Body by Science 1

- Phys. activity (any) improves health; but only bc our activity is super low! And not optimal.
- Overly straining (athletes) → deteriorate life quality/health

High intensity training activates lipase (bodyfat mobilization) → insulin high (as w/ jogging/stress) => fat loss impossible

VO_2 max: not a general test; specific to activity (single leg biking didn't deliver benefits on other side => metabolic adaptation on muscular level)
=> center of health = muscular system

Fast-twitch: great force output, slow recovery, fatigue quickly

Slow twitch: less space => we have more!

Sequential recruitment

slow twitch activated first → interned → lif slow not recovered yet) fast

=> moderate weight: * allows progressing through all muscle types
* not so quick that only fast twitch
* not so slow that slow-twitch recovers

Single set taken to failure is sufficient stimulus. (p. 54)

Fatigue: 45-90s for reaching max. level of fatigue is best (p. 56)

Cadence: Once a week enough/better than twice (p. 60)

Equipment: (p. 67) Believe in Nautilus or MedX machines
free weights are pushed by manufacturers (who also own publications)

Nautilus: adapts resistance to position in exercise movement!

Alternative: Power rack & home training (p. 71)

Big 5

(p. 72) Big 3: Leg Press, Pulldown, Chest Press
+ Overhead Press, Seated Row

Freeweight Big 5

p. 80 Bent over Row, Overhead Press, Deadlift
Bench Press, Squat

Rep speed

As slowly as possible w/o degenerating into starts & stops.

Time Under Load: Duration of set from start till muscular failure.
measure & record

Breathing: Natural, open mouth; towards hyperventilating
no Valsava (holding breath raises blood pressure)

Struggling: p. 89 Body doesn't like fatigue => desire to quit
as muscular failure approaches, real struggle begins
=> DON'T speed up, rest, pause

Body by Science 2

Beginners: Take to positive failure right away (p. 91)

Frequency: 1x/7d (small, weak => less rest; strong => more rest!) (p. 92)

If no progress => add more recovery.

Rest periods: Move quickly; 30-60s to next movement! (p. 93) You should be quick enough to still huff & puff

Record keeping: Record TUL, total duration (=> rest can be calculated); weight;

Advantages of Big 5 (Chap 5, p. 97)

Insulin sensitivity better, HDL improvement (less inflammation)

Stretching not helpful (p. 109)
cardio effects at least as good as steady state

Partial reps can be great (p. 136)
Neg. only also helps w/ sticking points (p. 139)

Variation: Split Big 5 into two days (p. 142)

Science of fat loss (Chap 9, p. 179)

Activity barely burns calories; sedentary lifestyle not too big of a problem.

BUT: Calories are too easily available
About 1000 cal. between feeling satisfied and full!
Another 2000 cal between full and stuffed.

ω3 is important → fish & green leafy veg (p 192)

hydration: b/c drought always precedes famine

Synergize (p. 199)
- Eat natural food
- Stay cool (thermostat down)
- Sleep well & cool
- Avoid stress
- HIT

Athletes training (Chap 10, p. 203)

- Deliberate practice: Hitting & iron w/ goals you continuously observe and adjust your actions (p. 204)
- Consistency is crucial; daily, including weekends
- Training intensity must match performance intensity
- Heavier golf balls and deflated soccer balls is BS b/c it trains different things, sidetracks nervous system
- Skills are specific: Don't combine w/ conditioning (p. 207) Don't alter
- Recover (most train too much!)
- Stretching doesn't help (p. 217) Warmup is important however; get some blood flow
- Cross-training is BS (p. 219)
- Most children: just playing is enough for conditioning workout during off season is possible

Seniors (p. 238) can train under same guidelines