## Supplementary Information

## Manipulation of food related risk in Study 1



Figure SI 1: Translation: "You will now be shown 12 food items, including chocolate bars, muesli bars and crackers. Some of these food items are produced using biotechnology, while others are produced using conventional methods. Each product is shown without packaging. Biotechnology foods differ from conventional foods in several respects. The table below lists the most important benefits and disadvantages of biotechnology foods. Upper left: Benefits: A higher level of satiety is achieved than from equivalent conventional foods. Lower left: Disadvantages: 1 out of 500 may be subjected to a temporary allergic reaction. Upper right: Some degree of satiety is achieved. Lower right: No risk of allergic reactions.

## Manipulation of non -food related risk in Study 1



Figure SI 2: Translation: "You will now be shown 12 products, including toothpaste, mouthwash and hand soap. Some of these products are produced using nanotechnology, while others are produced using conventional methods. Each product is shown without packaging. Products manufactured using nanotechnology differ from conventional products in several respects. The table below lists the most important benefits and disadvantages of nanotech products. Upper left: Benefits: A higher level of cleanness is achieved than with the similar conventional products. Lower left: Disadvantages: 1 out of 500 may be subjected to a temporary allergic reaction. Upper right: Some degree of cleanness is achieved. Lower right: No risk of allergic reactions.

Table SI 1

|  | Root Mean Square Error |  |
| :--- | :--- | ---: |
| $\quad$ Models | Training | Test |
| WTP $=$ Glucose $+(1 \mid$ ID $)+(1 \mid$ prodID $)$ | 3.387036 | 4.091270 |
| WTP $=$ Glucose + Risk $+(1 \mid$ ID $)+(1 \mid$ prodID $)$ | 3.369168 | 4.091486 |
| WTP $=$ Risk $+(1 \mid$ ID $)+(1 \mid$ prodID $)$ | 3.369165 | 4.091726 |
| WTP $=(1 \mid$ ID $)+(1 \mid$ prodID $)$ | 3.387033 | 4.092173 |
| WTP $=$ Glucose + Food $+(1 \mid$ ID $)+(1 \mid$ prodID $)$ | 3.387200 | 4.092909 |
| WTP $=$ Glucose + Risk + Food $+(1 \mid$ ID $)+(1 \mid$ prodID $)$ | 3.369328 | 4.093077 |
| WTP $=$ Risk + Food $+(1 \mid$ ID $)+(1 \mid$ prodID $)$ | 3.369325 | 4.093328 |
| WTP $=$ Food $+(1 \mid$ ID $)+(1 \mid$ prodID $)$ | 3.387197 | 4.093824 |
| WTP $=$ Glucose*Risk $+(1 \mid$ ID $)+(1 \mid$ prodID $)$ | 3.369135 | 4.095623 |
| WTP $=$ Glucose*Food $+(1 \mid$ ID $)+(1 \mid$ prodID $)$ | 3.386356 | 4.099073 |
| WTP $=$ Glucose*Risk*Food $+(1 \mid$ ID $)+(1 \mid$ prodID $)$ | 3.367640 | 4.105291 |
| WTP $=$ Glucose + Food $+(1 \mid$ ID $)$ | 3.574428 | 4.241667 |
| WTP $=$ Food $+(1 \mid$ ID $)$ | 3.574424 | 4.241960 |
| WTP $=$ Risk + Food $+(1 \mid$ ID $)$ | 3.558398 | 4.242685 |
| WTP $=$ Glucose + Risk + Food $+(1 \mid$ ID $)$ | 3.558401 | 4.242911 |
| WTP $=$ Glucose*Food $+(1 \mid$ ID $)$ | 3.573629 | 4.248194 |
| WTP $=$ Glucose $+(1 \mid$ ID $)$ | 3.619023 | 4.251798 |
| WTP $=(1 \mid I D)$ | 3.619019 | 4.252021 |
| WTP $=$ Risk $+(1 \mid$ ID $)$ | 3.603189 | 4.253281 |
| WTP $=$ Glucose + Risk $+(1 \mid$ ID $)$ | 3.603193 | 4.253650 |
| WTP $=$ Glucose*Risk*Food $+(1 \mid$ ID $)$ | 3.556905 | 4.256297 |
| WTP $=$ Glucose*Risk $+(1 \mid$ ID $)$ | 3.603125 | 4.258555 |

Table SI 2
Full model of treatment and conditions effect on Willingness to pay

|  | WTP |  |  |
| :--- | :---: | :---: | :---: |
| Predictors | Estimates | $C I$ | $p$ |
| (Intercept) | 7.60 | $6.56-8.64$ | $<\mathbf{0 . 0 0 1}$ |
| Glucose | -0.89 | $-2.06-0.27$ | 0.131 |
| Risk | 0.59 | $0.04-1.13$ | $\mathbf{0 . 0 3 5}$ |
| Food | -1.37 | $-2.43--0.30$ | $\mathbf{0 . 0 1 2}$ |
| Glucose * Risk | -0.07 | $-0.84-0.71$ | 0.867 |
| Glucose * Food | 0.20 | $-0.57-0.98$ | 0.608 |
| Risk * Food | 0.19 | $-0.58-0.96$ | 0.633 |
| Glucose * Risk * Food | 0.18 | $-0.92-1.28$ | 0.748 |
| Random Effects |  |  |  |
| $\sigma^{2}$ | 11.94 |  |  |
| $\tau_{00 \text { ID }}$ | 6.95 |  |  |
| $\tau_{00}$ prodiD | 1.31 |  |  |
| ICC $^{\mathrm{N}} \mathrm{ID}$ | 0.41 |  |  |
| $\mathrm{~N}_{\text {prodID }}$ | 102 |  |  |
| Observations | 24 |  |  |
| Marginal R $^{2}$ / Conditional R ${ }^{2}$ | $0.029 / 0.426$ |  |  |

Table SI2 reports the full model of the different conditions effect on willingness to pay.

Table SI 3
Cross Validation for study 2 with participants with high blood glucose for placebo excluded

| Models | Brier Score |  |
| :---: | :---: | :---: |
|  | Training | Test |
| Risk $=$ GlucoGroup $+(1 \mid \mathrm{ID})+(1 \mid \mathrm{GambleNr})$ | 0.21821 | 0.24829 |
| Risk $=$ GlucoGroup*Food + (1\|ID) $+(1 \mid$ GambleNr $)$ | 0.21814 | 0.24833 |
| Risk $=$ GlucoGroup + Food $+(1 \mid$ ID $)+(1 \mid \mathrm{GambleNr})$ | 0.21821 | 0.24834 |
| Risk $=(1 \mid \mathrm{ID})+(1 \mid \mathrm{GambleNr})$ | 0.21821 | 0.24836 |
| Risk $=$ Food $+(1 \mid$ ID $)+(1 \mid \mathrm{GambleNr})$ | 0.21821 | 0.24841 |
| Risk $=$ GlucoMeasure $+(1 \mid \mathrm{ID})+(1 \mid \mathrm{GambleNr})$ | 0.21821 | 0.24849 |
| Risk $=$ GlucoMeasure + Food $+(1 \mid \mathrm{ID})+(1 \mid \mathrm{GambleNr})$ | 0.21821 | 0.24854 |
| Risk $=$ GlucoMeasure *Food $+(1 \mid$ ID $)+(1 \mid$ GambleNr $)$ | 0.21821 | 0.24861 |
| Risk $=$ GlucoDiff $+(1 \mid$ ID $)+(1 \mid \mathrm{GambleNr})$ | 0.21821 | 0.24862 |
| Risk $=$ GlucoDiff + Food $+(1 \mid$ ID $)+(1 \mid \mathrm{GambleNr})$ | 0.21821 | 0.24867 |
| Risk $=$ GlucoDiff *Food $+(1 \mid$ ID $)+(1 \mid \mathrm{GambleNr})$ | 0.21817 | 0.24871 |
| Risk $=$ GlucoGroup + (1\|ID) | 0.22147 | 0.24986 |
| Risk $=$ GlucoGroup*Food+ (1\|ID) | 0.22141 | 0.24991 |
| Risk $=$ GlucoGroup + Food + (1\|ID) | 0.22147 | 0.24991 |
| Risk $=(1 \mid$ ID $)$ | 0.22147 | 0.24994 |
| Risk $=$ Food + (1\|ID) | 0.22147 | 0.24999 |
| Risk $=$ GlucoMeasure + (1\|ID) | 0.22147 | 0.25007 |
| Risk $=$ GlucoMeasure + Food + (1\|ID) | 0.22147 | 0.25012 |
| Risk $=$ GlucoMeasure *Food + (1]ID) | 0.22146 | 0.25019 |
| Risk $=$ GlucoDiff + (1\|ID) | 0.22147 | 0.25020 |
| Risk $=$ GlucoDiff +Food + (1\|ID) | 0.22147 | 0.25025 |
| Risk = GlucoDiff *Food +(1\|ID) | 0.22143 | 0.25029 |

Table SI 4
Cross Validation for study 2 with participants with high blood glucose for placebo included in glucose group

| Models | Brier Score |  |
| :---: | :---: | :---: |
|  | Training | Test |
| Risk $=$ GlucoMeasure + (1\|ID)+ (1|GambleNr) | 0.21868 | 0.24828 |
| Risk $=$ GlucoMeasure + Food $+(1 \mid$ ID $)+(1 \mid \mathrm{GambleNr})$ | 0.21868 | 0.24832 |
| Risk $=$ GlucoGroup $+(1 \mid$ ID $)+(1 \mid \mathrm{GambleNr})$ | 0.21868 | 0.24833 |
| Risk $=$ GlucoGroup+Food + (1\|ID) + (1|GambleNr) | 0.21868 | 0.24837 |
| Risk $=$ GlucoMeasure *Food $+(1 \mid \mathrm{ID})+(1 \mid \mathrm{GambleNr})$ | 0.21868 | 0.24838 |
| Risk $=$ GlucoGroup*Food + (1\|ID) + (1|GambleNr) | 0.21865 | 0.24839 |
| Risk $=(1 \mid \mathrm{ID})+(1 \mid \mathrm{GambleNr})$ | 0.21868 | 0.24840 |
| Risk $=$ Food $+(1 \mid$ ID $)+(1 \mid \mathrm{GambleNr})$ | 0.21867 | 0.24844 |
| Risk $=$ GlucoDiff $+(1 \mid \mathrm{ID})+(1 \mid \mathrm{GambleNr})$ | 0.21868 | 0.24863 |
| Risk $=$ GlucoDiff + Food $+(1 \mid$ ID $)+(1 \mid \mathrm{GambleNr})$ | 0.21867 | 0.24867 |
| Risk $=$ GlucoDiff*Food $+(1 \mid$ ID $)+(1 \mid \mathrm{GambleNr})$ | 0.21863 | 0.24869 |
| Risk $=$ GlucoMeasure + (1\|ID) | 0.22197 | 0.24996 |
| Risk $=$ GlucoMeasure + Food + (1\|ID) | 0.22196 | 0.25000 |
| Risk $=$ GlucoGroup + (1]ID) | 0.22197 | 0.25001 |
| Risk $=$ GlucoGroup + Food + (1\|ID) | 0.22196 | 0.25005 |
| Risk $=$ GlucoMeasure *Food +(1\|ID) | 0.22196 | 0.25006 |
| Risk $=$ GlucoGroup*Food + (1\|ID) | 0.22193 | 0.25007 |
| Risk $=(1 \mid$ ID $)$ | 0.22196 | 0.25008 |
| Risk $=$ Food + (1\|ID) | 0.22196 | 0.25012 |
| Risk $=$ GlucoDiff + (1\|ID) | 0.22196 | 0.25031 |
| Risk $=$ GlucoDiff+Food + (1\|ID) | 0.22196 | 0.25035 |
| Risk = GlucoDiff*Food +(1\|ID) | 0.22191 | 0.25037 |

Table SI 5
Full model of treatment and conditions effect on risky choice. First model is with the cleaned data. Second model is with participants with a blood glucose level higher than $5.5 \mathrm{mmol} / \mathrm{l}$ included in the treatment condition

| Predictors | risk |  |  | risk |  |  |
| :---: | :---: | :---: | :---: | :---: | :---: | :---: |
|  | Odds <br> Ratios | CI | $p$ | Odds <br> Ratios | CI | $p$ |
| (Intercept) | 1.18 | 0.97-1.45 | 0.101 | 1.18 | 0.97-1.45 | 0.099 |
| GlucoGroup | 0.87 | 0.67-1.12 | 0.282 | 0.84 | 0.65-1.07 | 0.155 |
| Food | 1.09 | 0.98-1.22 | 0.125 | 1.09 | 0.98-1.22 | 0.125 |
| GlucoGroup * | 0.87 | 0.75-1.01 | 0.069 | 0.90 | 0.77-1.04 | 0.142 |
| Food |  |  |  |  |  |  |
| Random Effects |  |  |  |  |  |  |
| $\sigma^{2}$ | 3.29 |  |  | 3.29 |  |  |
| $\tau_{00}$ | 0.53 ID |  |  | 0.52 ID |  |  |
|  | 0.05 GambleNr |  |  | 0.05 GambleNr |  |  |
| ICC | 0.15 |  |  | 0.15 |  |  |
| N | 150 ID |  |  | 162 ID |  |  |
|  | 41 GambleNr |  |  | 41 GambleNr |  |  |
| Observations | 12300 |  |  | 13284 |  |  |
| Marginal $\mathrm{R}^{2}$ / Conditional $\mathrm{R}^{2}$ | 0.003 / 0.154 |  |  | 0.004 / 0.152 |  |  |

Table SI5 shows the full model for Study 2. The first column of effects are with the cleaned data whereas the last one is the robustness check where high level blood glucose individuals are moved to the treatment condition. This inclusion of the 12 individuals that were deleted from the first analysis does not change the result in any major way.

Table SI 6
Wilke questionnaire factor loadings

| Latent Factor | $B$ | SE | $\rho$ | $\beta$ |
| :---: | :---: | :---: | :---: | :---: |
| Betweengroup competition |  |  |  |  |
| Sitting in the section for fans of the opposing team with a group of friends while wearing your team's colors. | 0.429 | 0.167 | 0.010 | 0.224 |
| Adamantly defending the honor of your local team against a fan from a different sporting team, even if it may cause a fight. | 0.618 | 0.175 | 0.000 | 0.350 |
| Starting a rivalry with students from another school in one of your extracurricular activities | 0.691 | 0.177 | 0.000 | 0.413 |
| Withingroup competition |  |  |  |  |
| Trying to take a leadership role in any peer group you join. | 0.799 | 0.161 | 0.000 | 0.498 |
| Arguing with members of a group project over what should be done. | 0.373 | 0.148 | 0.012 | 0.248 |
| Attempting to influence people in your social group to advance your own agenda. | 0.976 | 0.186 | 0.000 | 0.540 |
| Status power |  |  |  |  |
| Blackmailing your opponent to win an election. | 0.984 | 0.134 | 0.000 | 0.652 |
| Driving too fast to appear strong and in control to your peers. | 0.470 | 0.137 | 0.001 | 0.306 |
| Telling lies to the leader about a teammate to appear more trustworthy than the other person (i.e., to get ahead). | 0.628 | 0.103 | 0.000 | 0.528 |
| Environmental exploration |  |  |  |  |
| Swimming far out from shore to reach a diving platform. | 1.171 | 0.179 | 0.000 | 0.568 |
| Hiking on a mountain trail with a beautiful view but with a high chance of a landslide. | 1.293 | 0.164 | 0.000 | 0.693 |
| Going on an expedition into a deep forest where there will be no one else around. | 1.407 | 0.174 | 0.000 | 0.711 |
| Food selection |  |  |  |  |
| Planting your own garden to grow your own fruit and vegetables. | 0.770 | 0.152 | 0.000 | 0.448 |
| Only eating meat from a local organic farm. | 1.113 | 0.180 | 0.000 | 0.566 |
| Significantly increasing your weekly food bill to buy healthy organic food. | 1.534 | 0.183 | 0.000 | 0.876 |
| Food acquisition |  |  |  |  |
| Not boiling or filtering water from a questionable source before drinking it. | 0.540 | 0.220 | 0.014 | 0.309 |
| Eating at a restaurant where your friend got food poisoning. | 0.444 | 0.207 | 0.032 | 0.244 |
| Eating a piece of food that has fallen on the floor | 1.428 | 0.459 | 0.002 | 0.810 |
| Parent offspring conflict |  |  |  |  |
| Talking your parents into giving you weekly allowance money. | 1.263 | 0.163 | 0.000 | 0.721 |
| Bugging your parents for money to go out with friends until they finally give in. | 0.826 | 0.134 | 0.000 | 0.558 |
| Asking your parents to get their old car when they get a new one (instead of giving it to your siblings). | 0.977 | 0.173 | 0.000 | 0.511 |
| Kinship |  |  |  |  |
| Risking your life to drag your parents from a burning building. | 0.450 | 0.127 | 0.000 | 0.365 |
| Staying up all night to help your sibling with a difficult school project. | 0.304 | 0.131 | 0.020 | 0.233 |
| Donating a kidney to your sibling. | 1.118 | 0.221 | 0.000 | 0.731 |
| Mate attraction |  |  |  |  |
| Taking part in sexual acts that you may not usually do to look more sexually appealing to the opposite sex. | 0.621 | 0.165 | 0.000 | 0.342 |
| Casually dating more than one person at a time. | 1.324 | 0.179 | 0.000 | 0.654 |


| Having a consistent sexual partner with whom you are not <br> romantically involved. <br> Mate retention | 1.446 | 0.182 | 0.000 | 0.712 |
| :--- | :--- | :--- | :--- | :--- |
| Not putting in the effort to fulfil the requests of your significant <br> other, such as remembering to call them when they ask you to. | 0.621 | 0.149 | 0.000 | 0.376 |
| Dumping the person you have been seeing when they mention <br> commitment. | 0.862 | 0.135 | 0.000 | 0.577 |
| Spending the night with an attractive person while vacationing <br> without your significant other. | 0.856 | 0.145 | 0.000 | 0.530 |

Note: $\mathrm{B}=$ Unstandardized coefficients, $S E=$ standard error, $\rho=p$-value, $\beta=$ standardized coefficients

