

Statins and Influenza Vaccine Response

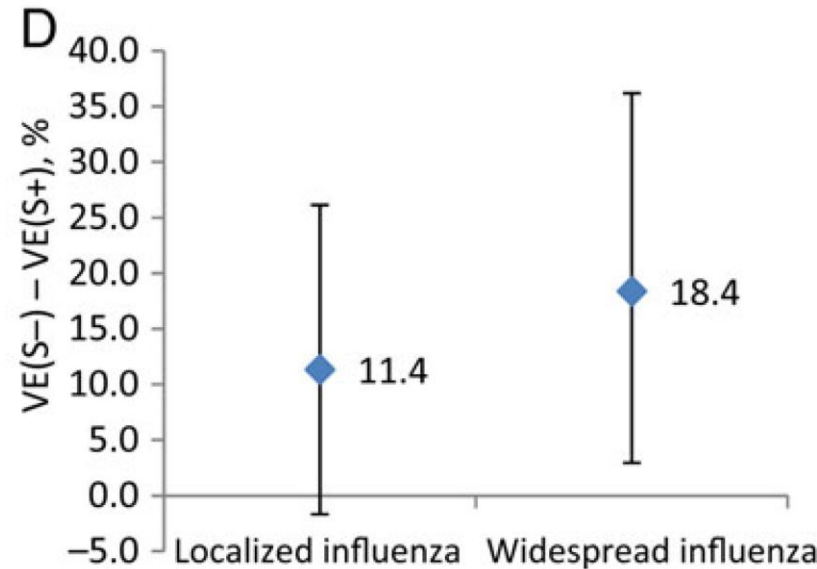
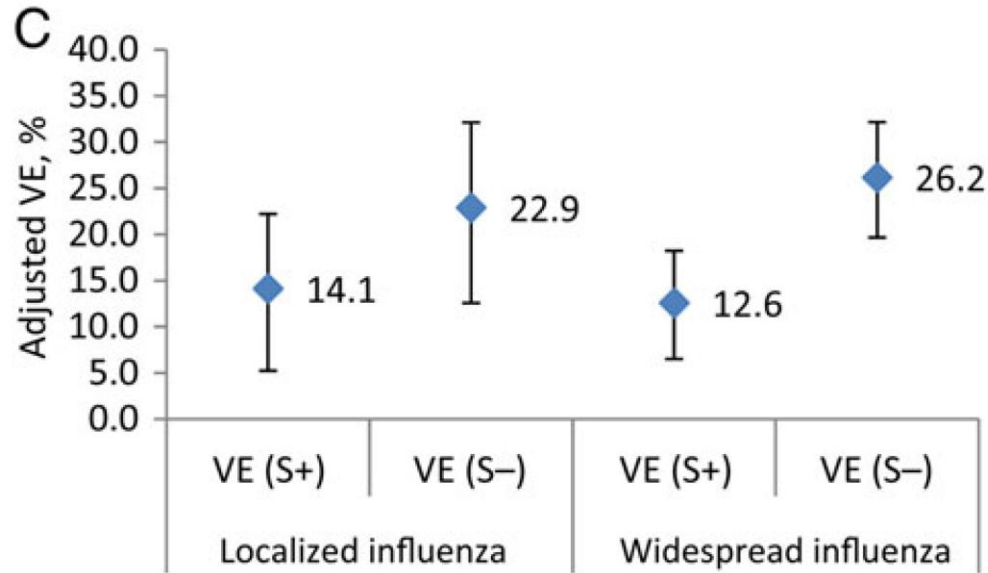
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Statins & Vaccine Response

- ~ 25% U.S. adults \geq 40 on statins
- \downarrow LDL
- Multiple immunomodulatory & anti-inflammatory effects
- Potential effects of interest
 - Generalized suppression of innate response
 - \uparrow HDL \rightarrow Tregs

Impact of Statins on TIV Effectiveness



Impact of Statins on GMTs

Homologous Strain	Ratio S–/Ferm S+ (95% CI)	Ratio S–/Syn S+ (95% CI)
B/Brisbane/08	1.32 (1.21–1.43)	1.59 (1.39–1.81)
A(H1N1)/California/09	1.31 (1.20–1.44)	1.62 (1.40–1.87)
A(H3N2)/Perth/09	1.59 (1.46–1.73)	1.91 (1.68–2.19)

Abbreviations: CI, confidence interval; Ferm, fermentation derived; Syn, synthetic; –, nonuse; +, use.

Next Steps

- Evaluate VE for PCR confirmed influenza
- Prospective studies
- Can high dose, adjuvanted vaccines, multiple doses, overcome statin effects
- Understand the mechanisms

The Team

