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Introduction: Group B Streptococcus (GBS) is a very common pathogen that causes infections in pregnant women and newborns.

Objectives: To examine whether GBS prevalence among pregnant Jewish women is associated with (i) the use of swimming pool and practice of ritual bath immersion (*mikveh*) at the end of menstrual cycles (ii) their spouses' frequent use of ritual bath and swimming pool.

Methods: A cross-sectional analysis of 303 pregnant women admitted to deliver at Ziv Medical Center in northern Israel from 12/2019 to 7/2021 after being tested for GBS in their community clinics prior to labor onset. Medical records and self report questionnaires included demographics, lifestyle, medical and previous pregnancy history, level of religious observance, and frequency of ritual bath immersion practice of the women (before current pregnancy) and their spouses. Multiple logistic regressions were used to assess the correlation between GBS carriage and the use of *mikveh* and swimming pool, with adjustment for maternal age and infant birth weight.

Results: GBS carriage was associated with *mikveh* use before pregnancy (OR=2.6; 95% CI: 1.4-4.9). In contrast, bathing in swimming pools was found to be protective (OR=0.55, 95% CI: 0.32-0.96). An 8-fold increase in GBS prevalence was found in women whose spouses used the *mikveh* daily compared to spouses who used it once a month (p for trend <0.001).



	Orthodox/ Ultra Orthodox (n=155)	Secular/ Traditional (n=148)	P
Women (n, %)			
GBS carrier	72 (46.5)	30 (20.3)	<0.001
Use of <i>mikveh</i>	155 (100)	46 (31.1)	<0.001
Swimming pool	63 (43.4)	108 (76.6)	<0.001
Spouse (n, %)			
Use of <i>mikveh</i>	119 (81.5)	14 (9.7)	0.002
Swimming pool	61 (43.3)	109 (80.1)	<0.001

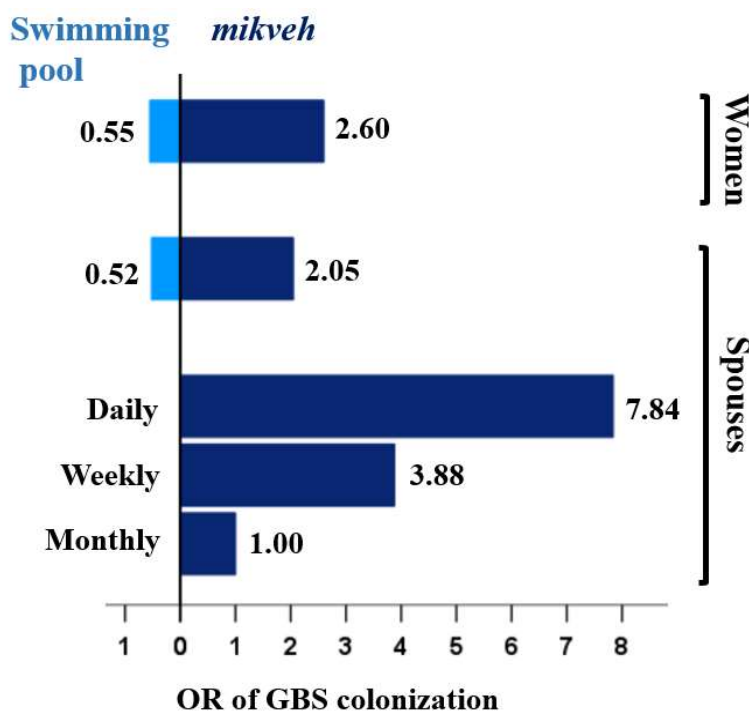


Figure: Odds ratios (OR) for the association between the prevalence of GBS and use of *mikveh* and swimming pool by women and spouses.

Conclusion:

- GBS carriage was significantly associated with level of religiosity and use of *mikveh* by both women and their spouses
- Use of swimming pool by both women and their spouses reduced the risk of women's GBS carriage.
- Systematic screening for GBS in pregnant women, particularly in Jewish Orthodox and ultra-Orthodox sectors, prior to their arrival to the delivery clinic, is suggested as a protective measure to reduce morbidity in pregnant women and their newborns.
- Validating the hygiene level of water in the ritual baths is obligatory to ensure safe use and avoid spreading contingent diseases.