DMSO

Dimethyl sulfoxide (DMSO, brand name RIMSO-50) was the first and remains the only FDA-approved bladder instillation specifically for interstitial cystitis (IC). Approved in 1978, its exact mechanism of action is still not fully known, though it is thought to have several effects positive effects:

- Reducing bladder irritation and pain (anti-inflammatory)
- Helping to relax the bladder and pelvic muscles (antispasmodic)
- Relieving pain by depleting the level of substance P levels from bladder nerves
- Increasing bladder capacity by breaking down scar tissue by preventing the formation of collagen, a protein the body uses to create scar tissue

Because of its ability to penetrate the bladder lining, some healthcare providers add DMSO to “bladder cocktails” to aid the absorption of other bladder-instilled medicines, such as heparin, steroids, bicarbonate, and analgesics (pain medicines).

Dosage & Treatment Plan

Typically, your healthcare provider instills a 50% liquid solution of DMSO intravesically, meaning via a catheter directly into your bladder. You then hold the solution in your bladder for up to 15 minutes before urinating it out. Though usually done in your healthcare provider’s office, you can learn you do DMSO instillations at home. You may find your urologist’s nurse practitioner to be very helpful in teaching you this technique.

You will receive a series of instillations, generally every one or two weeks for four to eight weeks, depending on your response to the medicine.

You may not see improvement in your symptoms until the third or fourth treatment. If you experience a recurrence in your symptoms, additional treatments may be necessary. Some people with IC find that, once they have had the initial series of instillations, they need only one DMSO instillation when an IC “flare-up” arises. It is best to schedule a treatment as soon as your symptoms begin to recur, rather than waiting until symptoms have intensified.

Wait three to four weeks after a cystoscopy with hydrodistention to start DMSO instillation. This ensures that the bladder has a chance to begin to heal, including any biopsy sites (small areas of tissue samples your doctor may cut from your bladder during cystoscopy with hydrodistention, to help aid in diagnosis). Also, prior to starting DMSO therapy, your healthcare provider orders a urine culture test and, before each instillation, a urinalysis to ensure that you do not have a urinary tract infection.

Potential Side Effects

A strong garlic-like taste or smell may be present on your breath and skin for 24 hours after DMSO instillation. You may not notice this odor, though anyone in close proximity to you may detect it. You may also experience a temporary worsening of bladder symptoms lasting 24 to 72 hours after treatment. Anecdotally, some patients report short-lived flu-like symptoms after DMSO treatment.

You may find that you experience pain during or after the DMSO instillation procedure, which may subside with repeated instillations.
If you experience pain:

- Ask your physician to prescribe pain medicines such as anticholinergics, bladder analgesics, or B&O suppositories, that you can use prior to and after instillation.
- Request a pediatric catheter for the instillation.
- Apply a numbing gel such as lidocaine to the urethra prior to catheter insertion. Ask your doctor about inserting a numbing agent such as lidocaine or bupivacaine hydrochloride (Marcaine) into the bladder before DMSO instillation.

**Other Precautions**

In use since the 1970s, DMSO is a safe and effective IC treatment option through patient-reporting and several small-scale studies. However, because of the strong garlic odor that DMSO produces, large-scale placebo-controlled studies in humans are limited. In much higher doses than used to treat IC, DMSO can be teratogenic, meaning that it has the potential to cause birth defects. Therefore, the manufacturer of the product does not recommend its use during pregnancy or when breastfeeding. Because of the potential for cataract formation in animal studies, the manufacturer’s literature recommends that you have full eye examinations prior to and during treatment with DMSO. No studies evaluated the safety and effectiveness of DMSO instillations in children. [Please see manufacturer’s literature for complete details].

To get more information on RIMSO-50 and complete prescribing information, call 888-258-4199 or visit www.bionichepharmausa.com.

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The Interstitial Cystitis Association (ICA) is the only non-profit health association dedicated to improving the quality of healthcare and lives of people living with interstitial cystitis (IC).

The ICA provides advocacy, research funding, and education to ensure early diagnosis and optimal care with dignity for people affected by IC.

Your donation dollars also enable the ICA to continue to fund new IC research projects, as well as work closely with Congress to ensure ongoing IC-specific research funding at the federal level.

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