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| Supplementary Table 1. Detailed information on 75 SNPs used in the MR analysis of asthma on dental caries. | *p* value | Outcome | 0.0301599 | 0.5716 | 0.1005 | 0.9068 | 0.263 | 0.5592 | 0.2111 | 0.7127 | 0.535601 | 0.4002 | 0.2027 | 0.5118 | 0.9037 | 0.757699 | 0.8755 | 0.7105 | 0.8823 | 0.1562 | 0.8075 | 0.2603 | 0.0167498 | 0.7984 | 0.8184 | 0.9199 | 0.7387 | 0.3602 | 0.3996 |
| Exposure | 1.30 × 10−10 | 9.89 × 10−15 | 3.64 × 10−08 | 4.29 × 10−08 | 1.05 × 10−11 | 3.49 × 10−11 | 4.67 × 10−26 | 1.38 × 10−39 | 4.42 × 10−10 | 3.67 × 10−08 | 2.47 × 10−27 | 5.46 × 10−10 | 2.91 × 10−14 | 7.50 × 10−11 | 7.57 × 10−15 | 3.85 × 10−15 | 2.02 × 10−08 | 2.68 × 10−12 | 2.52 × 10−10 | 7.21 × 10−15 | 4.05 × 10−08 | 1.86 × 10−23 | 1.16 × 10−55 | 7.70 × 10−10 | 1.17 × 10−09 | 3.18 × 10−41 | 2.86 × 10−17 |
| SE | Outcome | 0.0385 | 0.0228 | 0.0223 | 0.0229 | 0.0244 | 0.0255 | 0.0541 | 0.0272 | 0.0233 | 0.0431 | 0.0273 | 0.0237 | 0.0233 | 0.0225 | 0.0246 | 0.0252 | 0.0227 | 0.0235 | 0.0243 | 0.0306 | 0.0278 | 0.0242 | 0.0224 | 0.0227 | 0.0237 | 0.0253 | 0.0311 |
| Exposure | 0.0096 | 0.0066 | 0.0066 | 0.0068 | 0.0073 | 0.0067 | 0.0106 | 0.0075 | 0.007 | 0.0101 | 0.0076 | 0.0073 | 0.0067 | 0.0068 | 0.0072 | 0.0072 | 0.0066 | 0.0067 | 0.0068 | 0.0081 | 0.0072 | 0.0068 | 0.0065 | 0.0066 | 0.0067 | 0.0077 | 0.0079 |
| EAF | Outcome | 0.0915 | 0.4137 | 0.4926 | 0.385 | 0.3033 | 0.2597 | 0.0445 | 0.2171 | 0.6368 | 0.0721 | 0.2127 | 0.332 | 0.3557 | 0.4513 | 0.7096 | 0.2629 | 0.5841 | 0.6563 | 0.6999 | 0.1559 | 0.2038 | 0.6931 | 0.5493 | 0.5911 | 0.3333 | 0.265 | 0.1531 |
| Exposure | 0.1353 | 0.4214 | 0.4633 | 0.4068 | 0.2808 | 0.3987 | 0.1071 | 0.2554 | 0.6828 | 0.1188 | 0.2471 | 0.2748 | 0.3963 | 0.3652 | 0.7089 | 0.298 | 0.5551 | 0.6162 | 0.6433 | 0.1996 | 0.2862 | 0.6416 | 0.5106 | 0.5547 | 0.3875 | 0.2373 | 0.2257 |
| β | Outcome | 0.0835 | 0.0129 | 0.0367 | 0.0027 | −0.0273 | 0.0149 | −0.0676 | −0.01 | 0.0144 | 0.0362 | 0.0348 | −0.0155 | 0.0028 | −0.007 | −0.0039 | −0.0094 | 0.0034 | 0.0333 | 0.0059 | 0.0344 | −0.0665 | −0.0062 | 0.0052 | −0.0023 | −0.0079 | 0.0231 | −0.0262 |
| Exposure | −0.0619 | −0.0513 | −0.0361 | −0.0375 | 0.0497 | −0.0441 | −0.1122 | −0.0989 | 0.0438 | −0.0558 | −0.0825 | −0.0454 | 0.0509 | −0.0444 | 0.0562 | 0.0563 | −0.0368 | 0.0469 | 0.0431 | 0.0634 | −0.0397 | −0.0679 | −0.1026 | 0.0403 | −0.0407 | 0.1035 | −0.0664 |
| EA/OA | Outcome | G/A | A/G | C/T | A/G | T/C | T/C | G/T | A/G | A/G | T/C | A/T | GT/G | T/G | G/A | A/G | T/C | A/G | A/G | G/A | G/C | C/G | A/G | G/A | G/A | A/G | A/G | A/C |
| Exposure | G/A | A/G | C/T | A/G | T/C | T/C | G/T | A/G | A/G | T/C | A/T | GT/G | T/G | G/A | A/G | T/C | A/G | A/G | G/A | G/C | C/G | A/G | G/A | G/A | A/G | A/G | A/C |
| Position | | 198666232 | 47469186 | 8565990 | 64244593 | 68728425 | 167431352 | 57493727 | 242698640 | 1112472 | 198618104 | 11213021 | 35881130 | 33047662 | 20586843 | 6139009 | 27349168 | 135709760 | 141530157 | 8659714 | 28156606 | 134185916 | 81291645 | 38067533 | 65551957 | 84556623 | 67448363 | 38798648 |
| Chromosome | | 1 | 17 | 10 | 6 | 14 | 1 | 12 | 2 | 11 | 1 | 16 | 5 | 3 | 7 | 9 | 16 | 6 | 5 | 1 | 7 | 8 | 8 | 17 | 11 | 15 | 15 | 4 |
| SNP | | rs2296618 | rs2412099 | rs2477923 | rs2800040 | rs28498223 | rs2988277 | rs3024971 | rs34290285 | rs35225972 | rs35320232 | rs35441874 | rs35467801 | rs35570272 | rs35621564 | rs368981 | rs3785356 | rs3827780 | rs413214 | rs4480384 | rs4722758 | rs4736639 | rs4739738 | rs4795401 | rs479844 | rs4842921 | rs56375023 | rs5743618 |

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| *p* value | Outcome | 0.5326 | 0.2256 | 0.1664 | 0.1912 | 0.8227 | 0.7796 | 0.9115 | 0.9137 | 0.1613 | 0.4824 | 0.1036 | 0.41 | 0.3312 | 0.3984 | 0.450199 | 0.9585 | 0.4932 | 0.285 | 0.6627 | 0.06952 | 0.228 | 0.8277 | 0.4833 | 0.6255 | 0.142 | 0.3975 | 0.0744406 | 0.537901 | 0.4008 |
| Exposure | 8.22 × 10−18 | 3.44 × 10−14 | 5.13 × 10−09 | 3.37 × 10−08 | 6.17 × 10−09 | 4.21 × 10−18 | 8.55 × 10−11 | 1.06 × 10−10 | 2.55 × 10−08 | 5.45 × 10−09 | 2.95 × 10−09 | 8.51 × 10−09 | 3.84 × 10−21 | 1.20 × 10−11 | 1.81 × 10−21 | 2.42 × 10−08 | 1.16 × 10−09 | 1.08 × 10−09 | 3.09 × 10−08 | 2.14 × 10−47 | 3.35 × 10−25 | 3.14 × 10−08 | 4.92 × 10−16 | 5.31 × 10−12 | 3.52 × 10−14 | 1.15 × 10−10 | 1.49 × 10−47 | 3.96 × 10−08 | 6.28 × 10−12 |
| SE | Outcome | 0.0235 | 0.0277 | 0.0223 | 0.024 | 0.0239 | 0.0308 | 0.0323 | 0.0232 | 0.0295 | 0.0426 | 0.0268 | 0.0726 | 0.0377 | 0.0256 | 0.0579 | 0.0257 | 0.0305 | 0.0882 | 0.0242 | 0.0243 | 0.0257 | 0.0241 | 0.0232 | 0.0339 | 0.0235 | 0.0229 | 0.0264 | 0.0281 | 0.0792 |
| Exposure | 0.0072 | 0.0098 | 0.0067 | 0.0071 | 0.0071 | 0.0098 | 0.0093 | 0.0066 | 0.0077 | 0.0105 | 0.0084 | 0.0138 | 0.0134 | 0.007 | 0.0153 | 0.0081 | 0.0088 | 0.0177 | 0.0073 | 0.0066 | 0.0068 | 0.0068 | 0.007 | 0.0125 | 0.0079 | 0.0071 | 0.0075 | 0.0091 | 0.0187 |
| EAF | Outcome | 0.3452 | 0.2076 | 0.4859 | 0.3181 | 0.3279 | 0.1546 | 0.1393 | 0.3586 | 0.1703 | 0.0742 | 0.2251 | 0.0257 | 0.0989 | 0.2562 | 0.0398 | 0.7453 | 0.1575 | 0.0169 | 0.6927 | 0.3025 | 0.2518 | 0.3149 | 0.6111 | 0.1268 | 0.3444 | 0.3884 | 0.7551 | 0.8032 | 0.0206 |
| Exposure | 0.2946 | 0.1284 | 0.4108 | 0.3065 | 0.3075 | 0.128 | 0.1425 | 0.4072 | 0.2342 | 0.115 | 0.1932 | 0.0668 | 0.067 | 0.3256 | 0.0482 | 0.7951 | 0.1667 | 0.0355 | 0.726 | 0.4236 | 0.3536 | 0.3585 | 0.6377 | 0.0765 | 0.2186 | 0.3097 | 0.7397 | 0.8458 | 0.032 |
| β | Outcome | 0.0147 | 0.0336 | −0.0308 | −0.0313 | −0.0053 | 0.0086 | 0.0036 | −0.0025 | 0.0414 | 0.0299 | −0.0437 | −0.0598 | −0.0367 | −0.0216 | −0.0437 | 0.0013 | −0.0209 | 0.0943 | 0.0106 | −0.0441 | 0.031 | −0.0052 | −0.0163 | −0.0165 | 0.0345 | −0.0194 | 0.047 | −0.0173 | −0.0666 |
| Exposure | −0.0617 | 0.0743 | −0.0389 | 0.0393 | 0.0413 | −0.0847 | 0.0605 | −0.0429 | 0.0429 | −0.0614 | 0.0498 | 0.0795 | −0.1264 | −0.0473 | 0.1457 | −0.0451 | −0.0535 | 0.1076 | −0.0406 | −0.0954 | −0.0707 | 0.0377 | −0.0569 | 0.0866 | 0.0598 | −0.0455 | 0.1084 | −0.0498 | −0.1288 |
| EA/OA | Outcome | A/G | G/T | G/A | T/C | T/C | T/C | G/C | T/G | A/G | A/G | CT/C | T/C | A/C | A/G | T/C | C/T | A/G | G/A | G/A | A/G | AT/A | T/C | A/G | G/C | G/A | G/A | C/T | G/A | GTAGA/G |
| Exposure | A/G | G/T | G/A | T/C | T/C | T/C | G/C | T/G | A/G | A/G | CT/C | T/C | A/C | A/G | T/C | C/T | A/G | G/A | G/A | A/G | AT/A | T/C | A/G | G/C | G/A | G/A | C/T | G/A | GTAGA/G |
| Position | | 8443803 | 131795310 | 20376018 | 173170618 | 10655623 | 61069988 | 36464631 | 71533238 | 73828903 | 8306727 | 8109663 | 3136091 | 33726578 | 6074082 | 152179152 | 41819960 | 118743286 | 61442619 | 128777719 | 9058671 | 90963614 | 22807473 | 196359310 | 14610309 | 123353432 | 61581764 | 110401872 | 82246749 | 101932851 |
| Chromosome | | 2 | 5 | 7 | 1 | 11 | 15 | 21 | 12 | 17 | 10 | 10 | 19 | 19 | 10 | 1 | 22 | 11 | 18 | 8 | 10 | 6 | 7 | 3 | 5 | 4 | 11 | 5 | 10 | 9 |
| SNP | | rs10178845 | rs10477741 | rs10486391 | rs10912564 | rs11042902 | rs11071559 | rs11088309 | rs11178649 | rs112267124 | rs113981909 | rs11567923 | rs117552144 | rs117710327 | rs11816044 | rs12123821 | rs12165508 | rs12365699 | rs12964116 | rs13277355 | rs1444782 | rs148639908 | rs1608555 | rs1684466 | rs16903574 | rs17454584 | rs174557 | rs1837253 | rs1870140 | rs200491113 |

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| *p* value | Outcome | 0.0503895 | 0.0894396 | 0.523801 | 0.9428 | 0.7112 | 0.2643 | 0.756 | 0.8506 | 0.4548 | 0.673301 | 0.0266397 | 0.5389 | 0.3013 | 0.8039 | 0.4231 | 0.0712804 | 0.00236298 | 0.1697 | 0.2538 | SNPs: single nucleotide polymorphisms; MR: Mendelian randomization; EA: effect allele; OA: other allele; EAF: effect allele frequency. |
| Exposure | 4.51 × 10−13 | 2.56 × 10−53 | 1.83 × 10−08 | 5.96 × 10−10 | 8.21 × 10−10 | 2.48 × 10−17 | 8.81 × 10−09 | 3.99 × 10−08 | 9.54 × 10−38 | 7.35 × 10−10 | 6.54 × 10−11 | 5.80 × 10−30 | 4.04 × 10−16 | 4.65 × 10−08 | 1.85 × 10−08 | 2.37 × 10−21 | 2.11 × 10−48 | 4.16 × 10−08 | 1.25 × 10−56 |
| SE | Outcome | 0.1261 | 0.0306 | 0.0247 | 0.023 | 0.0415 | 0.028 | 0.0235 | 0.0331 | 0.0225 | 0.0325 | 0.0256 | 0.0232 | 0.0233 | 0.0223 | 0.0723 | 0.0239 | 0.024 | 0.0526 | 0.0262 |
| Exposure | 0.0187 | 0.0096 | 0.0076 | 0.0067 | 0.0141 | 0.0091 | 0.0072 | 0.0092 | 0.0065 | 0.0092 | 0.0073 | 0.0085 | 0.0071 | 0.0065 | 0.032 | 0.0095 | 0.0092 | 0.0132 | 0.0076 |
| EAF | Outcome | 0.0079 | 0.1595 | 0.7135 | 0.3783 | 0.0803 | 0.1985 | 0.3479 | 0.1306 | 0.4152 | 0.8644 | 0.2553 | 0.6307 | 0.6417 | 0.5025 | 0.0239 | 0.6598 | 0.4286 | 0.0472 | 0.7621 |
| Exposure | 0.0332 | 0.1367 | 0.7581 | 0.3952 | 0.058 | 0.1543 | 0.2858 | 0.1468 | 0.4768 | 0.8499 | 0.2709 | 0.8179 | 0.7039 | 0.49 | 0.0212 | 0.6282 | 0.5886 | 0.065 | 0.7476 |
| β | Outcome | 0.2467 | −0.0519 | 0.0157 | −0.0016 | 0.0154 | −0.0313 | −0.0073 | 0.0062 | −0.0168 | −0.0137 | 0.0567 | −0.0142 | 0.0241 | −0.0055 | −0.0579 | 0.0432 | 0.0729 | 0.0722 | −0.0299 |
| Exposure | 0.1353 | −0.1478 | 0.043 | −0.0414 | 0.0864 | 0.0768 | 0.0416 | 0.0507 | 0.0838 | 0.0565 | 0.0479 | −0.0963 | 0.0581 | −0.0358 | 0.1802 | −0.0898 | 0.1338 | 0.0725 | −0.1199 |
| EA/OA | Outcome | C/T | A/T | C/T | T/A | G/C | G/A | A/G | T/G | T/G | A/G | G/C | C/A | G/A | C/T | A/G | T/C | C/T | G/C | G/A |
| Exposure | C/T | A/T | C/T | T/A | G/C | G/A | A/G | T/G | T/G | A/G | G/C | C/A | G/A | C/T | A/G | T/C | C/T | G/C | G/A |
| Position | | 152319572 | 102936159 | 228704721 | 176852038 | 156691025 | 110158844 | 154627823 | 173057239 | 76293726 | 94604963 | 128279429 | 131996500 | 100032346 | 23586654 | 29935010 | 32602396 | 32627128 | 74039935 | 6209697 |
| Chromosome | | 1 | 2 | 2 | 3 | 5 | 5 | 6 | 1 | 11 | 12 | 6 | 5 | 13 | 9 | 6 | 6 | 6 | 13 | 9 |
| SNP | | rs61816766 | rs72823641 | rs7423358 | rs7626218 | rs76493820 | rs7734635 | rs7770794 | rs78556180 | rs7936312 | rs7961712 | rs802731 | rs848 | rs912131 | rs919826 | rs9260752 | rs9272226 | rs9273386 | rs981625 | rs992969 |

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| Supplementary Table 2. Detailed information on 10 SNPs used in the MR analysis of dental caries on asthma. | *p* value | Outcome | 0.998602 | 0.886934 | 0.891745 | 0.995666 | 0.681723 | 0.307892 | 0.22949 | 0.759646 | 0.0229953 | 0.00091622 | SNPs: single nucleotide polymorphisms; MR: Mendelian randomization; EA: effect allele; OA: other allele; EAF: effect allele frequency. |
| Exposure | 1.92 × 10−06 | 2.91 × 10−06 | 3.22 × 10−06 | 2.10 × 10−06 | 2.37 × 10−06 | 2.00 × 10−06 | 4.59 × 10−06 | 2.25 × 10−06 | 1.51 × 10−06 | 1.44 × 10−06 |
| SE | Outcome | 0.0199253 | 0.0171342 | 0.00673392 | 0.00657395 | 0.0105658 | 0.0153174 | 0.00752586 | 0.0115204 | 0.015268 | 0.0131402 |
| Exposure | 0.0816 | 0.0598 | 0.0238 | 0.0225 | 0.0342 | 0.052 | 0.0269 | 0.0375 | 0.0589 | 0.0321 |
| EAF | Outcome | 0.0284841 | 0.0379422 | 0.401196 | 0.444573 | 0.107245 | 0.0496296 | 0.251764 | 0.0895332 | 0.0474289 | 0.827834 |
| Exposure | 0.02039 | 0.03682 | 0.3364 | 0.4316 | 0.1231 | 0.04922 | 0.2198 | 0.1007 | 0.03835 | 0.8495 |
| β | Outcome | −3.49 × 10−05 | 0.00243623 | 0.000916464 | −3.57 × 10−05 | −0.00433317 | −0.0156184 | −0.00904364 | 0.00352461 | 0.0347121 | 0.0435607 |
| Exposure | 0.3884 | 0.2797 | 0.1107 | −0.1069 | −0.1613 | 0.2471 | 0.1233 | 0.1771 | 0.2833 | 0.1546 |
| EA/OA | Outcome | A/C | C/A | G/T | C/A | T/G | C/G | T/G | A/G | C/T | C/G |
| Exposure | A/C | C/A | G/T | C/A | T/G | C/G | T/G | A/G | C/T | C/G |
| Position | | 32986008 | 48061712 | 69168941 | 42702875 | 148003783 | 66497369 | 95792163 | 1824460 | 111193372 | 32626786 |
| Chromosome | | 18 | 16 | 1 | 20 | 4 | 3 | 12 | 11 | 7 | 6 |
| SNP | | rs112406774 | rs11643372 | rs12405430 | rs12479905 | rs13128426 | rs143941193 | rs282325 | rs72850984 | rs73203040 | rs9273375 |