

| Oestrogen Metabolism | | | | | | |
|-----------------------------|-----------|---|-----|-----|--------------|---|
| CYP17A1 | rs743572 | G | A | A | | Typical expression |
| SULT2A1 | rs182420 | C | T | C | Heterozygous | Slightly lower levels of DHEAS - more bioavailable DHEA, risk of PCOS , high testosterone & oestrogen |
| SULT2A1 | rs2637125 | A | ### | ### | | |
| SULT2A1 | rs2910397 | T | T | C | Heterozygous | Slightly lower DHEAS to DHEA ratio - more bioavailable DHEA, risk of PCOS , high testosterone & oestrogen |
| SULT2A1 | rs182420 | C | T | C | Heterozygous | Slightly reduced enzyme activity and may play a role in inherited adrenal androgen excess in PCOS |
| CYP19A1 | rs4646 | A | C | C | | Most common, typical, higher oestrogen levels |
| CYP19A1 | rs700518 | T | C | C | | Lower oestrogen levels in men |
| CYP3A4 | rs2740574 | C | C | C | Heterozygous | Typical expression |
| CYP1A1 | rs1048943 | C | T | T | | Typical expression |
| CYP1B1 | rs1056836 | G | C | G | Heterozygous | Intermediate CYP1B1, intermediate hot flashes & menopause symptoms, especially in smokers. Combined with COMT issues, increased risk of breast cancer & prostate cancer |
| CYP1B1 | rs1056827 | A | ### | ### | | |
| GSTP1 | rs1695 | G | A | A | | Typical expression |
| GSTM1 | rs366631 | A | ### | ### | | |
| NQO1 | rs1800566 | A | G | G | | Typical expression |
| UGT1A1 | rs2070959 | G | G | G | Homozygous | Decreased detoxification/ inactivation of oestrogen, decreased excretion |
| UGT1A1 | rs4148324 | G | T | T | | Typical expression |
| SULT1A1 | rs1042028 | T | ### | ### | | |
| SULT1A1 | rs1042157 | A | ### | ### | | |
| SULT1E1 | rs3736599 | T | ### | ### | | |

| Gene | SNP | Risk allele | Patient Results | | | Interpretation |
|--------------|------------|-------------|-----------------|-----|--------------|--|
| COMT | | | | | | |
| COMT | rs4680 | A | A | G | Heterozygous | Slightly lower COMT activity (most common genotype in Caucasians), intermediate risk of hot flashes, especially in smokers, intermediate risk of breast cancer |
| COMT | rs4633 | T | T | C | Heterozygous | Slightly lower (slow) COMT activity |
| COMT | rs6267 | T | G | G | | Typical expression |
| COMT | rs165599 | A | A | G | Heterozygous | Increased risk of anxiety, especially in females and in combination with rs4680 A/A |
| MTHFR | | | | | | |
| C677T | rs1801133 | A | A | A | Homozygous | MTHFR enzyme function decreased by 70%-80%, increased risk of high blood pressure, especially with riboflavin deficiency |
| A1298C | rs1801131 | G | T | T | | Typical expression |
| MTHFR | rs2274976 | T | C | C | | Typical expression |
| MTHFR | rs9651118 | C | T | C | Heterozygous | [Benefit] Decreased risk of liver cancer, slower cognitive decline in the elderly, lower homocysteine and type 2 diabetes |
| MTHFR | rs13306560 | T | C | C | | Typical expression, no benefit |
| MTHFR | rs17367504 | G | A | A | | Typical expression, no benefit |
| MTHFR | rs4846049 | G | ### | ### | | |

