Expanding the area of what is possible

In Track & Field Distance Running & Competent Self-Care in medicine and psychology

TheETG

range of motion

TheETG Training Packets

Mission: Expand the area of what is possible for human performance in distance running. One of TheETG methods of achieving that is to proliferate applied science based information by way of -free– packets containing plain language info for “the average joe” seeking to move themselves or others forward.

As you continue to acquire and apply more information you continue to expand the area of what is possible.

The functioning of brain cells, muscle cells, blood cells, -all cells- are governed by the laws of nature. The laws of nature -are- the underlying mechanisms of how everything works. The laws of nature that control human cellular function are -not- governed by your chosen belief system or the dogma you have been indoctrinated into, or the dogma you refuse to set aside.

“Nature, to be commanded, must be obeyed.” —[Francis Bacon]

Data-less conclusions founded upon faulty assumptions are the mother of all screw-ups. They lead to human belief systems that quickly get set in stone insuring that new information gets shouted down as pride, ego, and resistance to change supplant data, logic and reason. Put data ahead of dogma. Follow the data -not- the crowd.

“In God we trust…Everyone else must bring data.” —[W.Edwards Deming]

To be a good track coach one must -first- be a good physiologist.
To be a good medical doctor one must -first- be a good physiologist.
To be a good physiologist one must -first- be willing to………..
— put data ahead of dogma, follow the data -not- the crowd
— put science ahead of indoctrinated tradition
— put logic and reason ahead of faulty assumptions
— put mechanisms ahead of correlations and "risk factors"
— put critical thinking and clinical reasoning ahead of a memorized set of “if-then” statements
— read and apply large amounts of published research
— accept outcomes as the judge and jury of your work

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TheETG ROM's Day  [full list]

ROM's = range of motion exercises

Just as strength training can be a stimulus for muscles and tendons to grow in width, long hold stretching such as for 4 minutes for each stretch is a stimulus for muscles and tendons to grow in length resulting in a maintained or increased range of motion.

TheETG......we don't do traditional stretching before or after workouts.

We have formal stretch sessions [Range Of Motion Training Day] spread across the month all year around. Entire session takes about an hour consisting of long duration holds [4 minutes] for each stretch.

**Hip Rotators = internal rotators, external rotators**

<table>
<thead>
<tr>
<th>Push on knee</th>
<th>Arm extensor, adductor, rotator</th>
</tr>
</thead>
<tbody>
<tr>
<td><img src="image1.png" alt="Hip Rotators" /></td>
<td>--- On your back, laying flat on floor, place arms over head, place weight in each hand, weight holds back of hand on floor. Hold this position for 4 minutes.</td>
</tr>
<tr>
<td><img src="image2.png" alt="Arm Extensor, Adductor, Rotator" /></td>
<td>--- On your back, laying flat on floor, place arms out to each side in bench press position. Rotate arms backward so that back of hand approaches floor. Place weight in each hand, weight holds back of hand on floor. Hold this position for 4 minutes.</td>
</tr>
</tbody>
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**Upper Leg = quads, hamstrings, adductors**

![Upper Leg](image3.png)

**Lower Leg = calf, soleus, anterior tibialis, plantar fascia**

![Lower Leg](image4.png)
The ETG primary training program principles.....

1 --- Stay anabolic.
Keep the body in an anabolic state. If you get that done everything moves forward. If you don't get that done, nothing else matters. Be highly aggressive at preventing the gradual pile-up of job time, school time, travel, stress, lack of downtime, etc. And in this modern era of distance running it goes without saying that you should permanently place days off in your training program. That's days, as in the plural form of that word. As in more than one.

2 --- Relatively high velocity aerobic training in interval form.
The faster you train the less frequently you'll need to train and the lower the training volume required in your training. Repetitions in the corridor of 400m to 1 mile, the corridor of 1 - 7 minutes of relatively high intensity running. Those workouts should never be "periodized" out of a training program. They shouldn't come and go across the course of a year or sport season as is the traditional approach in our sport. Their presence should be permanent. At the cellular level both endurance and speed emanate from relatively high velocity aerobic training. You'll have "speed" whether you do sprints or not, you'll have endurance whether you do "long runs" or not.
The multitude of workouts in a traditional training program from 10 mile runs to 6 mile fartleks to mile repeats should collectively be viewed as the multitude of different ways a personal trainer has a client do sit-ups. You don't need a multitude of different ways to do sit-ups. You can choose one or two effective ways, stick with those and ditch the rest.

3 --- Keep up with the rate of tissue tightening and tissue strength requirements.
Hamstring, calf, or quad issues occur at times when your fitness level is moving forward. The rate of tissue tightening as your fitness level progresses in any given week may exceed the rate [frequency of stretching and strengthening] and/or effectiveness of your stretching and strengthening protocols.

So stay anabolic, have most of your workouts consist of reps between 400m to 1 mile, do formal stretch sessions somewhat frequently to keep up with the rate of tissue tightening as your fitness level moves forward, and strength train to keep up with tissue strength requirements.

Do these things and you remove the major limitations and road blocks that are embedded in most traditional training programs in track & field distance running.
"Maintenance and enhancement of vascular endothelial function contribute to the prevention of cardiovascular disease and prolong a healthy life expectancy. Given the reversible nature of vascular endothelial function, interventions to improve this function might prevent arteriosclerosis."

"Accordingly, we studied the effects of a 6-month static stretching intervention on vascular endothelial function and arterial stiffness and investigated the reversibility of these effects after a 6-month detraining period following intervention completion."

"The study evaluated 22 healthy, non-smoking, premenopausal women aged ≥40 years. Subjects were randomly assigned to the full-intervention (n = 11; mean age: 48.6 ± 2.8 years) or a half-intervention that included a control period (n = 11; mean age: 46.9 ± 3.6 years)."

"Body flexibility and vascular endothelial function improved significantly after 3 months of static stretching."

"In addition to these improvements, arterial stiffness improved significantly after a 6-month intervention. However, after a 6-month detraining period, vascular endothelial function, flexibility, and arterial stiffness all returned to preintervention conditions, demonstrating the reversibility of the obtained effects."

"A 3-month static stretching intervention was found to improve vascular endothelial function, and an additional 3-month intervention also improved arterial stiffness. However, these effects were reversed by detraining."

H.Shinno, et al
Evaluation of a static stretching intervention on vascular endothelial function and arterial stiffness
European Journal Of Sport Science -- Volume 17 #5 -- 2017 -- page 586
So called "performance enhancing drugs" are prescription drugs.

Some examples of the effectiveness of prescription drugs in sport..........

| "The drug erythropoietin, often called EPO......a new systemic review of existing research reveals that there is no scientific evidence that it does enhance performance, but there is evidence that using it in sport could place a user's health and life at risk." | EPO [erythropoietin] doping in elite cycling: No evidence of benefit, but risk of harm  
Science Daily......December 5, 2012. |
| "...there is no scientific basis from which to conclude that rHuEPO has performance-enhancing properties in elite cyclists." | The use of rHuEPO in cycling is rife but scientifically unsupported by evidence, and its use in sports is medical malpractice.  
J.A.Heuberger, et al  
Erythropoietin doping in cycling: lack of evidence for efficacy and a negative risk-benefit.  
British Journal Of Clinical Pharmacology......Volume 75 #6....June 2013...page 1406 |
| "The over-exaggeration of the effects of growth hormone in muscle building is effectively promoting its abuse...." | "...there is the question of disinformation on rhGH....Part of this problem may, paradoxically, derive from the anti-doping authorities themselves. By ignoring the evidence the rhGH does not work in normal healthy subjects, the athletic establishment could be accused of effectively promoting its use."  
*We must tell athletes the truth: growth hormone does not work* or at least not as they think it does and that its is associated with all kinds of immediate and long term hazards-----everything from decreased performance to cancer."  
"...none of us scientists, doctors, coaches, or sports bodies should continue to suggest that this dangerous doping practice works."  
M.J. Rennie  
British Journal Of Sports Medicine......Volume 37 #2....April 2003....pages 100-103 |
| "Testosterone prohormones such as androstenedione, androstenediol, and dehydroepiandrosterone (DHEA) have been heavily marketed as testosterone-enhancing and muscle-building nutritional supplements for the past decade." | "Contrary to marketing claims, research to date indicates that the use of prohormone nutritional supplements (DHEA, androstenedione, androstenediol, and other steroid hormone supplements) does not produce either anabolic or ergogenic effects in men. Moreover, the use of prohormone nutritional supplements may raise the risk for negative health consequences."  
G.A.Brown, et al  
Testosterone Prohormone Supplements.  
Medicine & Science in Sports & Exercise.....Volume 38 #8....August 2006.....pg 1367-1537 |

So called "performance enhancing drugs" are prescription drugs.

Some examples of the effectiveness of prescription drugs in American medicine & health care..........

| "Most drugs are only effective for a small percentage of people who take them." | Michael Leavitt [U.S. Secretary of Health & Human Services 2005 - 2009] |
| ".....the benefits that US health care currently deliver may not outweigh the aggregate health harm it imparts." | Journal Of The American Medical Association...Volume 302 #1...July 1, 2009...page 89 - 91 |
| "It is estimated that more than 700,000 individuals are seen in hospital emergency departments for adverse drug events each year in the United States." | [Centers For Disease Control....2015] |
| "106,000 deaths/year from non-error, adverse effects of medications" | B. Starfield  
Is US Health Really the Best in the World  
Journal Of The American Medical Association.....Volume 284 #4.....July 26, 2000.....page 483 - 485 |
| ".....1.5 million U.S. residents are harmed or killed each year because of medication errors, according to an Institute of Medicine report." | Nature Medicine.....Volume 12 #9.....September 2006.....pg 984 - 985.....News In Brief |
Pursue becoming a Master Of Sport