Western

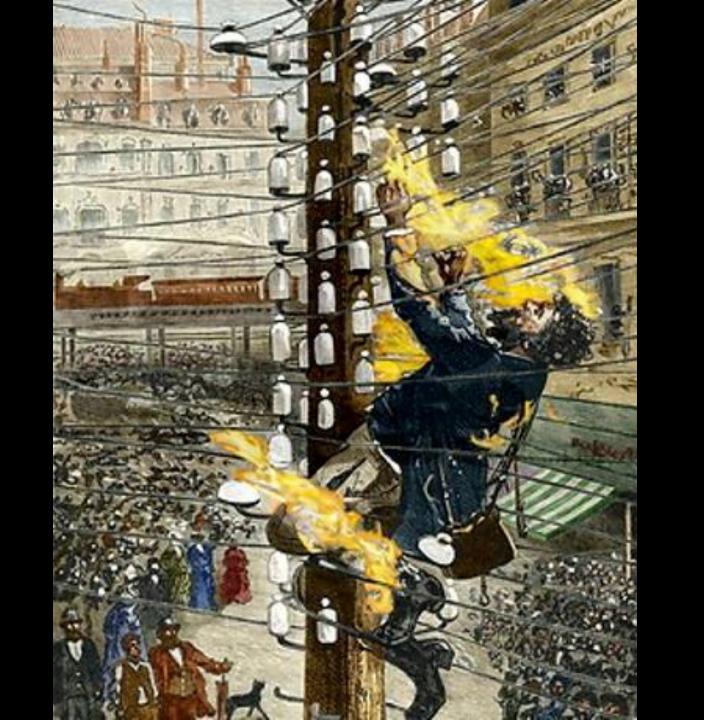


The Future of the Electric Industry in the West



2022 FALL CONFERENCE PROGRAM

LAS VEGAS, NV. SEPT. 12 - 14, 2022





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Lufkin,
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I think these might be advantageously introduced into this country, if not for general use, at least for particular cases where high insulation is a necessity.

An American Institute of Electrical Engineers.

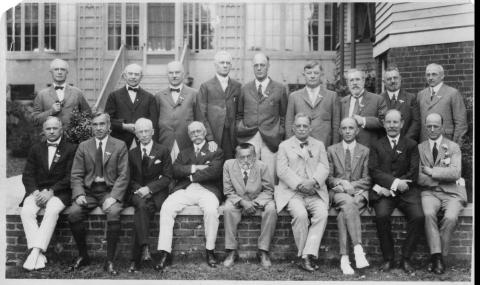
We give below the "call" that has been issued for the purpose of establishing a national electrical society to which it is suggested to give the name of the "American Institute of Electrical Engineers." We print also the names of the electricians and capitalists and others prominently connected with electrical enterprises, who have already given their hearty adhesion to the project:

The rapidly growing art of producing and utilizing electricity has no assistance from any American national scientific society. There is no legitimate excuse for this implied absence of scientific interest, except it be the short-sighted plea that every one is too busy to give time to scientific, practical and social intercourse, which, in other professions, have been found so conducive to advancement.

The American Societies of Civil, Mechanical and Mining

N. S. Keith E. A. Lesli Theo. Mac C. O. Maill James W. W. H. McC George B. Frank I.. I H. C. Room S. D. Schu George B. J. A. Seel; Frank Sha Charles S. Gerritt Sn Geo. W. S Thos. R. T L. G. Tille P. H. Var Chas. J. V D. Van No Edward

Further Broadwa

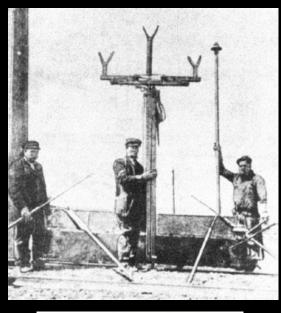


GROUP IN ATTENDANCE AT PAST PRESIDENTS'LUNCHEON, ANNUAL CONVENTION, A.I.E.E., SWAMPSCOTT, MASS., JUNE 28, 1923.

- 1. CALVERT TOWNLEY 4 CHARLES F. SCOTT 7 CARL HERING
 2 E. W. Rice, Jr., 5 PAUL M. Lincoun 8 John W. Lieb
 3. D.C. Jackson 6 Wm. McClellan 9 F.L. Hutchinson

- BOTTOM ROW, LEFT TO RIGHT 1.-A.W.Berrespord
 2-Raph D. Mershon
 3-Harris J. Ryan
 6.-Elihu Thomson
 2-C.A. Adams.





LINEMAN'S PROTECTIVE SHIELD FOR HIGH-TENSION CIRCUITS

The necessity of working on electric wires carrying as high as 8,000 and 10,000 volts, and the disadvantage of



Shields in Use on High-Tension Wires





SESSION LAWS

OF THE

State of Washington

THIRTEENTH SESSION

Convened January 13; Adjourned March 13,

1913

COMPILED IN CHAPTERS WITH MARGINAL NOTES

at the station or substation in each feeder for the transmission of electrical energy at constant potential of seven hundred fifty (750) volts or over; one shall be an oil switch so situated as to insure the safety of the person operating the same; the other shall be a disconnecting switch: Provided, That oil switches shall not be required in direct current feeders.

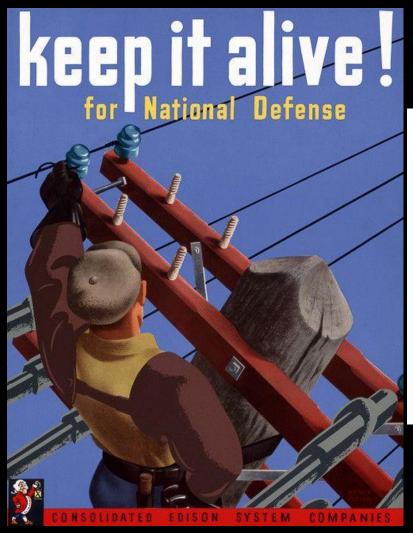
Cutouts for repairs.

Rule 20. When lines of seven hundred fifty (750) volts or over are cut out at the station or substation to allow employees to work upon them, they shall be short-circuited and grounded at the station, and shall in addition, if the line wires are bare, be short-circuited, and where possible grounded at the place where the work is being done.

Rule 21. All switches installed with overload protection devices, and all automatic overload circuit breakers must have the trip coils so adjusted as to afford complete protection against overloads and short circuits, and the same must be so arranged that no pole can be opened manually without opening all the poles, and the trip coils shall be instantly operative upon closing.

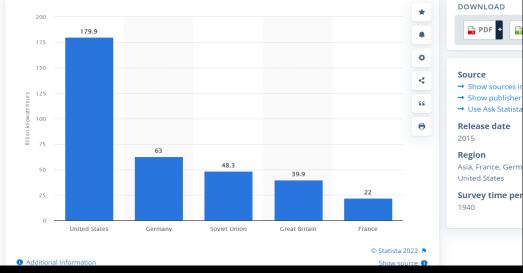
Rule 22. All feeders for electric railways must, before leaving the plant or substation, be protected by an approved circuit breaker which will cut off the circuit in case of an accidental ground or short circuit.

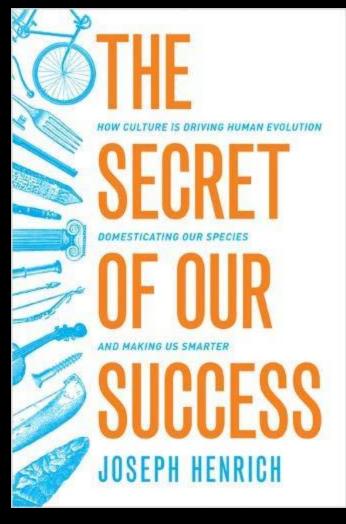
Station ground detectors. stations a ground detecting device. Rule 23. There shall be provided in all distributing



Electricity output by major powers during the Second World War in 1940

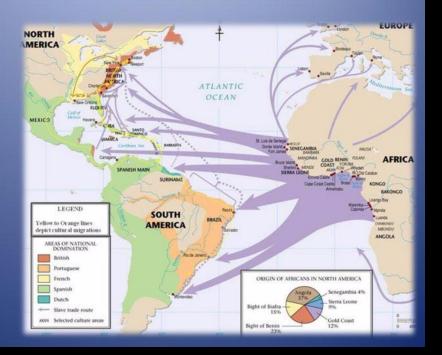
(in billions of kilowatt hours)





Cultural Diffusion

Spread of ideas, customs, or technology from one culture or people to another.



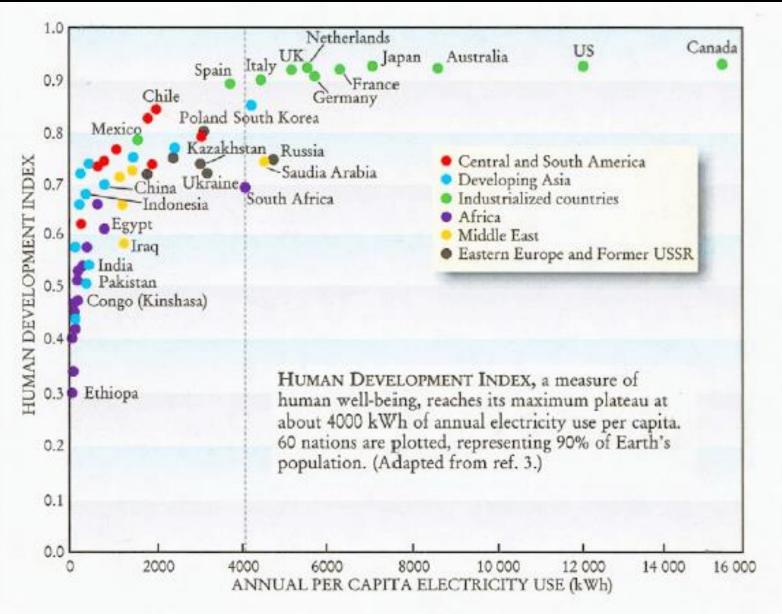


Figure 1.2. Human development index vs. per capita electricity use for selected countries. Taken from S. Benka, *Physics Today* (April 2002), pg 39, and adapted from A. Pasternak, Lawrence Livermore National Laboratory rep. no. UCRL-ID-140773.

Energy Poverty And Its Human Costs

10/05/2016 01:59 pm ET | Updated Oct 06, 2016



Michele L. Sullivan, President of The Caterpillar Foundation





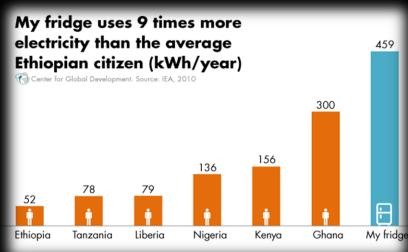
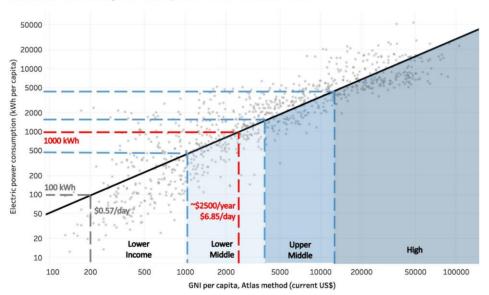
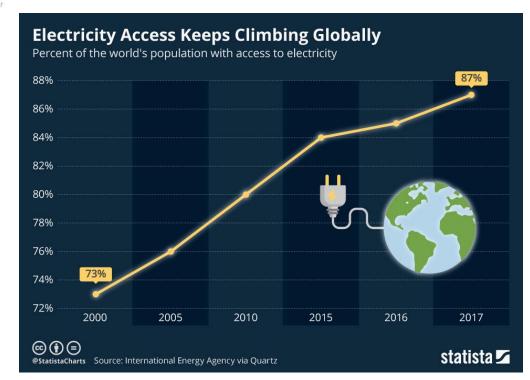


FIGURE 5: Electricity consumption and income levels



Source: World Bank, World Development Indicators. Notes: both axes are logged; R² is 0.77; see Annex 3 for methodology; income categories are the current World Bank country classifications.









https://www.facebook.com/100038037157529/videos/1298179510670876/





















"Giving light to mothers and infants in Chiulo"

Elettrici senza frontiere

Assessment for Minigrid and Solar Systems



Nino Cirrincione Fabio Ciapponi

Chiulo Hospital Cunene - 28 February 2018



Contact us Donate

Northwest Linemen Share Safe Practices on St. Kitts

by Len Shindel

They are separated by neetly 4,000 miles. But, linemen members of Seattle-based IBEW local 77 and subtly workers on the West Indian Island of St. Kitts, bordering both the Caribbasin Sea and the Addantic Cosan, share the same need—to return home to their families at the end of their wondays cate and sound.

"Honestly, we could have tifled up a whole week on rigging and tyling knots," said Brian Wheeler, who, along with Local 77 linemen Russell Smith. Cases Stater and Brask Honero, Joined on EWWIBM-Sponsored trip to St. Notts in April where they conducted training sessions and attended a lineman nodeo.

The initiative was made possible by the foresight and goodwill of Ed Hill, former President of the IBEW and EWWENA. President Hill, who passed away It all blockmark was made possessely introducing an adjustment of but net bringer inholdent or but net bringer between the but the but net bringer in a but the but net but ne

The Americans were hosted by CARILEC, a Caribbean association of electric utilities and the CUEA, the Caribbean Utilities Employees Association.

Hansen's flight to St. Kitts was delayed. Arriving a day after the other Local 77 members, said Hansen, "I saw three Northern Idaho guys who needed suncriven and had onlies ear-to-ear." The critics, he added, were from the "relationships they had already started building, finding out how also were they and their fellow electrical workers in the Caribbean."

"We noticed a lot of areas where the kneman were proficient, but a number of areas where exposure to training or safe work methods was lacking."

"Our Caribbean friends are adrenalized talking about storms, like Hurricane Maria in 2017," said Hansen. With a storm surge of one meter across the Island, workers were lieft without materials for a month and a half.

"The Caribbean workers were able to teach me about outsire and comaraderie as much as I was able to teach them about rigging and safety advances."









Electrical Workers Without Borders (Partners):











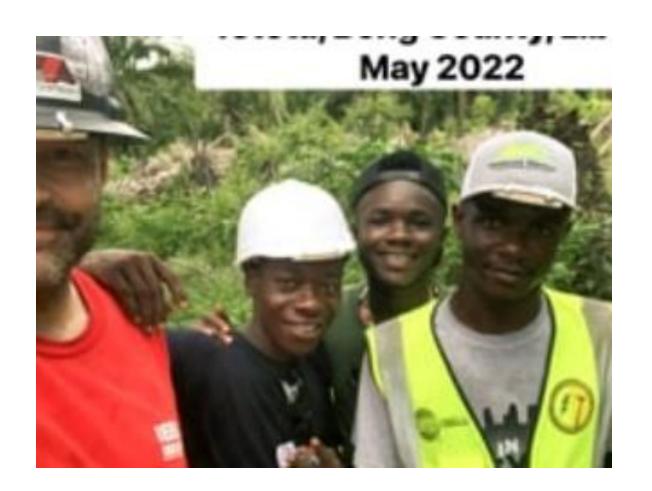
















GET INVOLVED

CONNECTING PEOPLE, TRAINING AND RESOURCES TO THOSE WHO NEED IT



GET INVOLVED SURINAME-AMERICAN BROTHERHOOD INITIATIVE (SABI)

LEARN MORE →



GET INVOLVED TOTOTA ELECTRIC COOPERATIVE - LIBERIA, **AFRICA**

LEARN MORE →



GET INVOLVED AMERICA BANGLADESH **BROTHERHOOD**

LEARN MORE →



SCAN ME

Western



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Very often people talk as if some group has taken control of some industry and they wonder how it happened. And in most cases, they **created** the industry. It did not exist until they got there."

- THOMAS SOWELL

INTERNAL PPE

SAFETY STARTS FROM WITHIN

You invest in the best on the outside:











It's time to invest in the best on the inside:





WHEN IT'S MORE THAN **JUST A GAME**

The professional sports athlete is active an average of less than 28 minutes per game.

The **working athlete** is active an average of 7 hours per work day.



TOP 5 CAUSES FOR FATIGUE-RELATED

ACCIDENTS ON THE JOB



ACCESS TO

FLUID

TEMPERATURE

PHYSICAL

EXERTION



What is Heat Illness?

Heat illness is a serious medical condition that occurs when an employee's body becomes overheated from working in areas with high temperatures and/or humidity.



INABILITY TO COPE

Heat illness is a result of the body's inability to cope with a particular heat load.



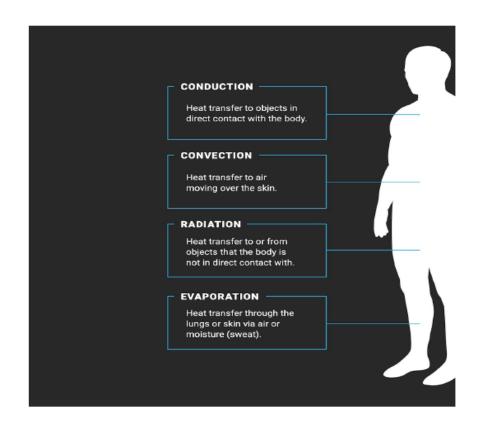
80°+

It an occur at any time but it is a greater concern with high daytime temperatures, typically above 80 degrees.



SYMPTOMS

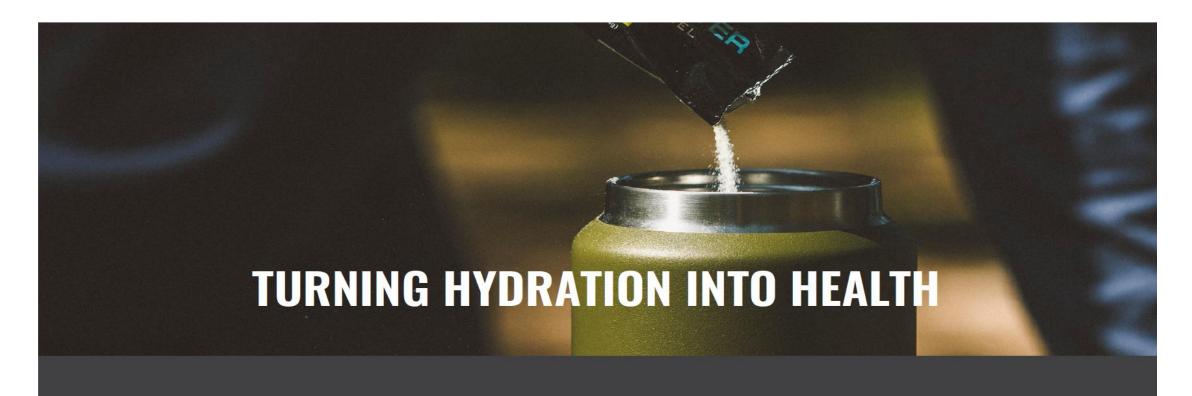
Heat illness includes heat rash, heat cramps, fainting, heat exhaustion, and heatstroke.



THERMOREGULATION

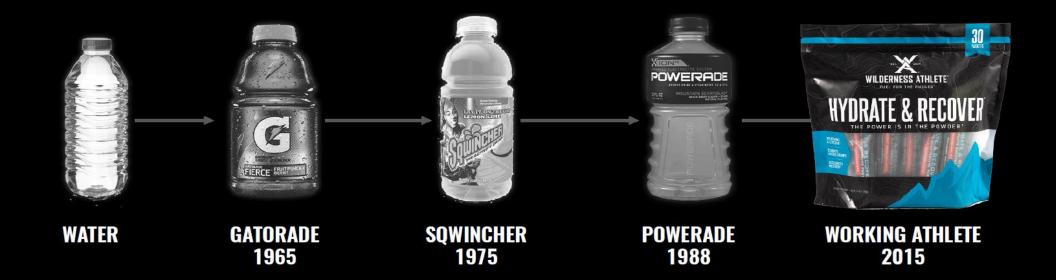
Ways Heat Can Impact the Body

Your body wants to maintain a core body temperature of roughly 98.6 degrees. When the body cannot get rid of the heat, it stores it. When the air temperature is warmer than a body's temperature, blood cannot dissipate heat through the skin via circulation. So, how can heat affect the body?



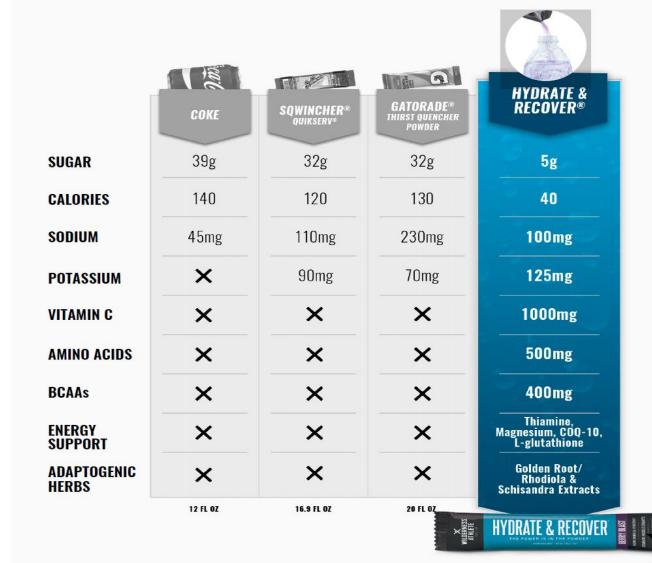
Our core belief is that the mental and physical health of your employees directly affects their safety and performance

THE EVOLUTION



LET'S COMPARE

You're probably familiar with products like Sqwincher and Gatorade as proclaimed remedies to dehydration and electrolytes. You should be just as familiar with the host of ingredients and benefits Hydrate & Recover offers that other products don't want you to know about.*

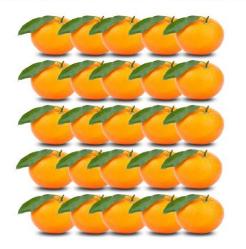


EQUIVALENT TO 1 SERVING OF HYDRATE & RECOVER

GLUTAMINE= 40Z STEAK



VITAMIN C = 25 ORANGES



POTASSIUM = 1/2 BANANA



BCAA'S = 1/2 EGG WHITE



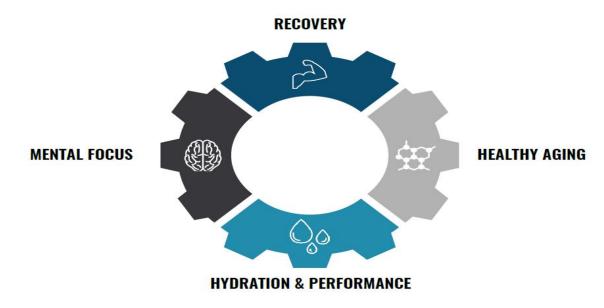






FORCE MULTIPLIER

Factors that allow you to accomplish greater things than without them.



HYDRATE & RECOVER®

Supports your system with the right things.



MAGNESIUM

Promote healthy sleep cycle and decrease nighttime cramps.*



GLUTAMINE

Speed up recovery of sore, broken down muscles and boost brain function.*



BCAAs

Rebuild muscle tissue and reduce physical fatigue.*



1000mg of Vitamin C

Increase the formation of collagen, boost the immune system, and maintain cartilage and bone strength.*

PERCENTAGE OF WATER

IN VARIOUS PARTS OF THE BODY



BRAIN 75%



HEART 75%



LUNGS 75%



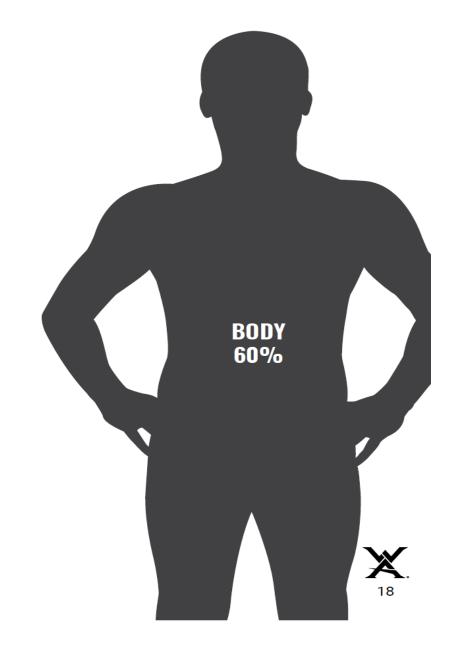
SKIN 75%



KIDNEYS & MUSCLE 79%



BONE 31%



SLUDGEBLOOD

"Normal circulation brings blood back to your heart, which pumps it to the lungs to be oxygenated. Fluid loss stresses this mechanism."

- GOOD TO GO

HEALTHY BLOOD = HEALTHY BODY



- The average adult has approximately 5.5 liters of blood.
- A healthy blood sugar level is considered 80-100 m/dl
- Average person should have around 4.9 grams (1 tsp) of sugar in their blood at any given time.

Why then do companies overload their products with 5x the amount of sugar that is required?

ENERGY & FOCUS®



BENEFITS OF ENERGY & FOCUS®

- X Zero Crash*

 No simple sugars to interfere

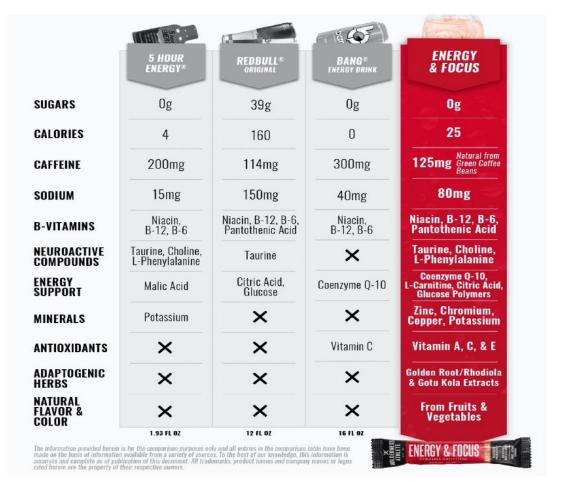
 with blood sugar metabolism and regulation.
- Vitamins B6 & B12 are included for enhanced cognitive function & elevated neurological activity.
- Sustained Energy*
 Supports the bodies natural
 energy producing mechanisms
 and pathways.
- Clarity & Alertness*
 Supports optimum brain and nervous system energy and physiology.



THE DANGERS OF

STORE-BOUGHT ENERGY DRINKS

SYNTHETIC
INCRASED BLOOD PRESSURE
DRAINED ADRENAL GLANDS
STROKE
HEART PALPITATIONS
LIVER DAMAGE
KIDNEY ISSUES
OVER STIMULATION
STRESSED ENERGY PATHWAY



Our Signature Combo

COMBINE ONE HYDRATE & RECOVER® PACKET WITH ONE ENERGY & FOCUS® PACKET INTO ONE WATER BOTTLE

ENERGY & FOCUS

HYDRATE & RECOVER



No simple sugars to interfere with blood sugar metabolism and regulation."

MENTAL PERFORMANCE

Vitamins B6 & B12 are included for enhanced cognitive function & elevated neurological activity."

SUSTAINED ENERGY

Supports the bodies natural energy producing mechanisms and pathways."

CLARITY & ALERTNESS

Supports optimum brain and nervous system energy and physiology."



*Stene statements have not been evaluated by the Poor and Drug Administratio This product is not intensity to diagnoses, frost, cure, or prevent are stonese.







Formulated with BCAAs for enhanced recovery for the next days work."

IMPROVE SAFETY

With L-Glutamine for consistent endurance and cognitive function.*

STABLE ENERGY

Low sugar formula with glycogen replenishment to beat the afternoon slump.*

ELIMINATE CRAMPS

With precisely balanced electrolytes fortified with magnesium.*



WORKINGATHLETE.COM



INTERNAL PPE

Working Athlete® Preventative Protocol

Consume 1 Hydrate & Recover® serving and 1 Energy & Focus® serving or just 1 serving of Hydrate & Recover® before your shift to ensure that the body can absorb the nutrients before work is performed.

(1)

Drink plain water throughout the rest of the morning.

2

Consume another "Superman" Combo or 1 serving of Hydrate & Recover® during lunch break or mid-afternoon as needed, depending on the level of physical exertion, loss of fluid, etc.

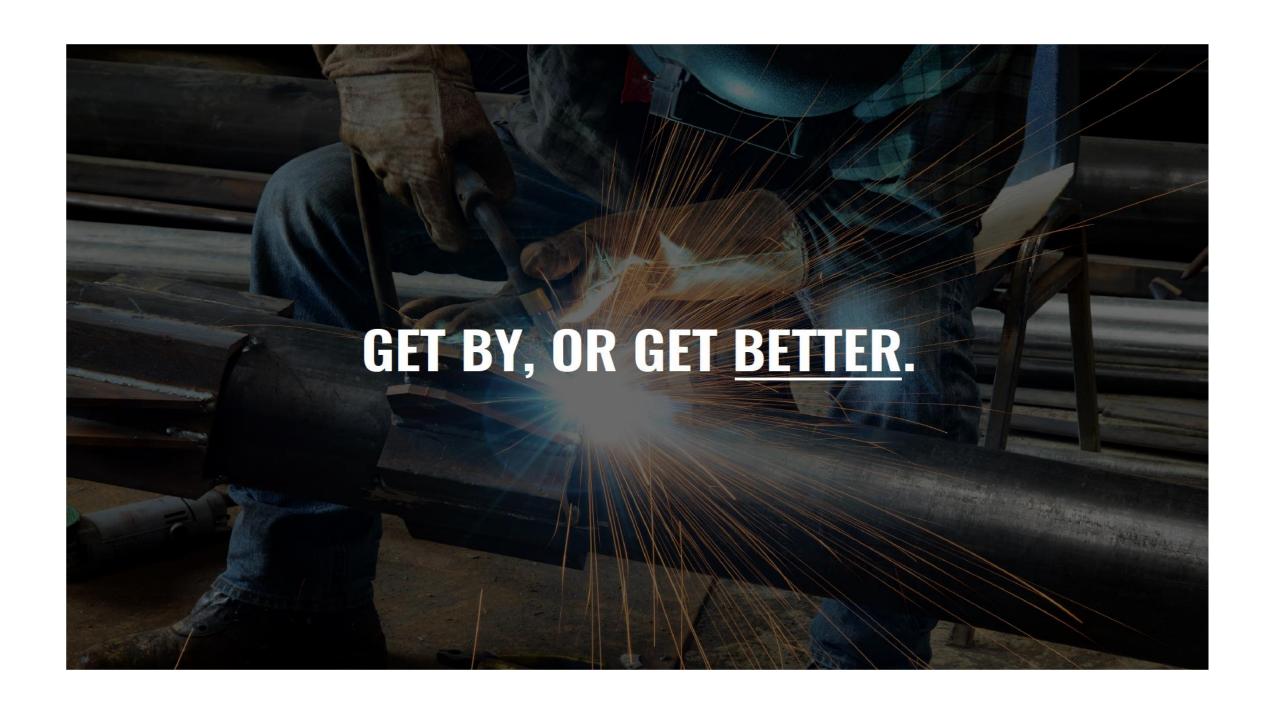
(3)

Drink plain water the rest of the afternoon shift and at dinner.

4

Another great time to consume Hydrate & Recover® is before bed. This will help you wake up feeling refreshed, recovered, and recharged.

(5



workingathlete.com

CASE STUDY 1:

Asplundh Tree Experts

Employing over 33,000 service professionals who specialize in tree pruning and removals, right-of-way clearing and maintenance, vegetation management, and emergency storm work and logistical support.

RESULTS:

We saw a **70% decrease in heat related events** across divisions nationally that used Working Athlete product, with a **100% decrease in the SW region**. We have now implemented it into the company culture and highly encourage its daily use over other products.

CASE STUDY 3:

Republic Services

2nd largest waste hauler in the USA

RESULTS:

Saw \$20,000 in cost savings per division

(contingent work spending, hiring temp workers) for those who brought in product and followed protocol.



COMPANIES FUELED BY:

WORKING ATHLETE





































































WHAT ARE BCAAs?

BCAAs allow for more intense activity & faster recovery times.

18°/_o

OF ENERGY USED

while working out comes from BCAAs

APPROX 30%

CHRONIC MUSCLE LOSS

impacts approx 30% of those over age 60.

35%

OF MUSCLE TISSUE

is made up of BCAAs

2% PER YEAR

MUSCLE MASS DECLINES

about 2% each year after the age of 50

SUPPORTED BY SCIENCE



HARRY G. PREUSS, M.D.

MD, MACN, CNS

Chair of Working Athlete®

Science, Research &

Formulations Board

Bachelor of Science



RICHARD P. SCHECKENBACH, PH.D. Bachelor of Arts (Bacteriology) University of California, Los Angeles Ph.D. (Microbiology/Biochemistry) Oregon State University, Corvallis



Institute of Physical Education & Sport,
Moscow Russia

Ph.D. (Biochemistry)
Institute of Physical Education & Sport,
Moscow Russia

VLADIMIR OLEYNIKOV, PH.D.



Bachelor of Science
The University of Utah, Exercise Science

Master of Science
The University of Montana,
Health & Human Performance

Ph.D. (Exercise Physiology)

Brigham Young University

ELI LANKFORD, PH.D.

Western



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