TheElite Training Group track club

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

You may copy any and all contents of this packet, with exception and exclusion of using such copies for purposes of producing revenue, profit, or any direct or indirect compensation.
The ETG ROM's Day

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.

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

We have formal stretch sessions spread across the month all year around. These sessions take about 90 minutes. They consist of long duration holds [10 minutes] for each stretch.

The importance of range of motion......range of motion impacts energy expenditure. The greater resistance to movement your tight tissues create, the greater the energy expended just to move the limbs. Add this to issues at ground contact, the loss of elastic energy in the calves, achillies, and plantar tissues, at some point that stuff adds to energy necessary to cover the same distance and time on the clock.

Injury prevention......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 protocols. Strength requirements of tissues that are the weakest link in the chain may exceed the frequency or effectiveness of your strengthening protocols.
soleus
The ETG ROM's

**Group 1**  [takes about 40 minutes]
1 -- hip flexors
2 -- hamstring [left]
3 -- hamstring [right]
4 -- calves

**Group 2**  [takes about 60 minutes]
1 -- adductors
2 -- soleus
3 -- quads [left]
4 -- quads [right]
5 -- hip internal rotators [left]
6 -- hip internal rotators [right]

**Group 3**  [takes about 60 minutes]
1 -- hip external rotators [left]
2 -- hip external rotators [right]
3 -- tibialis anterior
4 -- pec major 1
5 -- pec major 2
6 -- plantar facia
stretching vs heart disease [a.k.a. vascular disease, a.k.a blood vessel issues]

"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."
Science Daily......December 5, 2012.

...there is no scientific basis from which to conclude that rHuEPO has performance-enhancing properties in elite cyclists.”
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