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Conflict of Interest Statement

I have no actual or potential conflict of interest in relation to this presentation.

Anthropometry, Leverages and Strength Training

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The Problem with Strength Training

- We know the benefits, but no one talks about disadvantages
- Assumes a clean slate for most lifters
- The Anthropometric “sweet spot”

The Problem with Strength Training (cont'd)

- There are outliers, but not enough of them to change the facts
- What this means for YOU the Personal Trainer (focus on clients)
- Who comprise MOST of our clientele? The way we approach training, programming, cueing matters
- Don't force-feed movement patterns! Let Leverages, Pain/injury history, Skill be deciding factors

A Closer Look at Strength

- Strength “standards” can also rely on the same prerequisites and may be impractical for many within general population
- Results oriented trainers would do well to prioritize training effect over weight lifted
- STRENGTH vs. WORK
- 5’6” lifter 315lbs squat x 10 reps, vs 6’7” lifter – 300lbs squat x 10 reps – absolute load vs. RPE/TUT/Training Effect
- Overall size of the individual matters (relative vs. absolute strength)

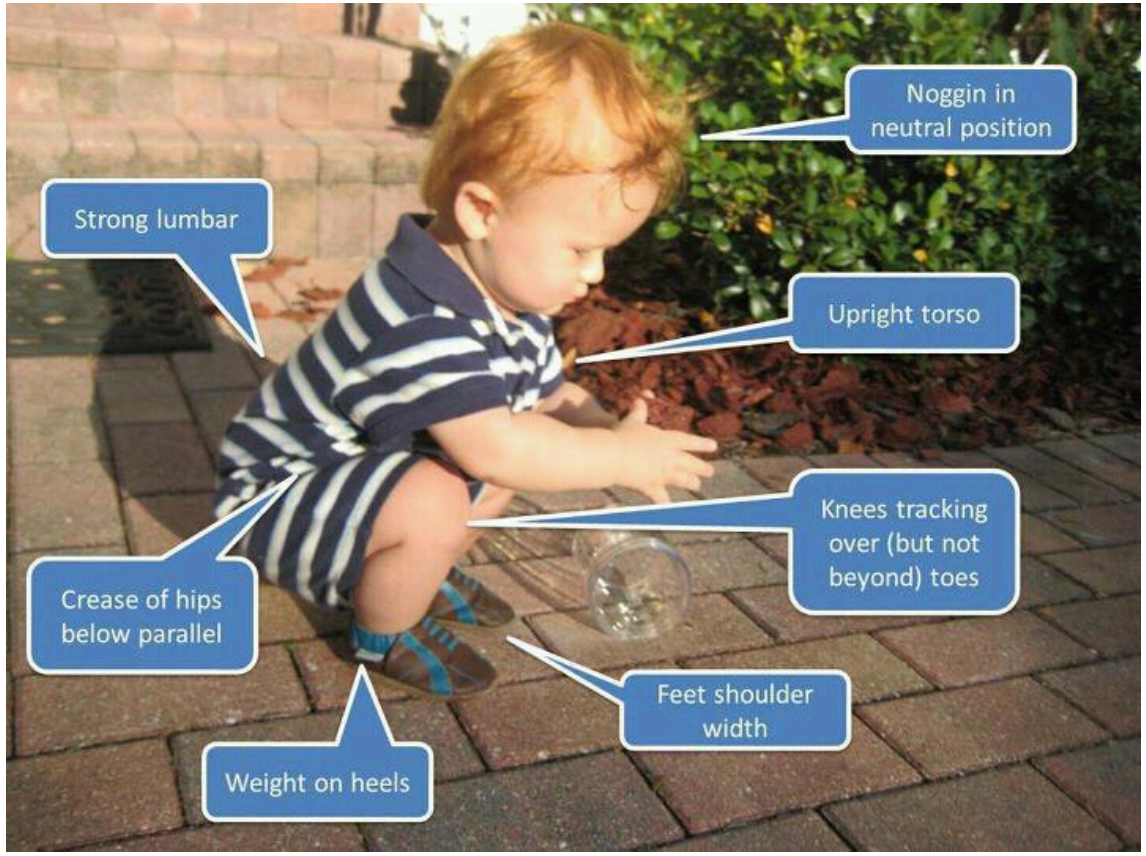
A Few Notes on Hips and Shoulders

- Each can be constructed differently depending on your genetics

Hips and Shoulders (cont'd)

- This suggests variety in exercise preferences, setups, and implements used
- All PT clients aren't powerlifters

Troubleshooting the Squat



Troubleshooting the Squat (cont'd)

Troubleshooting the Squat

- Having the “perfect squat” requires a lifter to be favourably built for squatting first. “Squat like a baby”: Good idea, bad example.
- Hip anatomy variation = determining foot width via trial and error
- Long Femurs and short torso = DORSIFLEXION. Poor ankle mobility is the death of good quality squats for taller/long-limbed lifters
- Increased shear forces on knees, lumbar spine due to anatomical differences. What does this mean for volume, programming, pattern variation, loading?
- The myth of “making depth” (butt-wink and hip anatomy)

Troubleshooting the Deadlift

- Longer torso and arms = a happy deadlift
- Lower hip position, more quadriceps involvement
- Shorter torso, longer legs = more PC/lumbar dominant DL
- What assumes control of the pelvis?
- Modifications, variations (trap bar, medium sumo, block pull, *isometrics*)

Troubleshooting the Overhead Press

- Short arms, and a “type 1” AC construction = a happy overhead press
- Poor shoulder mobility: Look at the T-Spine
- Bad neck posture and kyphotic thoracic spine common for tall lifters
- People who can’t address these things via mobility and soft tissue work (i.e. type 3 AC construction), probably shouldn’t be BB OH pressing
- DB’s, Landmine bars

Troubleshooting Vertical Pulls

- A big trunk and Short Extremities = a happy vertical pull
- A *back* exercise or a *pulling* exercise?
- Shoulder glide (sidenote: this applies to horizontal pulls too)
- Long arms and pull ups, and the myth of full ROM (think of your lat attachment)
- Can pull ups be harmful?

Body Size and Conditioning

- Many fixed conditioning and HIT protocols ask for a particular rest interval, lifting percentage, etc., which may be unreasonable for someone very strong or very large.
- Being conditioned and “fit” still requires training within the realms of possibility (think of Tabata method)
- For bigger bodies, chase training effect, RPE, and don’t forget the power of bodyweight training for muscular or heavier lifters

Closing Thoughts

- Ditch the dogma over conventional big lifts for our clients – you can still hinge, squat, pull, push etc., using modifications that fit the individual and their body type
- If an exercise consistently causes you or your clients pain, just STOP doing it
- For clients that will deal with greater shear and stress forces under load, lower their overall volume of exposure to heavy absolute loads by using advanced lifting methods (isometrics, tempos, paused reps, in order to make light weight *feel* heavier and create the same RPE)
- Don't forget – the average client doesn't want to be a powerlifter; they want to safely improve their strength and probably their physique too.