

Supplementary File S1. Endpoint OD summary tables and ANOVA/Tukey HSD post hoc results

This supplementary file contains the endpoint OD600 summary tables from the main manuscript, together with one-way ANOVA and Tukey's HSD post hoc summaries used for the lettering in Figures 1–4.

S. mutans

Table S1. *Streptococcus mutans* endpoint OD600 at 24.75 h (mean ± SD; n = 3). Values in parentheses are % of the untreated control (0% polyol).

| Treatment | 0% | 1% | 2% | 5% | 10% | 20% |
|---------------------|-------------------------|-------------------------|-------------------------|-------------------------|---------------------|--------------------|
| Control (0% polyol) | 2.500 ± 0.000 (100%) | — | — | — | — | — |
| Allulose | — | 2.500 ± 0.000 (100%) | 2.417 ± 0.144 (97%) | 1.057 ± 0.023 (42%) | 0.354 ± 0.018 (14%) | 0.066 ± 0.006 (3%) |
| D-mannose | — | 2.500 ± 0.000 (100%) | 2.500 ± 0.000 (100%) | 2.500 ± 0.000 (100%) | 0.806 ± 0.226 (32%) | 0.053 ± 0.013 (2%) |
| Erythritol | — | 2.500 ± 0.000 (100%) | 2.500 ± 0.000 (100%) | 2.500 ± 0.000 (100%) | 0.252 ± 0.034 (10%) | 0.019 ± 0.003 (1%) |
| Xylitol | — | 1.537 ± 0.023 (61%) | 1.163 ± 0.012 (47%) | 0.672 ± 0.038 (27%) | 0.255 ± 0.009 (10%) | 0.024 ± 0.008 (1%) |

Abbreviations: OD, optical density. Percent of control was calculated using the untreated control mean OD600 = 2.50.

Table S2. One-way ANOVA and Tukey's HSD post hoc comparisons for *Streptococcus mutans* (0% control excluded).

| Concentration | ANOVA F | ANOVA p | Tukey HSD significant contrasts / summary |
|---------------|---------|-----------|---|
| 1% | 5259.18 | 1.623e-13 | Allulose vs Xylitol (p = 0.000e+00); D-mannose vs Xylitol (p = 0.000e+00); Erythritol vs Xylitol (p = 0.000e+00) |
| 2% | 247.20 | 3.179e-08 | Allulose vs Xylitol (p = 0.000e+00); D-mannose vs Xylitol (p = 0.000e+00); Erythritol vs Xylitol (p = 0.000e+00) |
| 5% | 5573.18 | 1.288e-13 | Allulose vs D-mannose (p = 0.000e+00); Allulose vs Erythritol (p = 0.000e+00); Allulose vs Xylitol (p = 0.000e+00); D-mannose vs Xylitol (p = 0.000e+00); Erythritol vs Xylitol (p = 0.000e+00) |
| 10% | 15.86 | 0.001 | Allulose vs D-mannose (p = 0.0057); D-mannose vs Erythritol (p = 0.0016); D-mannose vs Xylitol (p = 0.0017) |
| 20% | 22.17 | 0.0003 | Allulose vs Erythritol (p = 0.0006); Allulose vs Xylitol (p = 0.0012); D-mannose vs Erythritol (p = 0.0047); D-mannose vs Xylitol (p = 0.0118) |

Group lettering in the main-text figures was derived from Tukey's HSD comparisons within each concentration. High F values in ANOVA indicate significant differences between group means, suggesting that the variation among the group means is greater than the variation within the groups.

S. anginosus**Table S3. *Streptococcus anginosus* endpoint OD600 at 23.75 h (mean ± SD; n = 3). Values in parentheses are % of the untreated control (0% polyol).**

| Treatment | 0% | 1% | 2% | 5% | 10% | 20% |
|---------------------|--------------|----------------------|----------------------|----------------------|---------------------|---------------------|
| Control (0% polyol) | 2.000 (100%) | — | — | — | — | — |
| Allulose | — | 0.752 ± 0.104 (38%) | 0.988 ± 0.056 (49%) | 0.930 ± 0.182 (46%) | 0.805 ± 0.144 (40%) | 0.319 ± 0.002 (16%) |
| D-mannose | — | 2.500 ± 0.000 (125%) | 2.500 ± 0.000 (125%) | 2.500 ± 0.000 (125%) | 0.687 ± 0.714 (34%) | 0.032 ± 0.016 (2%) |
| Erythritol | — | 0.788 ± 0.019 (39%) | 0.481 ± 0.168 (24%) | 0.094 ± 0.021 (5%) | 0.023 ± 0.014 (1%) | 0.000 ± 0.000 (0%) |
| Xylitol | — | 0.375 ± 0.046 (19%) | 0.355 ± 0.070 (18%) | 0.516 ± 0.215 (26%) | 0.140 ± 0.032 (7%) | 0.022 ± 0.027 (1%) |

Percent of control was calculated using the untreated control mean OD600 = 2.00.

Table S4. One-way ANOVA and Tukey's HSD post hoc comparisons for *Streptococcus anginosus* (0% control excluded).

| Concentration | ANOVA F | ANOVA p | Tukey HSD significant contrasts / summary |
|---------------|---------|-----------|---|
| 1% | 813.67 | 2.799e-10 | Allulose vs D-mannose (p = 0.000e+00); Allulose vs Xylitol (p = 0.0002); D-mannose vs Erythritol (p = 0.000e+00); D-mannose vs Xylitol (p = 0.000e+00); Erythritol vs Xylitol (p = 0.0001) |
| 2% | 320.94 | 1.131e-08 | Allulose vs D-mannose (p = 0.000e+00); Allulose vs Erythritol (p = 0.0008); Allulose vs Xylitol (p = 0.0002); D-mannose vs Erythritol (p = 0.000e+00); D-mannose vs Xylitol (p = 0.000e+00) |
| 5% | 165.92 | 1.531e-07 | Allulose vs D-mannose (p = 0.000e+00); Allulose vs Erythritol (p = 0.0004); Allulose vs Xylitol (p = 0.0291); D-mannose vs Erythritol (p = 0.000e+00); D-mannose vs Xylitol (p = 0.000e+00); Erythritol vs Xylitol (p = 0.0265) |
| 10% | 3.43 | 0.0727 | No Tukey-adjusted pairwise differences. |
| 20% | 276.99 | 2.027e-08 | Allulose vs D-mannose (p = 0.000e+00); Allulose vs Erythritol (p = 0.000e+00); Allulose vs Xylitol (p = 0.000e+00) |

Group lettering in the main-text figures was derived from Tukey's HSD comparisons within each concentration.

C. albicans

Table S5. *Candida albicans* endpoint OD600 at 23.5 h (mean \pm SD; n = 3). Values in parentheses are % of the untreated control (0% polyol). The reported values are after 1/10 dilutions to generate ODs within the instrument's working range; the relative values remain the same.

| Treatment | 0% | 1% | 2% | 5% | 10% | 20% |
|---------------------|-----------------------------|-----------------------------|-----------------------------|-----------------------------|----------------------------|----------------------------|
| Control (0% polyol) | 0.951 \pm 0.077 (100%) | — | — | — | — | — |
| Allulose | — | 0.946 \pm 0.056 (99%) | 0.883 \pm 0.002 (93%) | 0.954 \pm 0.050 (100%) | 0.940 \pm 0.069 (99%) | 0.909 \pm 0.008 (96%) |
| D-mannose | — | 0.968 \pm 0.062 (102%) | 0.972 \pm 0.035 (102%) | 0.941 \pm 0.060 (99%) | 0.946 \pm 0.077 (99%) | 0.906 \pm 0.052 (95%) |
| Erythritol | — | 0.838 \pm 0.010 (88%) | 0.932 \pm 0.062 (98%) | 0.888 \pm 0.071 (93%) | 0.845 \pm 0.005 (89%) | 0.912 \pm 0.065 (96%) |
| Xylitol | — | 0.855 \pm 0.016 (90%) | 0.905 \pm 0.046 (95%) | 0.926 \pm 0.061 (97%) | 0.921 \pm 0.062 (97%) | 0.921 \pm 0.073 (97%) |

Percent of control was calculated using the untreated control mean OD600 = 0.951.

Table S6. One-way ANOVA and Tukey's HSD post hoc comparisons for *Candida albicans* (0% control excluded).

| Concentration | ANOVA F | ANOVA p | Tukey HSD significant contrasts / summary |
|---------------|---------|---------|--|
| 1% | 6.87 | 0.0133 | D-mannose vs Erythritol (p = 0.0244); D-mannose vs Xylitol (p = 0.048) |
| 2% | 2.45 | 0.1381 | No Tukey-adjusted pairwise differences. |
| 5% | 0.66 | 0.6001 | No Tukey-adjusted pairwise differences. |
| 10% | 1.79 | 0.2273 | No Tukey-adjusted pairwise differences. |
| 20% | 0.04 | 0.9881 | No Tukey-adjusted pairwise differences. |

Group lettering in the main-text figures was derived from Tukey's HSD comparisons within each concentration.

F. nucleatum

Table S7. *Fusobacterium nucleatum* endpoint OD600 at 25.5 h (mean \pm SD; n = 3). Values in parentheses are % of the untreated control (0% polyol).

| Treatment | 1% | 2% | 5% | 10% | 20% |
|------------|--------------------------|--------------------------|-------------------------|-------------------------|------------------------|
| Allulose | 0.915 \pm 0.188 (85%) | 0.433 \pm 0.159 (40%) | 0.078 \pm 0.037 (7%) | 0.000 \pm 0.000 (0%) | 0.027 \pm 0.023 (3%) |
| D-mannose | 1.577 \pm 0.091 (147%) | 1.427 \pm 0.087 (133%) | 0.054 \pm 0.017 (5%) | 0.000 \pm 0.000 (0%) | 0.000 \pm 0.000 (0%) |
| Erythritol | 1.823 \pm 0.163 (170%) | 1.413 \pm 0.374 (132%) | 0.617 \pm 0.033 (58%) | 0.143 \pm 0.020 (13%) | 0.000 \pm 0.000 (0%) |
| Xylitol | 0.678 \pm 0.027 (63%) | 0.507 \pm 0.135 (47%) | 0.143 \pm 0.025 (13%) | 0.000 \pm 0.000 (0%) | 0.000 \pm 0.000 (0%) |

Percent of control was calculated using the untreated control mean OD600 = 1.073.

Table S8. One-way ANOVA and Tukey's HSD post hoc comparisons for *Fusobacterium nucleatum* (0% control excluded).

| Concentration | ANOVA F | ANOVA p | Tukey HSD significant contrasts / summary |
|---------------|---------|-----------|---|
| 1% | 49.33 | 1.667e-05 | Allulose vs D-mannose (p = 0.0013); Allulose vs Erythritol (p = 0.0001); D-mannose vs Xylitol (p = 0.0002); Erythritol vs Xylitol (p = 0.000e+00) |
| 2% | 18.96 | 0.0005 | Allulose vs D-mannose (p = 0.0024); Allulose vs Erythritol (p = 0.0026); D-mannose vs Xylitol (p = 0.0038); Erythritol vs Xylitol (p = 0.0042) |
| 5% | 250.56 | 3.014e-08 | Allulose vs Erythritol (p = 0.000e+00); D-mannose vs Erythritol (p = 0.000e+00); D-mannose vs Xylitol (p = 0.0232); Erythritol vs Xylitol (p = 0.000e+00) |
| 10% | 153.37 | 2.085e-07 | Allulose vs Erythritol (p = 0.000e+00); D-mannose vs Erythritol (p = 0.000e+00); Erythritol vs Xylitol (p = 0.000e+00) |
| 20% | 4.13 | 0.0481 | Omnibus ANOVA p = 0.048, but no Tukey-adjusted pairwise differences were retained. |

Group lettering in the main-text figures was derived from Tukey's HSD comparisons within each concentration.