see hand motion only with his right eye, and had a visual acuity of 20/200 (Snellen) in his left eye. Five days later (February 15, 1972), his vision was measured as 20/70 in the left eye, and he could count fingers at 5 ft with his right eye. Three months later, his visual acuity was 20/150 in the left eye. This patient has continued his treatments daily, except for a 1-week trial interval without DMSO. He noted that his vision began to get worse during this interval, and when he restarted treatment his vision returned to the level he had just before discontinuance. His most recent visual acuity measurement (January 2, 1974) is still 20/50 in the left eye, and he is able to count fingers at 6 ft with his right eye.

Following this, 50 more patients with RP or macular degeneration received DMSO applied to the eyes, of whom 22 had improved visual acuity, 9 had improved visual fields, and 5 had improved night vision, only 2 continued to worsen, while the rest noticed no changes in their vision (which could potentially mean DMSO stopped the degenerative process).

To evaluate for toxicity, the eyes were examined through serial fundus photography and slitlamp photomicrography, and no adverse tissue reactions were noted. Patients often reported temporary stinging (usually 20 to 30 sec) and occasional burning and dryness of the skin of the lid (likewise a reader [here](#) reported when applying DMSO to the eyes, they have a temporary stinging which quickly disappears, while [another reported](#) no issue with using a DMSO eyewash).

Additionally, patients in this study also reported a “glare or blur effect” in their vision that was often accompanied by an increased sensitivity to light, or photophobia. This typically lasted for a few days to weeks, after which it disappeared and was replaced with an improved ability to get around at night, and improved visual acuity experienced as better perception of contrast.

The author also stated they had initiated a controlled clinical study and were in phase III clinical trials with the FDA (which is where the above data originated from), but could not figure out what happened to it.

Note: the author of [that paper](#) suspected that DMSO was helping here by rescuing dormant cells in the eye which would otherwise eventually die.

Conversely, [a follow up](#) study was unable to detect a clear benefit for DMSO in patients with retinitis pigmentosa (but did find a complete lack of toxicity from applying DMSO to the eyes).

Animal studies have also shown DMSO prevents retinal vision loss:

- [In a 2025 study](#), very low doses of DMSO (0.01% in drinking water) protected retinal cells in mice engineered to model retinitis pigmentosa, preventing thinning of the outer nuclear layer, whereas untreated mice showed significant retinal thinning. [In a 2021 study](#) of retinitis pigmentosa model mice, intraperitoneal DMSO prevented the progressive decline in retinal function as from day 4 to 23 of life, placebo treated mice showed a 42% decrease in scotopic a-wave amplitudes, an 8% decrease in

photopic a-wave amplitudes, and a 20% decrease in photopic b-wave amplitudes compared to normal mice without retinitis pigmentosa. In contrast, DMSO-treated mice had a 107% increase in scotopic a-wave amplitudes, a 65% increase in photopic wave amplitudes, and a 56% increase in photopic b-wave amplitudes compared to normal mice.

- Very low doses of DMSO (0.01%) administered in the drinking water of 3-4 month mice genetically engineered to develop Alzheimer's disease. This corrected prodromal visual performance deficits, specifically improving contrast sensitivity, and restored normal external limiting membrane-retinal pigment epithelium (ELM-RPE) thickness in the superior retina—potentially due to DMSO mitigating early retinal oxidative stress. Additionally, DMSO did not correct supernormal mitochondrial configuration within photoreceptors (MCP/AR) or retinal laminar thinning, indicating that some aspects of photoreceptor mitochondrial dysfunction or damage may be unresponsive to DMSO or require earlier intervention or higher doses.^{[1,2](#)}

- [In a 2025 study of rats with diabetic retinopathy](#), 10% and 50% DMSO (particularly 50%), administered via subconjunctival injection, significantly improved the retina compared to controls. Specifically, it caused a significantly higher B-wave amplitude in electroretinography, enhanced flicker responsiveness, and increased retinal thickness.

Lastly, the formation of new blood vessels, primarily driven by vascular endothelial growth factor (VEGF), underlies many eye diseases (e.g., wet age-related macular degeneration, neovascular glaucoma, and diabetic retinopathy) and as a result, costly injectable VEGF suppressing drugs are commonly used to manage these diseases. DMSO has been repeatedly found to inhibit VEGF and new blood vessels forming (in corneal cells after acid burns^{[1,2](#)} or [after mechanical abrasions](#) and in cancer cells which [depend upon new blood vessels forming to spread](#)).

Note: while it has not been directly tested, there is data suggesting DMSO could be combined with the anti-VEGF drugs ([along with many other eye medications](#)) to directly carry them in

the eyes, thereby eliminating the need for unpleasant eye injections—highlighting another where DMSO potentially revolutionizes ophthalmology.

Other Eye Conditions

- [In rabbits](#), a DMSO brinzolamide gel designed for treating glaucoma effectively reduced intraocular pressure and had no toxicity.
- [A 1977 study](#) used DMSO and 5-FU to treat shingles in the eye.
- Gelatinous drop-like corneal dystrophy is a rare genetic eye disorder where amyloid build up just beneath the corneal epithelium (progressively clouding it, and impairing vision) that is difficult to treat (requiring corneal transplantation once it progresses which can then be followed by recurrences). Extensive research shows [DMSO eliminates amyloids](#), and [in one case report](#), DMSO was found to eliminate the amyloid which had accumulated after a corneal transplant.

Human Case Studies

In addition to those studies, a variety of individual case histories also support DMSO value for the eyes.

[One author](#) reported on DMSO being used by Stanley Jacob for more severe cases of eye damage such as:

- A man who had been blind for more than 30 years after having dynamite explode in his face who started seeing flashes of light after applying DMSO to the head.
- A man who lost sight in the right eye (along with other functions of the eye like focusing) and gradually lost it in the other after an almost fatal impact by an automobile while skating down the road. After trying DMSO for hair loss, he noticed sensation in the back of his right eye, so Stanley Jacob decided to try applying DMSO to that eye, eventually settling on a high concentration (that stung for several minutes).

caused tears, and left the eyes bloodshot for about 20 minutes). After this, sight rapidly returned to the right eye (demonstrated with blindfold test) along with him regaining the ability to see color (something his good eye had lost the ability to do since the accident).

Note: healing colorblindness is one of the few eye conditions I have not received a DMSO testimonial on—something I believe is due to the fact acquired colorblindness (the type I would expect to respond to DMSO) like that described here being an exceedingly rare form of colorblindness.

- A man who had been blind for many years in one eye (only able to distinguish light and dark) regained his sight in that eye with DMSO (e.g., he demonstrated this by walking unaided in public areas and describing objects and events while his good eye was covered).

- A man who was almost blind (leading to him being completely dependent on others like his wife to take him anywhere, cut his meat or keep his house clean) after a year of DMSO regained his sight and no longer needed assistance to do anything (which was of great relief to his family).

Note: these results led to Jacob testing DMSO on a series of patients with incurable blindness. Sadly, in many cases (which ophthalmologists had pronounced incurable), regardless of the remarkable results, the ophthalmologists tended to insist there was either no improvement or it was just a coincidence.

To [quote another author](#):

Ophthalmologist Norbert J. Becquet, M.D., of Little Rock, Arkansas, reported to the American Academy of Medical Preventives (AAMP) in May 1980 that he had great success using DMSO in treating cataracts and other eye problems. "I've treated thousands of patients in the last year for macular degeneration, macular edema, and traumatic uveitis...In using DMSO, glaucoma drugs are potentiated, including th

required for treating wide-angle glaucoma. But DMSO alone is better for macula degeneration.

Note: AAMP is now called ACAM, and other ACAM physicians at that meeting also state that DMSO treats cataracts and glaucoma. Additionally, [in a recent article](#), I discussed DMSO's value for treating uveitis (so it will not be discussed here).

- [Another author reported](#) DMSO eye drops once or twice a day [were useful for eye problems](#) such as cataracts or glaucoma.
- A few other authors have reported using DMSO eye drops before eye exercises is ideal, as its muscle-relaxing properties help loosen overstrained or hardened eye muscles, enhancing the effectiveness of exercises to improve eye muscle mobility.

[Another author](#) who has worked with many doctors using DMSO reported that they found applying DMSO to the eyes seems to help with a variety of vision issues and pain, and that typically, there will be a stinging sensation for 30-40 seconds after applying DMSO to the eyes, after which the eyes typically feel better than before treatment. Likewise, he also cited a Los Angeles doctor who had several patients who were able to read fine print more easily after only one week of applying DMSO to the eyes.

Note: that author also frequently applies DMSO to his own eyes when they feel tired and notices an immediate and rapid improvement. Likewise, [one reader here](#) who started taking DMSO for Parkinson's noted they had less discomfort due to more eye irrigation.

[In one case he cited](#), a 90 year old man who was unable to read (due to macular degeneration and other eye problems) who was treated daily with DMSO eye drops (along with oral DMSO) and after a month, could resume reading his books (along with thinking more clearly, and his whole body feeling better).

[In another case](#), a 78 year old man had a variety of eye problems that were making it difficult for him to walk around his home. His doctors told him that since there was

nerve damage to his eye, nothing could be done, and he should not waste his money any unproven treatments. However, that man decided not to give up and convinced another doctor to try applying DMSO to his eyes (along with oral DMSO). At the start he was 20/200, then in two weeks 20/100, two weeks after that 20/70, and then eventually 20/50 with glasses, allowing him to regain his independence (which persisted along with him being in excellent health for a man in his 80s).

Similarly, a reader here who had always been nearsighted [reported that](#) after taking DMSO internally for a few months, they stopped being able to see clearly through their glasses and then realized their vision had normalized (e.g., they could see the smallest print quite clearly) and had not needed reading glasses since.

[Another author](#) reports that patients on DMSO sometimes report an improvement in their eyesight as an unexpected but pleasant side effect (e.g., he cited a woman no longer needing her glasses the morning after she took DMSO). He found DMSO was often helpful for macular degeneration.

Note: the most common terminology for this condition (age-related macular degeneration) is AMD. Had I realized at the start that this was also the abbreviation of “A Midwestern Doctor,” I would have chosen a different name (and likewise, that is why I always refer to the condition as macular degeneration rather than AMD).

That author reported success using DMSO to treat eye conditions such as, macular degeneration, macular edema, uveitis (inflammation of the middle structures of the eye) due to trauma, cataracts, glaucoma, and various retinal diseases.

In turn, many DMSO doctors would use DMSO for perplexing eye conditions when they weren't sure what to do. Likewise, readers here have reported that DMSO helps with a variety of other challenging eye conditions. For example:

- [A firefighter](#) injured his upper eyelid after some hot tar fell on it, which caused chronic inflammation that did not respond to any treatment from his doctor. After

years, he tried topical DMSO, and within a week it was gone forever.

- [A reader](#) has a very rare condition ([less than 200 cases have been reported](#)) that causes the eye to randomly spasm and jump all over the place (which makes it very difficult to drive) and is thought to be linked to migraines or concussions (both conditions I associate with impaired blood flow in the head). It's considered to be essentially incurable, but after reading this series, he decided to try using DMSO applied as an eye drop and found it would stop the episodes.

- [One reader](#) who found DMSO helped many other symptoms they had, began applying DMSO drops to the eyes because they had symptoms of a vitreous detachment (floaters and flashes), and afterward noticed that they had less floaters and flashes, resulting in a clearer field of vision.

DMSO and the Ears

To establish the safety of DMSO in the ear, [a study](#) gave the eardrums of 10 volunteer prisoners five drops of 50% DMSO (in water) or 60% DMSO (in glycerin) three times per day for 74 days. During each application, they first laid on their side (with the ear facing up) for 15 minutes, then had a cotton plug placed in the ear so they could stand up but not have the DMSO leak out (which was then removed an hour later). Various tests and examinations were performed, and no signs of toxicity were detected besides a transient decrease in white blood cells (which regressed on its own and may have been related to a circulating infection in the prison). Once that study established the safety of putting DMSO directly into contact with the ear's tympanic membrane, a variety of other studies were conducted utilizing a similar approach. Likewise, [another human study](#) also found (90%) DMSO had no toxicity to the ears.

Note: [a 2014 rat study](#) found that applying 1% DMSO to the middle ear did not cause any adverse changes to the inner ear and [a zebrafish study](#) found DMSO did not injure the hair

cells in the ear, while [another study](#) of young (4 week old) rats (and [one in cats](#) with high concentrations given for 21 days) found some adverse effects on the hair cells, suggesting that in life, those cells may be more sensitive to DMSO.

Impaired Hearing

I believe poor hearing often results from impaired circulation to the ear, and in turn you will sometimes encounter people who report their hearing improves as a side effect of DMSO usage. For example, after reading [an earlier article](#) about how to use DMSO to heal circulatory disorders (e.g., strokes) and starting oral DMSO, [this reader reported](#):

Within 5 days several things were noticeable a) I pass water far more easily, b) my hearing accentuated, c) my eyesight improved somewhat, d) my mind was that much sharper and e) my blood pressure dropped from 160/90 to 150/80 and I just sense my heart is that much better.

Likewise, I recently spoke to a friend of Stanley Jacob who told me that he had success in treating hearing loss with DMSO and that they vaguely remembered Jacob had also treated cases of tinnitus with it.

Tinnitus

Like macular degeneration, most of the treatments I have come across that help with tinnitus also improve circulation to the affected sensory organ. Additionally, I have seen many signs suggesting tinnitus is linked to excessive sympathetic activity (e.g., many other treatments I've seen help tinnitus address this component of the disease which again argues for DMSO's role in this condition (as [by being an acetylcholine esterase inhibitor](#) it increases parasympathetic activity).

While numerous patients with tinnitus have reported DMSO helped them (or their tinnitus improved incidentally from DMSO), I only know of one study that formally evaluated it.

In it, [fifteen patients](#) with tinnitus of unknown origin were selected [for a study](#) (which included 2 hearing voices and 3 with tinnitus preceded by acoustic trauma or an aneurysm of the internal carotid were excluded). Each had tinnitus for a prolonged period (6 months was the shortest amount of time) and had not been able to adapt to the noise. At baseline, their characteristics were:

Examination	Number of Patients	
	Normal	Altered
Otoscopy	15	0
Audiometry:		
Tonality	9	6 high
Discrimination	13	2
Positional vertigo	10	5
Radiography of paranasal sinuses	11	4
Tympanic temperature	4	11
(slightly decreased— $36.8 \pm 0.4^{\circ}\text{C}$ vs. $38.1 \pm 0.7^{\circ}\text{C}$ in normal patients)		

Note: in 3 cases, the ear ringing was localized approximately between 3,000 and 4,000 Hz, at an intensity of between 15 and 30 dB. In 12 cases, it was masked with a "white" noise between 10 and 12 dB.

Following one month of receiving a spray with DMSO and a few other drugs, all significantly improved.

TABLE 2
PRINCIPAL SYMPTOMS AND PROGRESS OF PATIENTS WITH SUBJECTIVE
TINNITUS OF UNKNOWN ORIGIN AFTER ONE MONTH'S TREATMENT WITH
DMSO INTEGRATED WITH ANTI-INFLAMMATORY AND VASODILATORY AGENTS*

Symptom	Number of Patients	Complete Recovery	Lower Intensity of Symptoms	Only Occasional Symptoms
Tinnitus	15	9	2	4
Dizziness	10	5	2	3
Vertigo	5	5	–	–
Insomnia	15	8	7	–
Otalgia	3	2	–	1
Headache	11	7	1	2
Hypacusis (sensorial-neural highs)	6	–	3	–
Discrimination	2	2	–	–

*The average temperature of tympanic membrane before treatment was 36.08 ± 0.4 after 1 month's treatment it was $37.9 \pm 0.6^{\circ}\text{C}$.

Note: this improvement was sustained for at least a year.

The increase in tympanic membrane temperature coinciding with an improvement tinnitus made the investigators suspect poor blood flow (which DMSO improves) w linked to tinnitus. Likewise, in the four patients who only had occasional symptoms they reported their symptom reoccurrence was tied to exposure to cold weather in t morning, further strengthening the circulatory hypothesis. Additionally:

A notable improvement was observed in the patients who at the beginning of the treatment had suffered from dizziness and positional vertigo. The insomnia of ei patients disappeared, and seven slept better. There was also improvement in headache and otalgia (the latter was not related to temporal-maxillar articulation). Very noteworthy was the modification in the sensorial-neural hypacusis of some the patients, as expressed subjectively by the patients and confirmed by audiometric examination.

Note: at [the 1974 symposium](#), this author also presented a paper on how DMSO could be used to treat hearing loss.

[Another author](#) reported on a clinic in New York City that treated a number of tinnitus patients with DMSO. They noted that in most cases, their ear noises were immediately reduced with DMSO, and that in most cases, the patients were permanently cured within a month, and if it recurred, a second course of DMSO would typically eliminate their tinnitus much faster than the original treatment. Additionally, in many cases, the patients did not report they had tinnitus until they shared that systemic administration of DMSO had improved their tinnitus (which then was fully improved with targeted DMSO treatment).

Airplane Ear (Aerositis)

Some individuals have immense difficulty tolerating altitude changes ([to the point their eardrums can rupture](#)), which in some cases follows an infection that inflames the Eustachian tubes, making them unable to open and accommodate the pressure changes created by increased elevation (which can be extremely painful—I know people who stopped flying because of it).

[In 1967](#), a former president of the [Aerospace Medical Association](#) reported [that DMSO could treat aerositis](#) and aerosinusitis, and that [he had treated 8 cases of aerositis and 4 cases of aerosinusitis](#) by spraying 30% DMSO into each nostril, which 75% of aerositis cases and 100% of the aerosinusitis responded.

Note: better results may have been obtained by spraying the soft palate and using ear drops

DMSO and Head Infections

[One ENT doctor](#) observed that DMSO would often significantly calm inflammation from an infection in the head (including severe ones that were difficult to treat with antibiotics). However, the improvement often only lasted for 2-4 hours. However, w

he mixed DMSO with an antibiotic, it frequently eliminated the infection in a dramatic fashion (e.g., the eardrum of an otitis media patient would begin shrinking 10-15 minutes)—especially if the infection was treated early. Unfortunately, because how rapidly the symptoms often improved, it often caused patients not to follow up when they needed to for the subsequent treatment.

Note: mixing an antibiotic with DMSO increases its potency, in part because it more easily travels into the body (e.g., in this study, the antibiotic was dissolved in DMSO, directly applied to the eardrum, and then was able to enter the ear), partly because DMSO has its own antibacterial properties, and partly because DMSO decreases antibiotic resistance in bacteria (which will be discussed later in this series).

Additionally, he also found:

- Because of the marked drying up activity of DMSO, a subsequent treatment with a high-fat cortisone ointment was sometimes necessary to use afterward when treating otitis media.
- For irritating nasal infections or inflamed hair follicles, that the feeling of tension and pain significantly diminished within half an hour of DMSO and typically, 2-4 applications were required.
- That infections of the throat (e.g., tonsillitis) required internal applications of DMSO onto the inflamed area (rather than from the outside) and that cases with edema frequently had dramatic results (e.g., edema of the uvula often disappeared within hours).
- Significantly facial injuries (all of which had accompanying hematomas and included 2 traumatic hematotympanums and 2 hematomas of the nasal septum) had excellent responses (e.g., the hematomas and swelling distinctly improved on the first day, and the healing process as a whole was reduced to about half to a third of the average time) and the 2 nasal septum hematomas did not require an incision or lead to colliquative

•Three patients who had lost their smell were treated with DMSO. One had a striking response and immediately regained it; the other two had temporary improvements after each administration of DMSO.

•Many patients with stomatitis aphthosa (canker sores) have a good response to DMSO. Unlike the other applications, 60% DMSO (applied as a spray) was used.

He [then compiled all of his cases](#):

TABLE 2
SUMMARY OF CASES

Diagnosis	Mode of treatment	No. of patients treated	Complete remission of symptoms	Partial remission of symptoms	Unchanged
Furuncular otitis (and infected eczematous otitis)	DMSO	119	2	16	11
	DMSO + ANTIB.		26	53	11
Otitis media (40 acute, 27 chronic)	DMSO	67	1	—	3
	DMSO + ANTIB.		26	26	11
Furunculosis of the nose (and infected nasal eczema)	DMSO	35	4	3	1
	DMSO + ANTIB.		12	12	3
Tonsillitis and Pharyngitis (acute) (acute and chronic)	DMSO	119	4	24	16
	DMSO + ANTIB.		16	48	11
Stomatitis aphthosa	DMSO	34	5	4	2
	DMSO + ANTIB.		8	15	—
Neuralgiform headache	DMSO	109	29	54	26
Temporomandibular arthropathy	DMSO	15	5	8	2
Injuries	DMSO + ANTIB.	13	9	4	—
Various disorders	DMSO	19	2	15	2
90% DMSO		530	149	282	99
Antibiotics were mainly terramycin and erythromycin			28.1%	53.2%	18.7%

Various disorders included: 4 acute facial paralyses (2 improved), 4 herpes simplex (3 improved), 2 chronic Herpes zoster otitis (both rapidly improved), 2 Parotitis (both improved), 2 phlegmons of the mylohyoid (both improved) and 3 anosmias (all improved).

Note: most of the poor responses in otitis media were in chronic cases. Of the 27, 4 had a “good” response, 13 had a “distinct improvement” (but generally relapsed in a short time), 10 had “no change” and 1 became worse.

Other studies have also shown DMSO treats these infections:

- A [1969 study](#) gave DMSO with success to 69 children (37 girls and 32 boys) with otitis media and 17 with maxillary sinusitis. In the otitis media cases, 30-50% DMSO (sometimes mixed with an antibiotic) was poured into a cleaned ear (under slight pressure) and typically passed through the eustachian tube into the nasopharynx (throat). In suppurative otitis media, there was a rapid cessation of pus discharge from the ears, a return of hearing, and a normalization of the blood. In purulent inflammation of the maxillary sinus, 30-50% DMSO was given by injection, and cures were achieved in 4-8 days in the majority of cases, with the treatments usually lasting long term.
- A [1993 study](#) used DMSO in combination with other drugs in 49 patients with external ear inflammation and 10 with acute otitis media, finding DMSO potentiated the other medications (e.g., enhancing antibacterial and antifungal coverage or increasing anti-inflammatory or anesthetizing properties), along with improving the risk-benefit profile and penetration through the skin—with the successes leading the authors to advocate for using these combinations in clinical practice. Likewise, similar results were seen in [a 2004 study](#).
- A 2010 study found that [in patients with purulent ear cartilage](#) inflammation (e.g., otitis externa), moist gauze with DMSO, gentamicin, and dexamethasone applied 2 times daily reduced ear swelling and pain within 2–3 days, with wounds healed in 20 days, compared to persistent swelling and pain after 10 days with gentamicin alone.
- A [2019 study](#) found DMSO treated chronic tonsillitis.

Finally, one approach for treating middle ear infections is to puncture the ear drum with a needle and drain it. Since this is quite painful, [this doctor](#) decided to try swabbing a drop of DMSO mixed with tetracaine against the ear drum, as DMSO [potentiates local anesthetics](#) and can allow them to pass through the eardrum without needing to puncture it (which would be immensely painful for any child). In turn, at the 1966 annual meeting of the American Academy of Ophthalmology and Otolaryngology, shared that had done this one 107 patients with serous otitis and 50 with purulent otitis media, of whom 80% had no pain, and 20% only had slight pain.

Likewise, [a 1990 paper](#) reported 80% DMSO mixed with 10% cocaine (a less common used local anesthetic) and 10% water or 5% tetraine mixed with 100% DMSO was an effective and tolerable anesthetic for the ear drums in 164 patients.

Puncturing a child's ear almost always requires putting them under anesthesia, which makes the procedure more costly and has its own set of complications, so having a way to perform the procedure while avoiding anesthesia would be of great benefit (once again making it remarkable this application of DMSO never entered standard medical care).

Sinusitis

DMSO has often been observed opening blocked nostrils within a few minutes due to its antibacterial and anti-inflammatory effects, which allow it to reduce swelling in sinuses and promote the healing of inflamed tissue. In addition to the previously mentioned studies where it showed benefit for sinusitis:

- [A large DMSO study](#) included 7 female patients (aged 43-66) who had had sinusitis for 1 week to 9 months and received DMSO. Of them, 2 had a good response to it, and 5 had an excellent response. Likewise,
- In 1965, [Merck sent out guidance](#) to their investigators on what they had learned from treating approximately 4,000 patients for up to 18 months. In it, they mentioned

one of the conditions DMSO had shown efficacy for was sinusitis and that “A dilute solution to the nasal mucosa has resulted in the discharge of a great deal of infected material from the sinuses and relief of pain.”

- [A 1987 Chinese study](#) of 44 patients with 59 sinus infections found local injection topical application of 25% DMSO resulted in a 91-95% cure rate (of the 44, 40 fully recovered, 2 improved, 2 had no benefit), with treatment duration ranging from 10 days to 5 years, with an average of 2.36 years for cases over 6 months and 41.1 days for those under 6 months.
- [A 1992 Russian study](#) found administering 10% DMSO to the sinuses followed by local oxygenation, within 2 years, 49 out of 52 children had a complete recovery (including all cases of maxillary sinusitis) whereas many controls receiving standard treatments did not.

DMSO and the Mouth

DMSO's therapeutic properties have also led to it being studied for ailments within the mouth. This work has primarily revolved around treating inflammatory conditions and herpes lesions (which, as I show [here](#), have an excellent response to DMSO).

For example, one study found [an anti-inflammatory](#) combination of 70% DMSO and 0.007% Decadron applied 4–8 times daily to oral lesions (e.g., lichen planus, ulcerative stomatitis) in 12 patients for an average of 83 weeks and found to significantly improve but not cure the lesions, and readers here have reported similar results (e.g.,

Note: [when DMSO was combined Decadron](#) (a steroid) was applied to the mouth, salivary Decadron levels peaked within 15 minutes and returned to normal within 30 minutes.

Readers have reported similar results (e.g., [DMSO resolved Lichen Sclerosis within reader's mouth in about a month](#)), and likewise, [authors have reported](#) DMSO is an

effective treatment for other small ulcers within the mucus membranes of the mouth and genitals.

DMSO has also been shown to heal inflamed salivary glands:

- [A 1988 Russian study](#) found of adolescent patients found DMSO plus procaine treated chronic parenchymatous parotitis (inflammation of the salivary glands).
- [A 1989 study of 57 patients](#) with exacerbated chronic parenchymatous parotitis for 30-50% DMSO applied topically (e.g., daily for 20-40 minutes 12-14 times) effectively treated it.
- [A 1993 Russian study](#) found DMSO plus short-acting insulin and 5% calcium pantothenate (B5) safely treated 42 patients ages 23 to 62 with chronic parenchymatous parotitis.

Lastly, [in a study](#) assessing the safety of using DMSO within the mouth it was found that DMSO on average, became tastable at 0.59% (with the detection threshold ranging from 0.005-1.5%), and that while taste increased with concentration, even 100% was objectionable enough to prevent clinical use. Likewise, when 70% DMSO was applied to the lips and tongue, it was found to cause mild warmth, occasional numbness, smarting, tingling, a distinctive taste, and mild breath odor—effects which were transient and not significant enough to classify DMSO as an effective topical anesthetic. Finally, extensive blood work found no abnormalities from oral DMSO (DMSO mixed with Decadron), nor any significant local or systemic effects.

DMSO in Dentistry

Many people find DMSO to be an excellent mouthwash or toothpaste, and when DMSO is used on the gums, they are much less likely to bleed. Additionally, DMSO can often relieve pain from a toothache until a dentist is seen, and pain in the oral

cavity can be alleviated by swilling the mouth with a DMSO drink solution. For example, [one study found](#) DMSO reduced tongue pain and inflammation in patient with glossalgia.

Likewise, some dentists in practice find DMSO (or DMSO combined with an antibiotic) very helpful for pain, infections, and swelling in the mouth, as well as for saving teeth that are starting to loosen from periodontitis. In turn, three authors have reported on dentists using DMSO in their practices:

- [Stanley Jacob reported on a Portland dentist](#) who specialized in restorative work and found that applying DMSO after a dental procedure consistently eliminates the pain (from intrapulpal inflammation) that some patients often experience after dental (even in those who have undergone a full day of restorative work).
- [Another author reported](#) other dentists use DMSO in a similar manner (e.g., for pain, infections, and swelling issues or after teeth extractions—where it is either applied to the gum or outside on the cheek or on the jaw next to the extraction site) and frequently combine it with other medications (e.g., antibiotics). Additionally, he cited a dentist in New York who applies DMSO to areas that will be x-rayed to prevent the damage the x-ray could cause (as DMSO has been shown [to do this](#)) and stated that pioneering dentists are dropping DMSO into empty tooth sockets after extractions, especially those for wisdom teeth, as it stops post-extraction swelling.

Many studies, in turn, have found DMSO treats periodontal disease:

- [A 1968 study](#) reported using DMSO to sterilize root canals (which is potentially extremely important as infected root canals are a frequent—but often invisible—source of severe chronic disease).
- A [1969 Polish study](#) (preceded by [a 1966 study](#)) evaluated 32 male and female patients (ages 18-45) with periodontal disease. In 13 of the patients, the disease only involved bleeding and swollen gums. In the other 19, the oozing and painful pockets of

infection extended deep into the gum, sometimes involving the dental nerve, bone, loose teeth. After cleaning and repairing the teeth as much as possible, the patients were treated with DMSO every other day for 7-10 treatments.

Compared to controls, this resulted in “remarkable improvements.” Specifically, there was a total elimination of pain, decreased bleeding, and gum adherence to teeth in those patients with superficial disease. At the same time, those with deep infection reported less inflammation and disappearance of painful symptoms, but none of the had very loose teeth firm up.

- [A 1981 study](#) found DMSO is an effective prophylaxis against periodontopathies.

Furthermore, numerous pharmaceutical DMSO combinations have been shown to treat periodontal disease (e.g., [azathioprine](#)), including [metronidazole](#) or [indomethacin](#) treating severe generalized peritonitis and [oxacillin plus ceftericid](#) significantly accelerating the healing of inflammatory jaw diseases resulting from unhealed wounds following a dental extraction.^{[1,2,3,4](#)}

Note: [in cats with significant periodontitis](#), a patented DMSO pharmaceutical mixture (applied via daily oral irrigation) was found to be more effective at accelerating recovery and normalizing bloodwork than standard treatments.

Likewise, natural combinations have as well (e.g., [15% DMSO mixed with a herbal extract treated periodontal disease](#)). Similarly, [50% DMSO with 2.5% ortophenum](#) stopped type I and type II autoimmune inflammation in the periodontium and in animals, [a dental gel](#) with 10% glucosamine hydrochloride, 5% DMSO, nettle juice, and kalanchoe juice was found to reduce inflammation and promotes tissue regeneration.

Additionally, [DMSO alone was found](#) to inhibit the growth of all 95 tested bacterial strains from oral specimens and was bactericidal for many, especially at 45%, and to inhibit the growth of all 56 *Candida albicans* isolates (most of which it was fungicidal most).

DMSO has also been repeatedly shown [to diffuse into the teeth](#), to treat cavities and reduce inflammation within tooth pulp:

- [A 1983 study](#) of 222 people (176 had acute serous limited pulpitis and 46 — chronic fibrous pulpitis) found 70% DMSO placed into cavities was effective in 98.4% of acute cases and 89.3% of chronic cases, and that in most cases, this benefit persisted. Additionally, of 9 of the 16 cases with chronic fibrotic pulpitis benefitted from DMSO.

- [A 1968 study](#) showed DMSO improved the pulp of monkey's dental teeth. Three weeks later, that author then published a study that found DMSO improved 75% of pulpitis cases, while DMSO plus oxyphenylbutazone (a drug for gout) or chloramphenicol improved 85% of cases, while placebo only improved 50% of cases, and five months later [published another paper](#) on using a DMSO combination for pulpitis.

Note: this author conducted controlled studies on using DMSO for pulpitis for 10 years (e.g. he also published [this](#), [this](#), [this](#), and [this](#) study). Likewise, [in 1970](#) another German author replicated these results in humans, while [in 1975](#) another German author showed that DMSO increases the blood circulation in dental pulp.

- [A 1986 Russian study](#) found a DMSO containing paste treated deep caries and [a 1991 study](#) found DMSO helps deep caries and acute focal pulpitis

Note: [in human periodontal ligament fibroblasts](#), DMSO increased the production of RANKL—a protein that can promote bone breakdown—in a dose-dependent way after just one hour, suggesting DMSO may influence processes related to bone remodeling in the gums.

Applying DMSO to the Head

While applying DMSO to the body will often create positive effects on conditions in the head since DMSO spreads through the body, it is often necessary to apply DMSO directly to the area where the issue occurs so a higher concentration of DMSO can

reach the area. In turn, many of the principles for using DMSO I've highlighted throughout this series hold true for the local applications to the head, but there are also a variety of unique considerations.

For example, people often will have things on their faces they do not want to transfer in the body such as:

- Contacts
- Metallic residues from the nose pads of glasses.
- Make-up
- Dyes or chemical cleaning products in the hair.

Because of this, things like contacts must be taken off before using DMSO and you should ensure the area it is applied to has been cleaned beforehand if any chemical residue may have been left there.

Note: it's also important that each thing you use to dilute DMSO is also chemical free (so don't pour it with plastic spoons, don't use plastic droppers, and be sure to use purified water to dilute it).

Likewise, the face is one of the most sensitive parts of the body to DMSO, so typical topical applications need to be started at a low concentration and gradually increase rather than a high concentration of DMSO immediately used on the face (especially stronger gels), as otherwise the skin may get irritated and make the user not want to use DMSO.

In the final part of this article, I will discuss the protocols that have been developed for each of the conditions listed throughout this article (e.g., macular degeneration, tinnitus, sinusitis, aerotitis, and dental hygiene), where to source the best DMSO for doing so alongside some other related approaches I've come across over the years that I've found really help these conditions.

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