|  |  |  |
| --- | --- | --- |
| **Characteristic** | **Variant of Rs738409** | **p Value** |
| **CC** | **CG** | **GG** |
| rs738409 (%) | 4865 (60.4%) | 2798 (34.7%) | 393 (4.9%) |  |
| Age (years)2 adj for sex | 50.9 (15.8) | 50.4 (16.0) | 51.3 (15.5) | 0.328 |
| Female sex (%)1 adj for age | 2457 (50.5%) | 1461 (52.2%) | 216 (55.0%) | 0.123 |
| Body Mass Index (kg/m2)\* | 28.3 (28.13, 28.47) | 28.24 (28.03, 28.46) | 28.25 (27.76, 28.74) | 0.887 |
| Alcohol Consumption (g/d)\* | 11.8 (11.2, 12.3) | 11.9 (11.2, 12.5) | 10.7 (9.3, 12.1) | 0.298 |
| Alanine Transaminase (µmol ∙ sl−1)\* | 0.491 (0.480, 0.501) | 0.532 (0.517, 0.547) | 0.607 (0.567, 0.646) | < 0.001 |
| Aspartate Transaminase (µmol ∙ sl−1)\* | 0.349 (0.343, 0.356) | 0.372 (0.362, 0.383) | 0.419 (0.390, 0.447) | < 0.001 |

Age is given as marginal mean adjusted for sex with 50% women (standard deviation); Rs738409 is given as numbers (%); Sex is given as marginal mean adjusted for age; Body mass index, Liver enzymes and alcohol consumption are given as marignal means fixed at an age of 50 years and 50% women (95% confidence interval); p values refer to a combined test over all three genotypes.

**Table 1:** Characteristics of the study population.

|  |  |  |  |  |
| --- | --- | --- | --- | --- |
|  | **Coefficient** | **p** | **95% Confidence** | **Interval** |
| Men and women (N = 8056, R2 = 0.167) |
| rs738409 |
| CC | Reference |  |  |  |
| GC | 0.0471 | < 0.001 | 0.0318 | 0.0625 |
| GG | 0.1323 | < 0.001 | 0.0927 | 0.1718 |
| BMI (kg/m2; Polynomial: BMI-1) | -1.075 | < 0.001 | -1.195 | -0.9551 |
| Age (Years; Polynomial: age3) | -0.0004 | < 0.001 | -0.0004 | -0.0003 |
| Sex (Female) | -0.1776 | < 0.001 | -0.1906 | -0.1647 |
| rs738409 x BMI |
| CC | Reference |  |  |  |
| GC | -0.3663 | < 0.001 | -0.5661 | -0.1665 |
| GG | -1.1166 | < 0.001 | -1.6412 | -0.5921 |
| Men only (N = 3914, R2 = 0.070) |
| rs738409 |
| CC | Reference |  |  |  |
| GC | 0.0613 | < 0.001 | 0.0359 | 0.0867 |
| GG | 0.1702 | < 0.001 | 0.1035 | 0.2369 |
| Alcohol Consumption (g/day) | 0.0019 | < 0.001 | 0.0011 | 0.0027 |
| Age (years) | -0.0005 | < 0.001 | -0.0006 | -0.0004 |
| rs738409 x alcohol |
| CC | Reference |  |  |  |
| GC | 0.001 | 0.196 | -0.0005 | 0.0025 |
| GG | 0.0031 | 0.193 | -0.0016 | 0.0077 |
| Women only (N= 4119, R2 = 0.030) |
| rs738409 |
| CC | Reference |  |  |  |
| GC | 0.0145 | 0.053 | -0.0016 | 0.0291 |
| GG | 0.0693 | < 0.001 | 0.0304 | 0.1083 |
| Alcohol Consumption (g/day) | 0.0008 | 0.46 | -0.0013 | 0.003 |
| Age (years; polynomial: age-0.5) | -0.4097 | < 0.001 | -0.485 | -0.3344 |
| rs738409 x alcohol |
| CC | Reference |  |  |  |
| GC | -0.0013 | 0.357 | -0.004 | 0.0014 |
| GG | -0.0099 | 0.184 | -0.0245 | 0.0047 |

**Table 2:** Results from regression with ALT as outcome and interaction between body mass index/alcohol consumption and rs738409.

|  |  |  |  |  |
| --- | --- | --- | --- | --- |
|  | **Coefficient** | **p** | **95% Confidence** | **Interval** |
| Men only (N = 3922, R2 = 0.032) |
| rs738409 |
| CC | Reference |  |  |  |
| GC | 0.0404 | < 0.001 | 0.0221 | 0.0587 |
| GG | 0.0878 | < 0.001 | 0.044 | 0.1317 |
| BMI (kg/m2) | 0.0047 | < 0.001 | 0.0027 | 0.0067 |
| Age (years; Polynomial 1: age0.5) | 0.6491 | < 0.001 | 0.446 | 0.8522 |
| Age (years; Polynomial 2: age) | -0.1579 | < 0.001 | -0.2039 | -0.1119 |
| rs738409 x BMI |
| CC | Reference |  |  |  |
| GC | 0.0006 | 0.737 | -0.003 | 0.0043 |
| GG | 0.0135 | 0.197 | -0.007 | 0.034 |
| Women only (N = 4134, R2 = 0.048) |
| rs738409 |
| CC | Reference |  |  |  |
| GC | 0.0063 | 0.17 | -0.0027 | 0.0153 |
| GG | 0.051 | 0.003 | 0.0173 | 0.0847 |
| BMI (kg/m2) | 0.0007 | 0.29 | -0.0006 | 0.0019 |
| Age (years; Polynomial: age3) | 0.0013 | < 0.001 | 0.001 | 0.0016 |
| rs738409 x BMI |
| CC | Reference |  |  |  |
| GC | 0.0027 | 0.006 | 0.0008 | 0.0046 |
| GG | 0.0118 | 0.001 | 0.0046 | 0.0191 |

**Table 3:** Results from regression with AST as outcome and interaction between body mass index and rs738409.

|  |  |  |  |  |
| --- | --- | --- | --- | --- |
|  | **Coefficient** | **p** | **95% Confidence** | **Interval** |
| **Men only (N = 3914, R2 = 0.050)** |
| rs738409 |
| CC | Reference |  |  |  |
| GC | 0.0375 | < 0.001 | 0.0196 | 0.0554 |
| GG | 0.0968 | 0.001 | 0.0401 | 0.1534 |
| Alcohol consumption (g/day) | 0.0023 | < 0.001 | 0.0017 | 0.0028 |
| Age (years) | -0.0002 | 0.289 | -0.0007 | 0.0002 |
| rs738409 x alcohol |
| CC | Reference |  |  |  |
| GC | 0.0012 | 0.048 | 0.00001 | 0.0024 |
| GG | 0.0027 | 0.386 | -0.0034 | 0.0089 |
| Women only (N = 4107, R2 = 0.043) |
| rs738409 |
| CC | Reference |  |  |  |
| GC | 0.0081 | 0.08 | -0.001 | 0.0171 |
| GG | 0.0586 | 0.002 | 0.0207 | 0.0966 |
| Alcohol Consumption (g/day, Polynomial: Alcohol3) | 0.0017 | 0.086 | -0.0002 | 0.0036 |
| Age (Years) | 0.0016 | 0 | 0.0014 | 0.0019 |
| rs738409 x alcohol |
| CC | Reference |  |  |  |
| GC | -0.001 | 0.338 | -0.0029 | 0.001 |
| GG | -0.013 | 0.121 | -0.0293 | 0.0034 |

**Table 4:** Results from regression with AST as outcome and interaction between alcohol consumption and rs738409.