



# STRENGTH/HYPERTROPHY

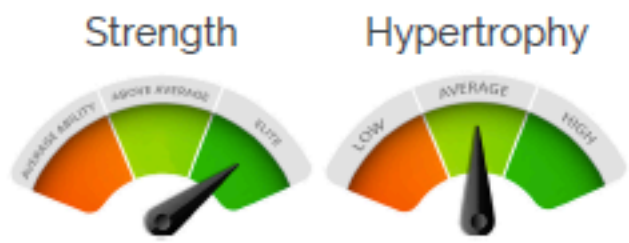
## GENETIC DATA

GENE	GENO TYPE
ACTN3	CC
ACE del	AA
AGTR2	CC
AGTR2(2)	AA
SHBG	TT
MSTN	TT
RETN(1)	CC
IGFBP3	AA
IGF1	TT
CNTF	GG
DIO1	CT
IGF2(2)	CG
IGF2(3)	TT
IL6	CG
CCL2(1)	AG
CCL2(2)	AA
CCR2	TT
IL15Ra(1)	TT
IL15Ra(2)	AA
IL15Ra(3)	AA
ACVR1B	AG
RETN(2)	GG
IL6R	CT

Endomorph, mesomorph, or ectomorph; we are all aware that we possess certain genetic predispositions toward a specific body type. This genetic predisposition resides in the genetic variations that deal do with muscle strength and hypertrophy (muscle size).

It has been estimated across multiple genomic studies that >50% of muscle strength and muscle mass is attributable to heritable genetics.

We can investigate genetic variants that specifically code for hypertrophy and ones that code for strength development. There is no doubt that genetics will gift us with a specific proportion of muscle fiber types but through lifestyle approaches we have an ability to create different varying body type outcomes.



INTERPRETATION

RECOMMENDATIONS



# VO2 MAX METABOLIC

## METABOLIC

GENE	GENO TYPE
DEPTOR	AA
MIPEP	GG
ACSL1	AG
NRF1(1)	CT
NRF1(2)	GG
HIF1A	GG
PPARGC1A	CC
CKMM	TC
UCP3	GG
KIF5B	CG
AMPD1	GG
GABPB1	AA

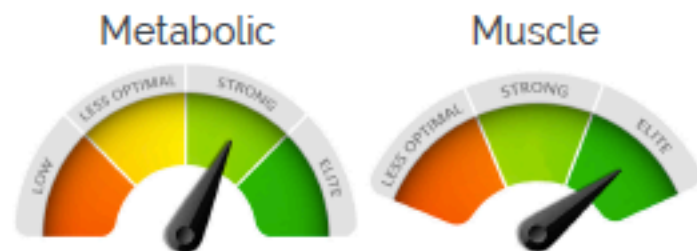
## MUSCLE

TTN	CC
DAAM1	TT
AMPD1	GG
AGTR2(2)	AA

Metabolic and muscular components of VO2 max are grouped together in this section because there is crossover in the genes involved with each.

VO2 max is the body's ability to uptake oxygen, deliver it efficiently to the cells, transport it effectively into the muscle and then rely on the muscles metabolic machinery to use it in an optimized fashion.

Oxygen is a key component of the electron transport chain where macronutrients are converted into energy for contraction. Without an adequate and efficient supply of oxygen, the conversion of nutrients into usable energy currency can be compromised.



INTERPRETATION

RECOMMENDATIONS



# VO2 MAX CARDIOVASCULAR

## CARDIOVASCULAR

GENE	GENO TYPE
ADRB1	GC
ADRB2(1)	GA
ADRB2(2)	CC
NFIA-AS2	GG
EDN1	GT
DBX1	TT
HIF1A	GG
CREB1	AG
KIF5B	CG
NPY	TT
BDKRB2	CC

One of the three main components of VO2 max is cardiovascular function. In this section, genes involved in creating optimized cardiac output are analyzed. These include genes that are involved in inotropic effect (modifying force or speed of contracting muscles) and chronotropic effect (changes in heart rate or rhythm). Additional aspects include genes involved in blood flow to the heart, the response to sympathetic nervous system stimulation, blood capillary density, and utilization & transport of oxygen to the cardiac musculature.

By identifying gene variants and their function, it may be possible to address specific interventions to optimize the cardiac aspects of VO2 max.



INTERPRETATION

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