



## **SPINAL FLUID LEAKS IN ARACHNOIDITIS (ARC)**

Spinal fluid leaks have one of two causes: (1) puncture wound of spinal canal cover, (2) inflammation erodes through the spinal canal cover.

**Basic Problem:** Traumatic punctures of the spinal canal cover are obvious causes of leaks. Arachnoiditis is inflammation of the arachnoid membrane which is the inner lining of the spinal canal cover. When the arachnoid becomes inflamed it may erode through the dura (outer lining) and cause seepage and leakage.

**Relationship to Connective Tissue Disease (Ehlers-Danlos Syndrome and Others):** Connective tissue diseases have tissues that are collagen deficient, weak, and prone to inflammation and tears. The spinal canal cover is a collagen-laden tissue, so inflammation and spinal fluid leakage is common in persons with these disorders.

**Main Problem We Encounter:** Arachnoiditis Hope is constantly encountering persons with arachnoiditis who complain about CSF leaks. From our vantage point, the clinical approach to resolving and healing the leaks is misguided. Persons after person reports that their only treatments are blood patches, tranquilizers, and a recommendation to bed rest.

**Our Therapeutic Approach to Leaks:** ARC is an inflammatory disease of the arachnoid membrane and CSF leaks may be caused by inflammation in the membrane. Consequently, the basic secret to stopping CSF leaks is treatment and suppression of arachnoid inflammation. For example, step one may be a 6-Day Medrol® Dose Pak or 2 days of ketorolac. Regardless, any person with ARC who has CSF leaks needs a review of their inflammation treatment program. Our second step is the use of pro-growth, pro-healing peptides and hormones. For example, a course of BPC-157/thymosin with DHEA.

**Ongoing Prevention and Treatment:** Our first choice for ongoing treatment of ARC inflammation is low dose methylprednisolone and ketorolac. Our second choices for ARC inflammation are acetazolamide, pentoxifylline, or diclofenac. In addition, to prevent CSF leaks we recommend ongoing, intermittent use of pro-growth, pro-healing peptides and hormones such as colostrum and DHEA.

**Summary:** CSF leaks are caused by either a puncture wound or inflammation. We recommend control of ARC inflammation as the first step to stopping a CSF leak. Healing and prevention are, in our opinion, best done by a combination of pro-growth, pro-healing peptides and hormones. We recommend both short term and long-term approaches to treat and prevent leaks by inflammation suppression and use of pro-growth, pro-healing peptides and hormones.