Info

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Warning: package 'jtools' was built under R version 4.3.3
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blood.rm.data

Description This dataset includes summarized data from the CO-rebreathing tests and phlebotomy

A data frame with 459 rows and 11 columns:

id: participant number; 1-58

timepoint: order of test days; “2” is pretest, “7” is posttest 1 and “3” is posttest 2

weight: kg

test: different test timepoints; “pre” is pretest, “post” is posttest, “post.1.still” is before cycling-test at posttest 1, “post.1.vo2max” is after vo2max-test at posttest 1, “post.1.15tt” is after performance test at posttest 1, “post.2.still” is before cycling-test at posttest 2, “post.2.drained” is after phlebotomy at posttest 2, “post.2.vo2max” is after vo2max-test at posttest 2 and “post.2.15tt” is after performance test at posttest 2

hbmass: hemoglobin mass; grams

rbcv: red blood cell volume; mL

pv: plasma volume; mL

bv: blood volume; mL

hct: hematocrit; percent

hb.c: hemoglobin concentration; g/L

hbmass.kg: hemoglobin mass; g/kg

cycling.data

Combined dataset with submax, vo2max and performance datasets Description This dataset includes vo2 utilization rates

A data frame with 1179 rows and 25 columns:

id: participant number; 1-58

timepoint: order of test days; 1-8

period: order of training periods; 1 & 2

sex: gender; “m” is male and “f” is female

test: different cycling test; “sub_25” is 25% of Wmax, “sub_40” is 40% of Wmax, “new_40” is newly calculated 40% of wmax, “max” is vo2max and “per” is performance

height: height; cm

weight: weight; kg

age: age; years

temperature: temperature; degrees Celsius

humidity: air humidity; percent

t.o.d: time of day; number of hours

lac: lactate; mmol/L

rpe: rate of perceived exhaustion; BORG scale 6-20

watt: watt

rpm: cycling cadence; rounds per minute

vo2: volume of oxygen; mL/min

vo2.kg: volume of oxygen; mL/kg/min

rel.vo2: utilization ratio of vo2max; percent

ve: ventilation; L/min

vco2: volume of carbon dioxide; mL/min

bf: breathing frequency; breaths per minute

hr: heart rate; beats per minutes

rer: respiratory exchange ratio; vo2/vco2

GE: gross efficiency; percent

threshold: lactate threshold estimation; regression slope in watts between the last two lactate values during vo2max-test

hb.data

Description This dataset includes summarized data from the CO-rebreathing test to determine blood volume

A data frame with 105 rows and 11 columns:

id: participant number; 1-58

timepoint: order of testdays; 1-8

period: order of training periods; 1 & 2

weight: kg

hbmass: hemoglobin mass; grams

rbcv: red blood cell volume; mL

pv: plasma volume; mL

bv: blood volume; mL

hct: hematocrit; percent

hb.c: hemoglobin concentration; g/L

hbmass.kg: hemoglobin mass; g/kg

humac.data

Description This dataset includes summarized data from the isokinetic and isometric knee-extension test

A data frame with 153 rows and 20 columns:

id: participant number; 1-58

timepoint: order of testdays; 1-8

period: order of training periods; 1 & 2

leg: leg; “right” or “left”

60.peak.torque: peak torque at 60 degrees per second; Nm

60.tt.peak.torque: time to peak torque at 60 degrees per second; seconds

60.avg.power: average power during 60 degrees per second; watt

60.joint.angle.peak.torque: joint angle at peak torque during 60 degrees per second; degrees

180.peak.torque: peak torque at 180 degrees per second; Nm

180.tt.peak.torque: time to peak torque at 180 degrees per second; seconds

180.avg.power: average power during 180 degrees per second; watt

180.joint.angle.peak.torque: joint angle at peak torque during 180 degrees per second; degrees

240.peak.torque: peak torque at 240 degrees per second; Nm

240.tt.peak.torque: time to peak torque at 240 degrees per second; seconds

240.avg.power: average power during 240 degrees per second; watt

240.joint.angle.peak.torque: joint angle at peak torque during 240 degrees per second; degrees

isom.peak.torque: isometric peak torque; Nm

isom.tt.peak.torque: time to peak torque during isometric contraction; seconds

isom.tt.half.peak.torque: time to half peak torque during isometric contraction; seconds

isom.peak.torque.slope: the slope between torque and time during isometric contraction, Nm

performance.data

Description This dataset includes summarized data from the 15min cycling performance test

A data frame with 206 rows and 23 columns:

id: participant number; 1-58

timepoint: order of test days; 1-8

period: order of training periods; 1 & 2

sex: gender; “m” is male and “f” is female

test: different cycling test; “sub_25” is 25% of Wmax, “sub_40” is 40% of Wmax, “new_40” is newly calculated 40% of wmax

height: height; cm

weight: weight; kg

age: age; years

temperature: temperature; degrees Celsius

humidity: air humidity; percent

t.o.d: time of day; number of hours

lac: lactate; mmol/L

rpe: rate of perceived exhaustion; BORG scale 6-20

watt: watt

rpm: cycling cadence; rounds per minute

vo2: volume of oxygen; mL/min

vo2.kg: volume of oxygen; mL/kg/min

rel.vo2: utilization ratio of vo2max; percent

ve: ventilation; L/min

vco2: volume of carbon dioxide; mL/min

bf: breathing frequency; breaths per minute

hr: heart rate; beats per minutes

rer: respiratory exchange ratio; vo2/vco2

Session.data

Description This dataset includes summarized data from the cycling training sessions

A data frame with 1325 rows and 9 columns:

id: participant number; 1-58

period: order of training periods; 1 & 2

session.n: number of session; 1-25

type: type of interval training; 4x8min, 6x6min and 4x5min

ftp: functional threshold power; average 15min performance watt or average 4x5min session watt

hr: average heart rate; beats per minutes

hr.max: maximal heart rate; beats per minutes

watt: watt

rpe: rate of perceived exhaustion; BORG scale 6-20

submax.data

Description This dataset includes data from all submaximal bouts, i.e. 25% of Wmax, 40% of Wmax and newly calculated 40% of Wmax

A data frame with 689 rows and 23 columns:

id: participant number; 1-58

timepoint: order of test days; 1-8

period: order of training periods; 1 & 2

sex: gender; “m” is male and “f” is female

test: different cycling test; “sub_25” is 25% of Wmax, “sub_40” is 40% of Wmax, “new_40” is newly calculated 40% of wmax height: height; cm

weight: weight; kg

age: age; years

temperature: temperature; degrees Celsius

humidity: air humidity; percent

t.o.d: time of day; number of hours

lac: lactate; mmol/L

rpe: rate of perceived exhaustion; BORG scale 6-20

watt: watt

rpm: cycling cadence; rounds per minute

vo2: volume of oxygen; mL/min

vo2.kg: volume of oxygen; mL/kg/min

ve: ventilation; L/min

vco2: volume of carbon dioxide; mL/min

bf: breathing frequency; breaths per minute

hr: heart rate; beats per minutes

rer: respiratory exchange ratio; vo2/vco2

GE: gross efficiency; percent

vo2.session.data

Description This dataset includes summarized data from the two vo2 training sessions per period

A data frame with 53 rows and 15 columns:

id: participant number; 1-58

period: order of training periods; 1 & 2

lac: lactate; mmol/L

rpe: rate of perceived exhaustion; BORG scale 6-20

watt: watt

rpm: cycling cadence; rounds per minute

vo2: volume of oxygen; mL/min

ve: ventilation; L/min

vco2: volume of carbon dioxide; mL/min

bf: breathing frequency; breaths per minute

hr: heart rate; beats per minutes

rer: respiratory exchange ratio; vo2/vco2

vo2.percent: utilization ratio of vo2max; percent

hr.percent: utilization ratio of heart rate max; percent

session.90.vo2:time above 90% of vo2max; seconds

session.90.hr: time above 90% of heart rate max; seconds

vo2max.data

Description This dataset includes summarized data from the vo2max test

A data frame with 284 rows and 22 columns:

id: participant number; 1-58

timepoint: order of test days; 1-8

period: order of training periods; 1 & 2

sex: gender; “m” is male and “f” is female

test: different cycling test; “max” is vo2max

height: height; cm

weight: weight; kg

age: age; years

temperature: temperature; degrees Celsius

humidity: air humidity; percent

t.o.d: time of day; number of hours

lac: lactate; mmol/L

rpe: rate of perceived exhaustion; BORG scale 6-20

watt: watt

threshold: lactate threshold estimation; regression slope in watts between the last two lactate values during vo2max-test

vo2: volume of oxygen; mL/min

vo2.kg: volume of oxygen; mL/kg/min

ve: ventilation; L/min

vco2: volume of carbon dioxide; mL/min

bf: breathing frequency; breaths per minute

hr: heart rate; beats per minutes

rer: respiratory exchange ratio; vo2/vco2