Creating Little Life-long Athletes

build culture for:

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MOBO: Founder
Bend, OR
Day job decisions are easier than Dad job decisions
What matters to me:
Mileage club champs that I won’t let run, but give experiences
2 Issues with Youth Running Today:

Joe Vigil: “You know who shows up for my team? The kids who didn’t make the cut in ball sports. They aren’t athletic. They have no skill. It’s like making a sandwich with day old bread.”

Culture Inactivity Shift

Lack of:
SKILL
+
MECHANOTRANSDUCTION
for SPORT

not volume, not fitness
Success!

Kids Aren’t professional athletes. So don’t train them that way.
Success!

TRANSFORMATION!

SKILL
Success Through Skill Development

In kids, these change DAILY

- BRAIN writes the program
  - REFINEMENT
  - JOINTS feel how to respond
  - MUSCLES center the forces to move us

In kids, these change DAILY
Youth model: athletic development aims

**PLAY**
- Girls 8-10, Boys 9-11
  - PLAY and diversity: soccer, basketball, move! etc, just be consistently athletic

**SKILL**
- Girls 11-14, Boys 12-16
  - time to aid mechanics during growth spurt. Mindful of rapidly changing structure, relays, team competitive environment

**ROUTINE**
- Girls 15-18, Boys 17-19
  - Adjust F.I.T. through small dose of interval work, instill training ethic and commitment

**TRAIN**
- Girls 18+, Boys 19+
  - Progress FIT to environment, skill level, motivation
Youth model:

Athletic development aims

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  just be consistently athletic

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PLAY

SKILL

ROUTINE

TRAIN

WAIT! → WHAT HAPPENS BEFORE 8-9 YRS OLD?

SELF GUIDED!!!!!
Sports = Growth Mindset!

You see GaGa ball, your child’s brain see axonal connections
In Youth: transformation doesn’t always need to be COACHED
Kids learn through play! – and its supposed to be fun
Special Topics
This should not be happening to our kids!

Decoding a broken youth development system
Winning districts vs. long term development
Early Sports Specialization:

Kids get bored. So does your nervous system.

- Varied sport environments build VARIETY in sports skills!
- Single sport high school players are 60% more likely to sustain an overuse injury
- 88% of collegiate athletes played more than one sport as a kid
- Elite athletes don’t train year round. Neither should kids.

1) delay sports specialization until 15-16
2) encourage participation in multiple sports
3) take three months of the year off in one month increments
4) take one to two days off a week
Little Powerhouses: when to begin weights?

- Young bodies are rapidly changing. Enable proper mechanics as they grow and adapt.
- The “skill of weights” can begin as early as 8 yrs….research supports this for injury prevention: **skill of precision**
- ACSM actually supports resistance training for its impact on muscles, tendons, and bone density
- Train the **skill of force production**
**Fit or Fast**

- Fit kills fast, fast
- Want your kids to stink at field and court sports? Run distance into the ground.
Running won’t destroy young joints (and yours either)

Don’t treat little beagle dogs like kenyans
Do treat your kids like a dog
Developmental Bone Health

- Athletes in WB sports have a bone mass 10% higher than non-athletes - Nattiv 2007
- Early pubescent is critical time to establish bone health as 25% of bone mass occurs in 11-13 in girls and 13-15 in boys. –MacKelvie 2002
- 90% of peak BMD should be achieved by 18 in females and 20 in males –Baxter-Jones 2011
- Low BMD and oligo-amennorheic athletes do gain weight and recover memses, but still have a deficit in BMD after 12 mo prospective study. Singhal - 2018
- High Impact sports enhance bone density and geometry, especially as loaded by those sports (gymnastics, volleyball, karate, soccer, basketball, raquet)
- Low-Impact leads to modest increase over sedentary control (running!)
- Non-impact sports assoc with lower BMD than sedentary controls (swim/bike)

Developmental Bone Health

The type of load matters: Israeli Military Recruits with a Hx of playing ball sports for 2 years had 46-84% reduction in stress fractures vs runners (who had same incidence of stress fractures as sedentary control). -Milgrom 2000

**Running**
- 6000 load cycles each leg per training session
- GRF of 2.2-2.6x BW
- Primarily vertical + Sagital load

**Soccer**
- 1000-15000 load cycles each leg per training session
- GRF of 2.0-5.0 x BW
- Sprint / cut/ jump load body from all directions

Vs
Osteogenic Potential for Bone

Running: lower GRF applied in contact times of .15-.3 sec. not effective!
Previous ball sports participation = 50% reduction in St Fx – Fredericson 2005
Higher impact and RFD = stiffer, stronger, more Fx resistant bones

Jumping activities that load GRF QUICKLY are critical
GRF > 3.5x BW with peak force of <.1 sec are most effective at ↑ ↑ ↑ ↑ BMD
Bone only responds to first 20-40 jumps – no need for high volume

Take Home: plyos aren’t just for performance, they are for health too!!!!!!!!!
Bone Health vs. Low Energy Disorder

Spectrum of the Female Athlete Triad:
Energy Availability

**PATHOLOGY**
- Low Energy Availability with or without an Eating Disorder

- Functional Hypothalamic Amenorrhea

**OPTIMAL HEALTH**
- Subclinical Menstrual Disorders
- Low Bone Mineral Density
- Eumenorrhea

- Optimal Energy Availability
- Optimal Bone Health

Osteoporosis
What happens when you actually implement this?

- Fredericson 2018

"The Healthy Runner Project"

- **Study Design**: Prospective cohort over 3 years
- **Participating Institutions**: Stanford and UCLA
- **Principal Investigators**: Michael Fredericson, M.D. and Aurelia Nativ, M.D.
- **Co-Investigators**: Emily Kraus, MD; Adam Tenforde, MD; Brian Kim, MD; Andrea Kussman, MD; Michelle Barrack, PhD, Kristen Gravani RD
- **Study Participants**: Female middle and long distance runners participating in cross country and track and field at Stanford University and UCLA
What happens when you actually implement this?

- Fredericson 2018

Findings - Females

  (16 female athletes enrolled.)
- 2015-2016: 10 BSIs across 10 female athletes.
  (19 female athletes enrolled.)
- 2016-2017: 9 BSIs across 6 female athletes.
  (16 female athletes enrolled.)
- 2017-2018: 3 BSIs across 3 female athletes.
  (16 female athletes enrolled.)

Findings - Males

- 2014-2015: 5 BSIs across 5 male athletes.
  (25 male athletes enrolled.)
- 2015-2016: 9 BSIs across 7 male athletes.
  (29 male athletes enrolled.)
- 2016-2017: 5 BSIs across 5 male athletes.
  (22 male athletes enrolled.)
  (25 male athletes enrolled.)

*all new cases were in freshmen runners
Bone Health Discussion Points

• Ensure optimal energy availability.
• Ca and Vit D have a role
• Sleep matters
• Nutrition, lifestyle, and sports selection at an early age matter now, and when BMD dec with age later on. Start early!
• Sports specialization should be avoided in young runners
• Sports involving jumping and multidirectional loading optimize bone health. Use high impact!  – Tenforde 2015
• Holistic intervention programs have traction
Posture + Lifestyle
creature of habit ≠ creature of performance
Born?
.....Or adapted?

Nature vs Nurture
Shoes!
What’s best for kids

Shoes should fit feet.
Not the other way around

Better fit=better movement
Shoes: Be nice to your kids!
don’t practice Chinese foot binding
Squeezing your foot puts the squeeze on foot control, and leads to structural changes in their body.
Yes, I practice what I preach: kid shoes matter
Injury Prevention Programs
learning skill movement to control dynamic alignment *under load* and *fatigue*

Do they work? Yes, but high NNT
Childhood Obesity Inactivity

• The single highest correlated factor to childhood obesity is: distance from home to playground

• Kids >2 need 60 min of exercise DAILY.
Nutrition/ Body Image/ Expectations: *stop the madness*

I Was the Fastest Girl in America, Until I Joined Nike
People = different. Optimal preparation = different
...When we look back at Olympic weight lifting, or martial arts or gymnastics, the best of the best focus and dial in on **technique**, and they don’t worry about performance, they don’t worry about quantifying anything **until the move is dialed in**. But, when you get into recreational running, and body building, and everything else that Americans do, and spend money on, there is a number associated with it. Whether it’s your golf score, or whether it’s how quick you are doing a two mile run; anything else you do, your soccer team’s score for the season, your scoring percentage, your assist…everybody’s looking at numbers but they are not looking at the fundamentals

- Grey Cook
So what’s it take to be an Olympian?

• Genetics: esp from your mom
• Coaching: proper instruction
• A village: support network
• Intrinsic Work ethic
• Intrinsic Curiosity to build a better body
• Mental acuity: dissociate vs. associate
• See genetics above
• athleticism
But We Are Broken: I’m mad as hell

- Kids keep coming in broken
- Pre-workout “stretching” still exists
- Training volume applied
- Coaches don’t know better
- PE system broken
- We are practicing stupid

YOU NEED TO STEP UP
NO ELSE HAS or WILL
Your turn to train your community

• Every coach already has time built in for “warm up”
• Let’s make it **helpful**: your warm up should be quick and simple. The goal is to get your body to think “behind the scenes” about what you are doing. Aim to do these ahead of practice. This should take no more than 5-10 min total.

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STEER FIRST
LOAD SECOND
Your turn to teach your community
But I have no $$$ for equipment for the kids......waaaaaa

Nothing = FREE

Upper Body Postural work
Dynamic Core work
Hips: Posture, Steering, + Push
Knee Load to tolerate jump + Landing
Foot stability
Plyos for Bone

Bands = $1.50 / kid
Webbing = 10 cents/ft

2 rounds of exercises 3–7

1.
- Pigeon Hip Extensions, 10 reps on each side
- Donkey Toe, 20 reps on each leg, alternating
- Rotasorie Chicken, 8 reps on each side
- Frog Bridge, 20 reps

2.
- Bear Walk, 20 steps forward and backward
- Latera Hurdle, 20 reps
- Burches, 15 reps

3.
- Long Arm Band Squats, 10 reps on each side
- Banded Hip Twist, 20 reps on each side

4.
- Rotasorie Chicken, 8 reps on each side
- Reach Out, 8 reps

5.
- Sling Push-Ups, 8 reps
Prep kids PRE season. Short but effective IN season

Preseason
10-20 min
3x/wk

In-Season
10-20 min
1x/wk

Who is producing this plan? → YOU
in-person ed night for coach/parents videos about 30 min of planning
Motivated crew?

**Skills trained in this plan:**

- **POSTURE:** Running requires you to develop postural control from your trunk and core to help you maintain position under fatigue. Our society demands a lot of sitting and slumping and we take that poor position into your running, which compromises your running form. And running won’t help fix that—taking an active role to improve your core and posture will.

- **HIP:** Good form demands that you can PUSH, STEER, and control POSTURE from your hips. This plan helps kick your hips into gear for better durability.

- **FOOT CONTROL:** Your shoes won’t save you. Developing better control and stability in your own foot will. Adding MOBO into this stability plan will help cue your foot to do its job, and integrate it with your hips for a solid contact point. Better control in your foot = better control upstream in the kinetic chain too!

- **JUMP:** Even though running is bouncing from foot to foot, research shows that the impact loads from running actually are NOT enough to maintain adequate bone health. Instead you need to need much higher loads on your bones applied in a really short period of time. Plyometric jumps aren’t just for performance, they are good for bone development too. For all these jumps, aims to be QUICK on and off the ground.

Free access: “Garage Fit Dicharry” @ Podiumrunner.com
Younger kids? ➔ (unstructured) FUN

Parkour Field Trip

Obstacle course
Access to **play** and learn new skills
Send ‘em to camp (not running camp)
Use a BALL

Use a GAME
DO MORE DIFFERENT FUN STUFF, DO DIFFERENT STUFF MORE
REST!

2-3 MONTHS DURING THE YEAR

find their own fun

if EVERY elite out there does this, what objective info you have about your kid that lets you break this rule?
Who are your parental role models?
Kid Centered Goals

• Build an appreciation for sport. Some kids identify with pressure, some with social aspects, and some with skill challenge. Find out what’s appealing and take that focus.

• “I love my team!” – said by Eva on way to first game
Kid Centered Goals

How to talk to your kids about sports:

• **They aren’t watching from the sidelines.** They are watching through their eyes and are easily distracted! – keep focus on what’s important to them, and give them positive feedback for it.

• Remember – **the #1 reason Kids play sports is FUN** – help them zero in on FUN
Kid Centered Goals

Opportunity
• Boys are playing soccer and basketball on playground at recess. Why aren’t the girls playing too...especially when they are crushing it at practice and in games?
thinking critically about athleticism
Our days are meant to be fun. Once you lose that thread, I think you’ve lost the essence of the whole deal. If you build up a wealth of experiences, letting yourself be amazed by everything and everyone around you, then fun and its close relative - joy, will be the inevitable byproducts. The last thing you want to do is look back on life and think coulda, woulda, shoulda.

-Laird Hamilton
The idea is to become an old wizard; to live a long and fruitful life and have a family and be healthy and enjoy the ride. And speaking of the ride, why not let it rip? At least just a little bit. Everyone I know who’s really stoked about getting out of bed in the morning does that to some extent.

• Laird Hamilton
DO: Expose your kids to new experiences

- Balance challenges
- Air-time
- Water sports
- Yoga
- Climb a tree!
- Skate board
- Have tools in house to play on
- Backyard access to fun
- Access doesn’t have to be structured coaching
athletic development aims

1. GOAL: CREATE LIFE-LONG ATHLETES

2. BUILD INTRINSIC MOTIVATION

3. Support your kids where they are, and for what they love about sport. Your kids will remember you + sport forever if you model good behavior, teach them lessons, build their character.