

CasePerformance

December Newsletter Part I



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In Part I of this month's newsletter....

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Hello,

I hope that the month of December has treated everyone well. I'm confident that you're a step or two closer towards achieving one of your short/long term goals. Things are active here for the CasePerformance team members.

Our [strength](#), [running](#) and [nutrition](#) consultations are going well. If you're interested in finding out about our group discounts please send us an [email](#).

I. A Look at This Month's Newsletter

In Part I of the December newsletter, we kick things off with our CP Community Member of the Month interview with Justin Johnson, powerlifter/highland games competitor and coach. Topics touched upon include his background, proudest moments as an athlete/coach, training splits and more.

Following our interview, we get to our CP Community Member Discussion where registered dietitian, sports nutritionist & physical preparation/tennis coach Jeff Rothschild shares with us *Dark Nights & Healthy Living in a Modern World*. In it, Jeff discusses how to minimize artificial light exposure (at night) as well as how to time exercise and food such that it works with our body's natural light-dark sleep cycle.

Needless to say, I think you'll enjoy Part I of our newsletter!

Respectfully,

Sean Casey

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II. Community Member of the Month...

This month's CP Community Member of the Month is powerlifter and Highland games competitor Justin Johnson who comes to us from Columbia, South Carolina, USA. In addition to competing himself, Justin works as a coach, helping others achieve their training goals and has currently has his eyes set on the Lightweight Highland Games National Championship. But enough of me rambling; let's get straight to the show!



Justin Johnson preparing for a lift

First off, I want to thank you for taking the time out of your training, work and social commitment schedule to join us today. We are honored with your presence.

Thank you for having me! I always love getting a chance to share some knowledge and hopefully help fellow lifters.

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Tell us a little about your background... How did you get involved with exercise, powerlifting, and the life you live today?

Well, as far as my background, I am a Strength Coach, Powerlifter, Highland Games athlete, and Performance Therapy (mobility) specialist. I first got into training years ago as a personal trainer at a commercial gym... I had been working as a full time Martial Arts instructor when a friend of mine talked to me about becoming a personal trainer since I was in shape and good with people.

I had been working as a trainer for about two years when I came across the EliteFTS website and started reading their articles. I was instantly hooked on Jim Wendler articles; I started learning anything and everything I could about barbell training and powerlifting.

Before long, all I cared about was powerlifting. Since then I have had the chance to work for and with Phil Stevens, who I still feel is one of the top coaches in powerlifting. I now work alongside Donnie Thompson, who is another one of the top powerlifting coaches and the best there is when it comes to prehab and rehab therapy.

What have been your proudest moments as it relates to A) helping others as well as B) your own athletic endeavors?

Wow, my proudest moment helping others...there are so, so many. As a trainer and coach, I feel that there is nothing better than seeing the people you train and work with, push themselves past what they thought their limits were.

As far as my own endeavors... doing my first meet after battling cancer, which is something that I could not have done without the help of Phil Stevens.

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When first starting off, what were the biggest mistakes you found yourself making? In other words, what would you advise people NOT to do when first starting a training program?

"The biggest mistake I made...not sticking to a program long enough."

The biggest mistake I made in the beginning was not sticking with a program long enough. I was the only person into powerlifting in the group of friends I had, so I didn't have anyone to talk to about [how long should I be (I should have been trying the programs, why I wasn't seeing results yet, etc, etc.) trying these programs, why am I not seeing results yet, etc etc...] So to the people just starting out, please find a program and stick with it for at least 12 weeks!!!

Are there any particular short and/or long term goals that your training is currently directed at?

My short term goal is to make it to the 2015 Lightweight Highland Games National Championship. My long term goal is to make it out of the Lightweight division of Highland Games... (It's not easy being a little guy)

What does your typical training week look like for you right now?

Monday – Speed bench with assistance work

Tuesday – Max effort Squat with assistance work

Wednesday – Recovery work

Thursday – Max effort bench with assistance work

Friday – Speed Squat with assistance work

Saturday – Back and Shoulders (recovery/fun day)

Sunday – rest

Along with all of that I will also get a couple days of throwing practice in

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How does your training change when preparing for the go Highland games? Do you still spend as much time with the barbell and then add highland specific training on top of that?

My training for Highland games is pretty easy... I stick with all my normal powerlifting training and then just add in throwing practice on top of that. On the days that I throw, I will spend a hour to two hours practicing a couple different Highland events.

If you had to pick a single lift that would be your "favorite" for pure enjoyment purposes, (not to be confused with what you think is "best" lift for performance), what lift would it be?



Favorite lift is deadlift... Favorite Highland event is Hammer throw

Figure 2. Justin winding up to throw the hammer

A topic I always get questions about is nutrition and supplements. Have you found any particular nutrition/supplement strategies to be particularly effective for you?

For me it's just eating... I have to get in as many calories as I can to keep my weight where it is, and it is very hard for me to put weight on.

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Now, do you partake in any non-nutritive means (massage, ice baths, boatloads of sleep, etc) to assist the recovery process?

I try to get lots of sleep but that doesn't always happen... but other than that there is a lot of prehab and rehab work that I do that I have learned from Donnie Thompson.

Any other final thoughts/advice you're willing to share with us at CasePerformance?

"... Don't be afraid to ask questions... have fun and love what you do."

Advice that I always like to give to people is to have fun with your training; life is too short not to have fun and enjoy it. Don't be afraid to try new things, and don't be afraid to ask questions. I have been able to meet some of the top lifters (past and present), and get to train with world champs. The one thing they all have in common is that they all are some of the nicest people I have ever met and they love helping people and answering questions. But again above all else, just have fun and love what you do.

Great advice there! Once again I want to thank you for joining us here today.

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III. Community Member Performance Discussion

Does your out of whack day-night sleeping schedule have your body feeling like garbage? Furthermore, do you have trouble falling asleep at night? If so, there's a strong likelihood that pre-bed artificial light exposure as well as exercise/dietary habits may be the culprit. Luckily for us, Jeff Rothschild, provides some excellent advice on how to overcome these issues. **[Editor's Note** - You may recognize Jeff's name as he was previously featured here on CasePerformance. Learn more about him by checking out our interview together in the [July '14 CP Newsletter!](#)] So what are you waiting for? Read on!!!

Dark Nights & Healthy Living in a Modern World

By: Jeff Rothschild



Figure 1. Night Skyline Image Source³⁷

Finding dark nights in a modern world

There is no shortage of research showing us that exposure to artificial light at night is detrimental to our health. Countless books,¹ websites,^{2,3} and research papers⁴⁻⁹ are hitting us over the head with the fact artificial lighting is making us fat and sick; Yet very few people are able to avoid it. I would even go as far as saying that I believe artificial

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light (in the amounts we are currently exposed to it) is one of, if not *the* greatest health threat that we face.

As a Registered Dietitian who is really into circadian rhythms,¹⁰ living in the ever-lit city of Los Angeles can be a bit tricky to navigate. The purpose of this article is to share how I, a nutrition nerd who is mildly (well, fairly) obsessed with the daily light-dark cycle deals with omnipresent light at night. I will break things down into three sections, blue light suppression, food and nutrition, and activity.

Blue light suppression

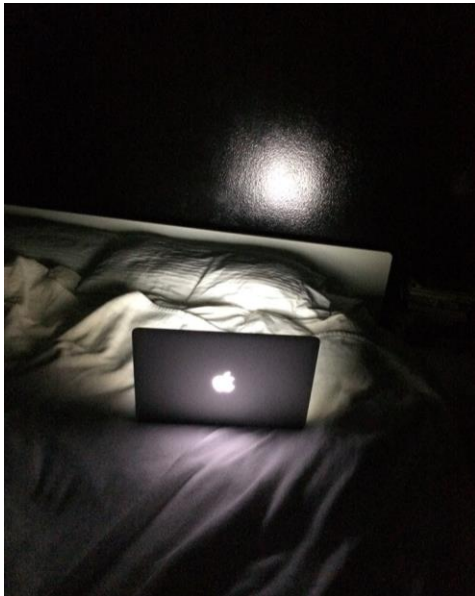


Figure 2. Blue Blocking Glasses.

I believe this is the most important aspect to address. Exposure to blue light (from smart phones, light fixtures, computer screens, eReaders, etc.) at night suppresses the nocturnal rise in melatonin secretion, disrupts circadian rhythms, and impairs sleep quality.^{11,12}

Dim lights - the first thing I do as the sun goes down is start dimming the lights. Originally installed for aesthetic reasons many years ago, having dimmers on all the lights is probably my favorite thing about my place. An alternative to dimmers could be to install red or amber bulbs in the light fixtures you use at night.

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Flux - if you don't have this program, I'd [download it right now](#). It is free, and after you install it on your computer it removes some of the blue light at night, turning the screen a yellow-ish color that will reduce the disruption of melatonin production.

TV turn-off time - with very few exceptions, I avoid watching TV after dark as this is a huge source of blue light. This may sound odd to some people, but with DVRs, Hulu, Netflix, etc., there isn't much reason (other than live sports) to watch TV at night.

Blue blockers - certain glasses with amber or red-tinted lenses, known as blue blockers, can be worn at night to prevent the melatonin suppression caused by artificial light.^{13,14} These have become increasingly popular, and the [Uvex brand](#) is probably the most commonly used. Being particularly geeky, I actually have three different pairs of blue blockers that I prefer for different purposes.



Figure 3. Blue Blocking Glasses

- *Uvex* - I like these for general use, they also fit over my glasses if I'm not wearing contacts. When I'm at home after dark these are usually being worn, and on the very rare occasion that I do watch TV after dark I definitely wear them. Even with [flux](#) on my computer, I still wear the blue blockers if I'm online at night (like while I'm writing this). Refer to top glasses on **Figure 3**.
- *Horn rimmed blue blockers* - These are more like traditional sunglasses, and are much darker than the others. I use these while reading in bed, as they reduce the light far more than

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the Uvex but still allow me to see the book (yes, actual books... not eReaders!³⁵). The downside is that they don't have the side shields like the Uvex; however this is a non-issue when reading. Refer to Middle glasses in **Figure 3**.

- *Red aviators* - Not because I want to look like Bradley Cooper in *The Hangover*; Rather, these are a nice alternative to the amber tinted Uvex and the dark horn rimmed pair. I would caution against driving with these at night as it can make the traffic lights extremely difficult to see, but it definitely does take the edge off bright headlights from oncoming traffic as well as the egregious amounts of blue light emitted from the energy efficient highway and street lights. Refer to lower glasses in **Figure 3**.

Even with closed eyes, exposure to artificial light can suppress melatonin secretion in humans.¹⁵ Mice exposed to dim light at night have increased fat stores, impaired glucose processing, and increased body mass gain in a manner similar to mice under constant light conditions.¹⁶ *This means you should probably be sleeping in a pitch dark room.* Lights from cable boxes, alarm clocks, or leaking through from the street can be very problematic.

Blackout curtains - these may not be an option for everybody, but if you can get a good set of curtains to keep your room pitch dark it would be ideal. Mine allow my room to be pitch black at night, but still manage to leak a little light in the morning which makes waking up feel a bit more natural.

Sleeping masks - a much more affordable option, they can feel a little weird but should definitely improve sleep quality. I use my sleeping mask anytime I'm sleeping in a hotel.

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With all of these recommendations, it is ideal to follow the sunset times rather than just picking an arbitrary cutoff time. This is because melatonin acts not only as a daily clock, but also as a yearly calendar.¹⁷ What that means is that the length of time melatonin is secreted (longer in the winter and shorter in the summer) cues the body as to what season it is. More research is needed to understand these implications, but I would guess there is some interplay with seasonal changes in cold tolerance,³⁶ vitamin D, cholesterol, and testosterone levels.

Food and nutrition - to eat or not to eat



Figure 3. Image Source³⁹

There is a lot of discussion about whether or not to eat at night, avoiding carbs at night, getting a protein-rich meal before bed, etc. There are multiple angles to view this from, and I'll roughly separate people into a) competitive athletes where performance is key, b) "normal", healthy people, and c) "normal" people whose bodies are highly stressed (physically or otherwise) and likely have some sort of adrenal dysfunction.

Time-restricted feeding windows - this refers to putting all of your daily food consumption within a certain window of time, often between 8-12 hours per day. For example, keeping food intake between 8 am and 6 pm is fairly achievable for many people and appears to be very good for long-term health.¹⁸ There are not many human studies but the animal research shows time-restricted feeding windows lead to

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“... eating when the sun is out is a very simple heuristic...”

improvements in body weight, visceral fat, glucose control, blood lipids, and inflammation.¹⁸

For 'normal, healthy people' I suggest consuming most/all of your daily calories while the sun is out. Some people may pick set cutoff times, such as eating between 12 pm and 8 pm. I think this is generally good but not optimal during winter when it gets dark so much earlier. I also feel that a longer window (12-14 hours) is okay during the longer days of summer. Again, eating when the sun is out is a very simple heuristic that will do the trick for most people.

For people who are in the 'normal but stressed' category, they will probably do better having a snack before bed. This is because fasting for 14-16 hours daily can be a stress on the body. Often a hormetic (beneficial) stress, but in an already stressed body this could be problematic. For competitive athletes who are training hard, I think evening an evening meal containing carbs and protein is a very good thing.

Late night protein - There is little doubt that a late night serving of protein (ideally casein) improves overnight net protein balance and promotes muscle protein synthesis.¹⁹⁻²¹ However, unless you are an elite athlete there are other factors to consider beyond net protein balance and muscle protein synthesis rates. I have no problem with late night protein for the athletes I work with, but I personally tend to favor low protein meals at night for a number of reasons.

- *Body temperature* - our natural circadian rhythms dictate a drop in body temperature while we sleep. Protein exerts a greater thermogenic effect than other macronutrients, and will raise body temperature to a greater degree.^{22,23} However, this may be counterbalanced at night by the fact that diet-induced thermogenesis is 31% lower after a nighttime meal compared with the same meal given in the morning.²⁴

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- *Cortisol* - Thought of as the 'alerting/stress' hormone, we want cortisol to be low at night. Protein has been shown to induce a greater cortisol spike than other macronutrients during a midday meal.²⁵ I'm not sure of any reason why things would be different at night, so it's reasonable to think a protein-rich bedtime snack could bump cortisol at a time when we want it down.
- *Insulin* - protein does generate an insulin response,²⁶ which is not something we want elevated late at night, especially considering melatonin influences insulin secretion.²⁷⁻²⁹
- *Iron* - many protein-rich meals also contain a lot of iron, recently shown to effect circadian rhythms of hepatic glucose metabolism.³⁰ We need to be careful that we set our clock to the appropriate times, and iron-rich foods at night may be sending the wrong signals.
- *AMPK : mTOR* - One of my [favorite Suppversity articles](#) explains the important balance between AMPK and mTOR. A recent animal study in the journal *Cell Metabolism* seems to confirm the importance of controlling mTOR for health and longevity,³¹ another reason to avoid late night protein and mTOR stimulation.

With all of that being said, consuming some gelatin protein, rich in glycine (an inhibitory neurotransmitter), could actually do good things for your sleep.³² There are various products along this line which I like and can provide more info to those interested.

Carbs at dinner - I'm not sure where this idea to avoid carbs in the evening came from, as research actually supports putting most of your carbs at dinner.^{33,34} Furthermore, if you exercise later in the afternoon, you need to restore your depleted glycogen stores! With that being said, if you're not exercising in the afternoon/evening, I am somewhat weary of spiking your insulin very late at night due to the interactions between melatonin

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and insulin.²⁷ Anecdotally, raw honey before bed can improve sleep quality. I do it on occasion (usually days when I've had very hard workouts), and I have no problem recommending it to clients.

Activity

"... after dark, there is only one type of 'exercise' that should occur..."

Exercise - while some moderate exercise a few hours before bed can help your sleep quality, high intensity workouts at night can wreck havoc on it. Furthermore, when you're at the gym after dark you are being bathed in blue light and receiving a lot of stimuli. *This is another reason why it's all about the light and dark cycles and not the clock time!* Working out at 7:30 pm during the summer is SO MUCH better than working out at 7:30 on during the winter when it's been dark nearly 3 hours already. I feel that after dark, there is only one type of 'exercise' that should occur, and that should occur between the sheets... if you catch my drift ;-).

Sleep trackers - for those who enjoy tracking things, I think sleep trackers can be a great way to see if the lifestyle changes you're making are actually affecting your sleep. I like the free program [Dan's Plan](#), but there are many to choose from.

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Wrapping it Up



Figure 4. Image Source³⁹

Ultimately this is about finding what works for you, and trying to live optimally in a sub-optimal environment. If you're a professional athlete who competes late into the evening (Grand Slam tennis matches can be played well past midnight), you will approach this differently than someone who works in an office from 9-5. Managing the light: dark cycle also becomes critical for frequent travelers who are constantly adjusting to new time zones. While some of these suggestions may seem inconvenient, making your best efforts to balance social health with physical health will certainly go a long way for you!

Last but not least, I mentioned a lot of items that can be used to assist in maximizing the light/dark/sleep cycle. If you're curious about specific items, drop me an email (see below) and I'll be more than happy to point you in the right direction!

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IV. Meets/Events

I have been notified of a couple upcoming events that those in the CP community may enjoy participating in...

2015 UPA Raw Midwest Powerlifting Championship

What: A two day event powerlifters. Will include full power event and bench only

Where: Dubuque, IA, USA

When: Jan 31st & Feb 1st

For more information [CLICK HERE](#)

2015 Strength Guild Qualifier Powerlifting, Weightlifting & Super Total Meet

What: A one day event for weightlifters and powerlifters

Where: Topeka, KS, USA

When: Feb 7th, 2015

Prize money: A cash prize dependent on total number of lifters.

For more information [CLICK HERE](#)

Endurance Sport Events

There has been no specific event that has been brought to my attention. However, for a general listing of running events going on in your area, [CLICK HERE](#)!

*** Please know that CasePerformance does **NOT** receive any financial or other incentives if you choose to participate in any of the above events.

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That wraps up Part I of this CasePerformance newsletter. Hope you enjoyed it. Stay tuned for Part II of the Newsletter where we share news of note at the CasePerformance & partner Websites before touching on the CP Performance Discussion, Part II of *Prebiotics, Probiotics & My Approach to Optimizing the Gut Microbiome*.

Until then... Train smart, train hard and leave the excuses to someone else!

Respectfully,

[The CasePerformance Team](#)