



BRIAN DANLEY FITNESS

BENEFITS OF RESISTANCE TRAINING

BODY COMPOSITION:

INCREASES LEAN BODY MASS (i.e., muscle mass)
DECREASES FAT MASS
DECREASES SARCOPENIA
MAY INCREASE FT FIBER AREA / ST FIBER AREA
INCREASES MUSCLE FIBER SIZE (i.e., hypertrophy)
MAY INCREASE MUSCLE FIBER NUMBER (i.e., hyperplasia)

HORMONAL SYSTEM:

INCREASES GH RELEASE
INCREASES INSULIN SENSITIVITY / GLUCOSE UPTAKE
INCREASES TESTOSTERONE

SKELETAL SYSTEM:

INCREASES BONE MINERAL DENSITY
INCREASES BONE STRENGTH
INCREASED BONE MASS

NERVOUS SYSTEM:

INCREASES NEUROMUSCULAR CONTRACTION SPEED
INCREASES MOTOR UNIT RECRUITMENT / SYNCHRONIZATION /
FIRING RATE
DECREASES CO-CONTRACTION

PERFORMANCE:

INCREASES STAMINA
IMPROVES BALANCE / AGILITY / GATE
INCREASES STRENGTH
INCREASES POWER

INCREASES SPEED
INCREASES ENDURANCE
INCREASES FLEXIBILITY (ROM)
IMPROVES COORDINATION
INCREASES BIOMECHANICAL EFFICIENCY
IMPROVES POSTURE
DECREASES REACTION DURATION
DECREASES RECOVERY DURATION
INCREASES RESISTANCE TO FATIGUE
INCREASES ADAPTATIONS (e.g., specificity, overload)

CARDIOVASCULAR SYSTEM:

INCREASES CAPILLARIES
DECREASES CAPILLARY DENSITY (due to increased muscle mass)
DECREASES MYOGLOBIN DENSITY
DECREASES RHR
INCREASES VENTRICULAR WALL THICKNESS
MAY DECREASE RESTING BLOOD PRESSURE
INCREASES HEART CONTRACTILITY
INCREASES STROKE VOLUME
INCREASES MYOCARDIAL EFFICIENCY

PULMONARY SYSTEM:

INCREASES MAXIMAL OXYGEN UPTAKE RATE (esp. circuit training)

METABOLIC SYSTEM:

INCREASES METABOLIC RATE
INCREASES FFA MOBILIZATION
INCREASES ENERGY EFFICIENCY (e.g., ATP, glycogen)
INCREASES FUEL SUBSTRATES (e.g., ATP, CP, glycogen)
INCREASES ENERGY STORAGE CAPACITY (e.g., glycogen, protein, triglycerides)
INCREASES ANAEROBIC ENZYME ACTIVITY (e.g., phosphogen, glycolytic systems)
INCREASES MUSCLE PROTEIN SYNTHESIS
INCREASES LACTIC ACID TOLERANCE
DECREASES LACTIC ACID RELEASE
INCREASES FAT / CARB BREAKDOWN

DECREASES MITOCHONDRIAL DENSITY (due to increased muscle mass)

COGNITIVE SYSTEM:

IMPROVES SELF-ESTEEM
IMPROVES CONFIDENCE
IMPROVES CONCENTRATION / FOCUS
IMPROVES MOOD
IMPROVES SLEEP QUALITY
IMPROVES CREATIVITY
INCREASES MENTAL RELAXATION
DECREASES DEPRESSION
DECREASES MENTAL DECLINE

IMMUNE SYSTEM:

INCREASES IMMUNITY

CHRONIC DISEASE RISK:

DECREASES TYPE-2 DIABETES RISK
DECREASES HEART DISEASE RISK
DECREASES CANCER RISK (e.g., colon, breast)
DECREASES ARTERIOSCLEROSIS RISK
DECREASES OBESITY RISK
DECREASES OSTEOPOROSIS
DECREASES STROKE RISK
DECREASES OSTEOARHRITIS RISK
DECREASES GALLBLADDER DISEASE RISK
DECREASES ALZHEIMERS DISEASE RISK

QUALITY OF LIFE:

IMPROVES THERMOREGULATION
DECREASES LOWER BACK PAIN RISK
DECREASES ANXIETY
DECREASES STRESS
DECREASES MORTALITY
DECREASES MORBIDITY
DECREASES RISK OF FALLS
DECREASES FRACTURE RISK
DECREASES DIGESTION DURATION

DECREASES ARTHRITIC PAIN
DECREASES JOINT PAIN
DECREASES CHRONIC PAIN
DECREASES MUSCLE WEAKNESS
DECREASES MUSCULAR IMBALANCES
INCREASES JOINT LUBRICATION
IMPROVES ABILITY TO PERFORM ACTIVITIES OF
DAILY LIVING