**Table S1**. Relationship between thyroid hormone sensitivity indices and prediabetes and diabetes.

**Table S2**. Relationship between gender-specific thyroid hormone sensitivity indices and prediabetes and diabetes.

**Table S3**. Relationship between thyroid hormone sensitivity index and prediabetes and diabetes in different ages and sexes.

**Table S1 Relationship between thyroid hormone sensitivity indices and prediabetes and diabetes**

|  |  |  |
| --- | --- | --- |
| **Variables** | **Prediabetes** | **Diabetes** |
| **OR(95% CI)1** | **OR(95% CI)2** | **OR(95% CI)1** | **OR(95% CI)2** |
| **TSHI** | **0.87(0.86-0.88)\*\*** | **0.86(0.85-0.87)\*\*** | **0.87(0.86-0.88)\*\*** | **0.83(0.83-0.84)\*\*** |
| ≤1.50 | Reference | Reference | Reference | Reference |
| (1.50-2.49) | 0.61(0.60-0.63)\*\* | 0.61(0.59-0.63)\*\* | 0.52(0.50-0.53)\*\* | 0.51(0.50-0.53)\*\* |
| ≥2.49 | 0.66(0.64-0.68)\*\* | 0.64(0.62-0.66)\*\* | 0.64(0.62-0.66)\*\* | 0.62(0.60-0.63)\*\* |
| **TT4RI** | **0.99(0.99-0.99)\*\*** | **0.99(0.99-0.99)\*\*** | **0.99(0.99-0.99)\*\*** | **0.99(0.99-0.99)\*\*** |
| ≤9.01 | Reference | Reference | Reference | Reference |
| (9.01-25.58) | 0.53(0.52-0.55)\*\* | 0.53(0.52-0.55)\*\* | 0.45(0.44-0.46)\*\* | 0.45(0.45-0.46)\*\* |
| ≥25.58 | 0.59(0.57-0.61)\*\* | 0.57(0.56-0.59)\*\* | 0.52(0.51-0.53)\*\* | 0.50(0.49-0.52)\*\* |
| **TFQI** | **0.72(0.70-0.74)\*\*** | **0.69(0.67-0.71)\*\*** | **0.71(0.70-0.74)\*\*** | **0.68(0.66-0.70)\*\*** |
| ≤-0.23 | Reference | Reference | Reference | Reference |
| (-0.23-0.12) | 0.80(0.77-0.82)\*\* | 0.79(0.77-0.81)\*\* | 0.74(0.72-0.76)\*\* | 0.73(0.71-0.76)\*\* |
| ≥0.12 | 0.76(0.74-0.78)\*\* | 0.73(0.71-0.75)\*\* | 0.77(0.75-0.79)\*\* | 0.73(0.71-0.75)\*\* |
| **PTFQI** | **0.63(0.61-0.65)\*\*** | **0.60(0.59-0.62)\*\*** | **0.57(0.55-0.59)\*\*** | **0.55(0.53-0.56)\*\*** |
| ≤-0.13 | Reference | Reference | Reference | Reference |
| (-0.13-0.24) | 0.65(0.64-0.67)\*\* | 0.65(0.63-0.67)\*\* | 0.57(0.55-0.58)\*\* | 0.62(0.60-0.63)\*\* |
| ≥0.24 | 0.67(0.65-0.69)\*\* | 0.65(0.63-0.67)\*\* | 0.64(0.62-0.66)\*\* | 0.56(0.55-0.58)\*\* |
| **FT3/FT4** | **1.22(1.21-1.24)\*\*** | **1.23(1.22-1.24)\*\*** | **1.28(1.27-1.29)\*\*** | **1.28(1.27-1.30)\*\*** |
| ≤0.29 | Reference | Reference | Reference | Reference |
| (0.29-0.41) | 0.74(0.72-0.76)\*\* | 0.75(0.73-0.77)\*\* | 0.42(0.40-0.43)\*\* | 0.43(0.41-0.44)\*\* |
| ≥0.41 | 1.33(1.29-1.37)\*\* | 1.36(1.32-1.40)\*\* | 1.14(1.11-1.17)\*\* | 1.17(1.14-1.20)\*\* |

1Model 1: adjusted for age and sex;

2Model 2: adjusted for age, sex, hypertension, hyperlipidemia, smoking, drinking.

Compared with NGT,\*\* *P* < 0.001

**Table S2 Relationship between sex-specific thyroid hormone sensitivity indices and prediabetes and diabetes**

|  |  |  |  |
| --- | --- | --- | --- |
| **Sex** | **Variables** | **Prediabetes** | **Diabetes** |
| **OR(95% CI)1** | **OR(95% CI)2** | **OR(95% CI)1** | **OR(95% CI)2** |
| Male | TSHI | 0.90(0.89-0.92)**\*\*** | 0.89(0.88-0.91)**\*\*** | 0.88(0.86-0.89)**\*\*** | 0.86(0.85-0.88)**\*\*** |
| TT4RI | 0.99(0.99-0.99)\*\* | 0.99(0.99-0.99)\*\* | 0.99(0.99-0.99)\*\* | 0.99(0.99-0.99)\*\* |
| TFQI | 0.79(0.76-0.82)**\*\*** | 0.76(0.73-0.79)**\*\*** | 0.80(0.77-0.83)**\*\*** | 0.76(0.73-0.79)**\*\*** |
| PTFQI | 0.70(0.67-0.73)**\*\*** | 0.68(0.65-0.71)**\*\*** | 0.64(0.61-0.66)**\*\*** | 0.61(0.58-0.64)**\*\*** |
| FT3/FT4 | 1.18(1.16-1.20)**\*\*** | 1.19(1.17-1.21)**\*\*** | 1.24(1.23-1.26)**\*\*** | 1.25(1.23-1.27)**\*\*** |
| Female | TSHI | 0.84(0.83-0.85)**\*\*** | 0.83(0.82-0.84)**\*\*** | 0.82(0.81-0.83)**\*\*** | 0.81(0.80-0.82)**\*\*** |
| TT4RI | 0.99(0.99-0.99)\*\* | 0.99(0.99-0.99)\*\* | 0.99(0.99-0.99)\*\* | 0.99(0.99-0.99)\*\* |
| TFQI | 0.65(0.62-0.68)**\*\*** | 0.62(0.59-0.65)**\*\*** | 0.64(0.61-0.66)**\*\*** | 0.60(0.58-0.63)**\*\*** |
| PTFQI | 0.56(0.54-0.59)**\*\*** | 0.54(0.52-0.57)**\*\*** | 0.51(0.49-0.54)**\*\*** | 0.49(0.47-0.51)**\*\*** |
|  | FT3/FT4 | 1.26(1.24-1.28)**\*\*** | 1.27(1.25-1.29)**\*\*** | 1.31(1.29-1.33)**\*\*** | 1.32(1.30-1.33)**\*\*** |

1Model 1: adjusted for age;

2Model 2: adjusted for age, hypertension, hyperlipidemia, smoking, drinking.

Compared with NGT,\*\* *P* < 0.001

**Table S3 Relationship between thyroid hormone sensitivity and prediabetes and diabetes in different ages and sexes**

|  |  |  |  |
| --- | --- | --- | --- |
| **Age** | **Variables** | **Prediabetes** | **Diabetes** |
| **OR(95% CI)1** | **OR(95% CI)2** | **OR(95% CI)1** | **OR(95% CI)2** |
| ≤60 | TSHI | 0.88(0.87-0.90)**\*\*** | 0.87(0.86-0.89)**\*\*** | 0.88(0.87-0.90)**\*\*** | 0.87(0.86-0.89)**\*\*** |
| TT4RI | 0.99(0.99-0.99)\*\* | 0.99(0.99-0.99)\*\* | 0.99(0.99-0.99)\*\* | 0.99(0.99-0.99)\*\* |
| TFQI | 0.73(0.69-0.77)**\*\*** | 0.71(0.67-0.75)**\*\*** | 0.81(0.77-0.85)**\*\*** | 0.78(0.74-0.83)**\*\*** |
| PTFQI | 0.63(0.60-0.67)**\*\*** | 0.61(0.58-0.65)**\*\*** | 0.64(0.60-0.67)**\*\*** | 0.62(0.59-0.66)**\*\*** |
| FT3/FT4 | 1.25(1.23-1.27)**\*\*** | 1.25(1.23-1.28)**\*\*** | 1.26(1.23-1.28)**\*\*** | 1.25(1.23-1.28)**\*\*** |
| ＞60 | TSHI | 0.86(0.85-0.87)**\*\*** | 0.85(0.84-0.86)**\*\*** | 0.93(0.90-0.95)**\*\*** | 0.82(0.81-0.83)**\*\*** |
| TT4RI | 0.99(0.99-0.99)\*\* | 0.99(0.99-0.99)\*\* | 0.99(0.99-0.99)\*\* | 0.99(0.99-0.99)\*\* |
| TFQI | 0.71(0.68-0.74)**\*\*** | 0.68(0.65-0.70)**\*\*** | 0.67(0.65-0.70)**\*\*** | 0.63(0.61-0.66)**\*\*** |
| PTFQI | 0.62(0.60-0.65)**\*\*** | 0.60(0.58-0.62)**\*\*** | 0.54(0.52-0.56)**\*\*** | 0.51(0.49-0.53)**\*\*** |
| FT3/FT4 | 1.21(1.20-1.23)**\*\*** | 1.22(1.20-1.24)**\*\*** | 1.29(1.27-1.31)**\*\*** | 1.30(1.28-1.31)**\*\*** |

1Model 1: adjusted for sex;

2Model 2: adjusted for sex, hypertension, hyperlipidemia, smoking, drinking.

Compared with NGT,\*\* *P* < 0.001