|  |  |  |  |  |  |  |  |
| --- | --- | --- | --- | --- | --- | --- | --- |
|  |  |  | Source (mean ± std. error) | | | | |
| Delivery | Sink | Disease | Anus | Cervix | Introitus | Unknown | Vagina |
| C-section | Ear | Control | 0.635 ± 0.31 | 0.022 ± 0.048 | 0.035 ± 0.043 | 0.276 ± 0.285 | 0.031 ± 0.051 |
| T1D | 0.691 ± 0.28 | 0.02 ± 0.03 | 0.039 ± 0.038 | 0.22 ± 0.25 | 0.031 ± 0.032 |
| Stool | Control | 0.839 ± 0.104 | 0.003 ± 0.003 | 0.067 ± 0.033 | 0.046 ± 0.111 | 0.044 ± 0.024 |
| T1D | 0.764 ± 0.252 | 0.003 ± 0.005 | 0.09 ± 0.091 | 0.091 ± 0.209 | 0.052 ± 0.069 |
| Vaginal | Ear | Control | 0.595 ± 0.311 | 0.052 ± 0.092 | 0.09 ± 0.096 | 0.18 ± 0.247 | 0.083 ± 0.105 |
| T1D | 0.832 ± 0.198 | 0.007 ± 0.011 | 0.051 ± 0.076 | 0.08 ± 0.174 | 0.03 ± 0.047 |
| Stool | Control | 0.653 ± 0.317 | 0.006 ± 0.006 | 0.038 ± 0.024 | 0.282 ± 0.331 | 0.021 ± 0.014 |
| T1D | 0.545 ± 0.336 | 0.02 ± 0.062 | 0.053 ± 0.053 | 0.346 ± 0.343 | 0.036 ± 0.042 |

**Supplementary Table X**. Overview of maternal source mean contributions to newborn sinks by disease and delivery method.

|  |  |  |  |  |
| --- | --- | --- | --- | --- |
| **Supplementary file X.** Results from a linear model fit showing significant variable interactions of disease, delivery method, and source model fit contributions. | | | | |
| term | estimate | std.error | statistic | p.value |
| (Intercept) | 0.635 | 0.037 | 17.119 | <0.0001 |
| SourceCervix | -0.613 | 0.052 | -11.678 | <0.0001 |
| SourceVagina | -0.604 | 0.052 | -11.508 | <0.0001 |
| SourceIntroitus | -0.600 | 0.052 | -11.438 | <0.0001 |
| SourceUnknown | -0.359 | 0.052 | -6.839 | <0.0001 |
| SourceUnknown:SinkStool | -0.434 | 0.086 | -5.044 | <0.0001 |
| DeliveryVaginal:SourceUnknown:SinkStool | 0.478 | 0.118 | 4.062 | <0.0001 |
| SinkStool | 0.204 | 0.061 | 3.352 | 0.001 |
| SourceCervix:SinkStool | -0.223 | 0.086 | -2.590 | 0.010 |
| diseaseT1D:DeliveryVaginal | 0.181 | 0.076 | 2.392 | 0.017 |
| SourceVagina:SinkStool | -0.191 | 0.086 | -2.220 | 0.027 |
| diseaseT1D:DeliveryVaginal:SourceVagina | -0.233 | 0.107 | -2.178 | 0.030 |
| diseaseT1D:SourceUnknown:SinkStool | 0.233 | 0.109 | 2.130 | 0.033 |
| diseaseT1D:DeliveryVaginal:SourceCervix | -0.224 | 0.107 | -2.098 | 0.036 |
| diseaseT1D:DeliveryVaginal:SourceIntroitus | -0.224 | 0.107 | -2.091 | 0.037 |
| diseaseT1D:DeliveryVaginal:SourceUnknown | -0.224 | 0.107 | -2.091 | 0.037 |
| SourceIntroitus:SinkStool | -0.172 | 0.086 | -1.996 | 0.046 |
| diseaseT1D:DeliveryVaginal:SinkStool | -0.214 | 0.114 | -1.881 | 0.060 |
| DeliveryVaginal:SinkStool | -0.146 | 0.083 | -1.748 | 0.081 |
| diseaseT1D:DeliveryVaginal:SourceUnknown:SinkStool | 0.274 | 0.161 | 1.709 | 0.088 |
| diseaseT1D:DeliveryVaginal:SourceVagina:SinkStool | 0.273 | 0.161 | 1.699 | 0.090 |
| diseaseT1D:SinkStool | -0.131 | 0.077 | -1.697 | 0.090 |
| diseaseT1D:DeliveryVaginal:SourceCervix:SinkStool | 0.271 | 0.161 | 1.689 | 0.092 |
| diseaseT1D:SourceUnknown | -0.113 | 0.071 | -1.593 | 0.112 |
| diseaseT1D:DeliveryVaginal:SourceIntroitus:SinkStool | 0.249 | 0.161 | 1.554 | 0.121 |
| diseaseT1D:SourceIntroitus:SinkStool | 0.150 | 0.109 | 1.373 | 0.170 |
| diseaseT1D:SourceVagina:SinkStool | 0.140 | 0.109 | 1.280 | 0.201 |
| DeliveryVaginal:SourceIntroitus | 0.095 | 0.075 | 1.269 | 0.205 |
| DeliveryVaginal:SourceVagina | 0.092 | 0.075 | 1.226 | 0.220 |
| diseaseT1D:SourceCervix:SinkStool | 0.133 | 0.109 | 1.216 | 0.224 |
| diseaseT1D | 0.056 | 0.050 | 1.117 | 0.264 |
| DeliveryVaginal:SourceCervix:SinkStool | 0.119 | 0.118 | 1.009 | 0.314 |
| DeliveryVaginal:SourceCervix | 0.070 | 0.075 | 0.928 | 0.354 |
| diseaseT1D:SourceCervix | -0.058 | 0.071 | -0.818 | 0.414 |
| diseaseT1D:SourceVagina | -0.057 | 0.071 | -0.799 | 0.424 |
| DeliveryVaginal | -0.040 | 0.053 | -0.756 | 0.450 |
| DeliveryVaginal:SourceUnknown | -0.056 | 0.075 | -0.749 | 0.454 |
| diseaseT1D:SourceIntroitus | -0.052 | 0.071 | -0.739 | 0.460 |
| DeliveryVaginal:SourceVagina:SinkStool | 0.070 | 0.118 | 0.594 | 0.553 |
| DeliveryVaginal:SourceIntroitus:SinkStool | 0.061 | 0.118 | 0.516 | 0.606 |

**Supplementary Figure X.** Sourcetracker2 derived maternal contributions to neonatal microbiomes by sample type and delivery mode. Results show statistically significant increases in maternal source Anus contributions to the ear microbiome when comparing vaginally delivered neonatal ear microbiomes from type 1 diabetic mothers to the control.

A picture containing diagram

Description automatically generated