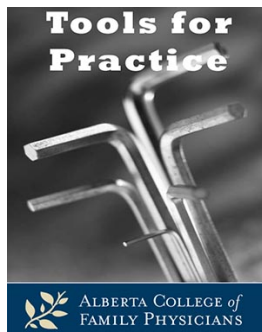


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Reviewed: May 26, 2015
Evidence Updated: None
Bottom Line: Unchanged
First Published: Dec 13, 2011



COLD-FX® evidence: Consistently reported inconsistently

Clinical Question: Does CVT-002 (COLD-FX®) reduce the chance of upper respiratory tract infections (URTI) or influenza?

Bottom-line: Much of the COLD-FX® research is limited by trial design and reporting/analysis issues. The evidence is neither consistent nor convincing enough to recommend COLD-FX® to prevent viral URTI in seniors or adults.

Evidence:

- Five industry-funded randomized controlled trials (RCTs), in four publications:
 - 783 patients ≥ 65 years old randomized to placebo or COLD-FX® at 400 mg or 800 mg per day for six months during influenza season:¹
 - Modified intention to treat analysis found no statistical difference in either clinical or laboratory confirmed URTI.
 - In a per-protocol analysis (only subjects who completing the study), two of eight outcomes were statistically significantly improved and two borderline.
 - Combination of two non-statistically significant RCTs on nursing home seniors (89 and 109 patients each)² of placebo versus COLD-FX® 400 mg:
 - Statistical difference in laboratory confirmed URTI and influenza (9% versus 1%, $p=0.009$) but not in clinical URTI or influenza.
 - 323 patient (279 analyzed) RCT of 18-65 year olds (influenza vaccine naive), demonstrated 0.25 fewer clinical URTI (0.93 reduced to 0.68) per person over four months in patients using COLD-FX® 400 mg/day.³
 - 43 community patients ≥ 65 years old randomized to placebo versus COLD-FX® 400 mg:⁴
 - Did not look at clinical URTI or laboratory URTI.
 - Statistically significant differences in some symptoms only seen in the last of three follow-up visits and no overall comparison.

Context:

- Viral URTI occur in adults approximately 2-4 x per year.⁵

- COLD-FX® trials suffer from many concerns: Drop-outs >10% before a single dose is taken,³ modifying analysis to achieve statistical significance (using per-protocol analysis,¹ combining trials,² or selecting certain time frames⁴), multiple analyses, laboratory not clinical values,² and inconsistent results.
- Other reviews raise similar concerns with this research.⁶
- Hand washing⁷ and getting an influenza vaccination⁸ do appear to reduce the chance of influenza or an URTI (although this research, too, is potentially biased).

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References:

1. McElhaney JE, Simor AE, McNeil S, *et al.* Influenza Research and Treatment 2011; Article ID 759051.
2. McElhaney JE, Gravenstein S, Cole SK, *et al.* J Am Geriatr Soc. 2004; 52:13-9.
3. Predy GN, Goel V, Lovlin R, *et al.* CMAJ. 2005; 173(9):1043-8.
4. McElhaney JE, Goel V, Toane B, *et al.* J Altern Complement Med. 2006 Mar; 12(2):153-7.
5. Gwaltney JM. Am J Med. 2002; 112(Suppl 6A):13S–18S.
6. Nahas R, Balla A. Can Fam Physician. 2011; 57:31-6.
7. Jefferson T, Del Mar CB, Dooley L, *et al.* Cochrane Database Syst Rev. 2011; 7:CD006207.
8. Jefferson T, Di Pietrantonj C, Rivetti A, *et al.* Cochrane Database Syst Rev. 2010; 7:CD001269.

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