



BRIAN DANLEY FITNESS

BENEFITS OF CARDIORESPIRATORY EXERCISE

BODY COMPOSITION:

DECREASES FAT MASS
MAY DECREASE LEAN BODY MASS (if excessive)
MAY DECREASE FT FIBER AREA / ST FIBER AREA
MAY INCREASE MUSCLE FIBER SIZE

HORMONAL SYSTEM:

INCREASES INSULIN SENSITIVITY / GLUCOSE UPTAKE
INCREASES PARASYMPATHETIC STIMULATION
DECREASES EPINEPHRINE / NOREPINEPHRINE RELEASE
DECREASES CORTISOL RELEASE

SKELETAL SYSTEM:

INCREASES BONE MINERAL DENSITY (i.e., high-impact wt-bearing exercise)
INCREASES BONE STRENGTH (i.e., high-impact wt-bearing exercise)
INCREASED BONE MASS (i.e., high-impact wt-bearing exercise)

PERFORMANCE:

INCREASES STAMINA
IMPROVES BALANCE / AGILITY / GATE
INCREASES STRENGTH (i.e., high-impact wt-bearing exercise)
INCREASES POWER
INCREASES SPEED
INCREASES ENDURANCE
INCREASES FLEXIBILITY (ROM)
IMPROVES COORDINATION
INCREASES BIOMECHANICAL EFFICIENCY
IMPROVES POSTURE
DECREASES REACTION DURATION
DECREASES RECOVERY DURATION
INCREASES ADAPTATIONS (e.g., specificity, overload)

CARDIOVASCULAR SYSTEM:

INCREASES CAPILLARIES
INCREASES CAPILLARY DENSITY
DECREASES TOTAL CHOLESTEROL
DECREASES LDL CHOLESTEROL
INCREASES HDL CHOLESTEROL
INCREASES HEART CONTRACTILITY
INCREASES MYOCARDIAL EFFICIENCY
DECREASES RHR
DECREASES SUBMAXIMAL EXERCISE HR
DECREASES RESTING BLOOD PRESSURE
DECREASES TRIGLYCERIDES
INCREASES VASODILATION
INCREASES STROKE VOLUME
INCREASES CARDIAC OUTPUT
INCREASES HEART CHAMBER SIZE
INCREASES BLOOD VOLUME
DECREASES PERIPHERAL RESISTANCE
INCREASES BLOOD VESSEL CROSS-SECTION AREA
INCREASES VENTRICULAR VOLUME

PULMONARY SYSTEM:

INCREASES TIDAL VOLUME (normal breathing capacity)
INCREASES PULMONARY DIFFUSION CAPACITY (i.e., alveolar membrane)
INCREASES ARTERIAL-VENOUS OXYGEN DIFFERENCE
INCREASES MUSCULAR OXIDATIVE CAPACITY
INCREASES MAXIMAL OXYGEN UPTAKE RATE (esp. interval training)

METABOLIC SYSTEM:

INCREASES METABOLIC RATE
INCREASES FFA MOBILIZATION
INCREASES ENERGY STORAGE CAPACITY (e.g., glycogen, triglycerides)
INCREASES FUEL SUBSTRATES (e.g., ATP, CP, glycogen)
INCREASES LACTIC ACID THRESHOLD
INCREASES MITOCHONDRIAL DENSITY (increases ATP production)
DECREASES APPETITE
INCREASES FUEL-BURNING EFFICIENCY (e.g., fat)
INCREASES ANAEROBIC ENZYME ACTIVITY (e.g., phosphogen, glycolytic systems)

INCREASES AEROBIC ENZYME ACTIVITY (e.g., oxidative system)
INCREASES GLUCOSE TRANSPORTERS (e.g., GLUT-4)
INCREASES MYOGLOBIN CONCENTRATION

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 STROKE RISK
DECREASES GALLBLADDER
DISEASE RISK
DECREASES ALZHEIMERS DISEASE
RISK

QUALITY OF LIFE:

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