

# CasePerformance

## December Newsletter

### Part II



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## **In Part II of this month's newsletter....**

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## I. Leading Off...

Hello,

Glad to see that you're tuning into Part II of our newsletter! I hope you enjoyed [Part I](#) which featured an exclusive interview with powerlifter/Highland games competitor and coach, Justin Johnson, who shared with us his background, proudest moments as an athlete/coach, training splits and more. After our interview we got straight to our CP Community member discussion, *Dark Nights & Healthy Living in a Modern World*, by Jeff Rothschild, which discussed how we can maximize our health by with our body's natural dark-light-sleep cycle.

Shifting gears a bit, we're proud to bring you Part II of our December '14 newsletter. We kick things off by taking a quick peek at some article news here at CasePerformance before moving onto a new column in the CP Newsletter; the "Building Better Athletes Exercise of the Month" which will highlight an exercise that my BBA business partner, Michael Zweifel, & I like to include in programs for individuals looking to maximize physical performance

Next we move on to our CP Performance Discussion, *Part II - Prebiotics, Probiotics and My Approach to Optimizing the Gut Microbiome*. Finally we conclude with our SuppVersity Corner Report as well as an update on the new Strength Guild Facility opening. Enjoy!

Respectfully,

Sean Casey

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## II. Donations for CasePerformance Are Welcomed

As you've probably noticed while surfing around the CasePerformance website, we **DO NOT** litter our pages with advertisements or have "Members Only" sections that require a paid subscription.

### Why do we do this?

My goal is to reach as many individuals as possible. If an individual truly wishes to improve their health and performance, I want them to succeed. This holds true regardless if they are a multi-millionaire or those pinching pennies.

### The Downside & What You Can Do To Help

The cost of running a website in conjunction with paying for full access to the various sport science and nutrition research journals I use is extremely expensive. Also, all of the authors at CasePerformance put considerable time into writing the articles for this site. If you enjoy the free information provided on this site, we humbly ask you to show your support by making a small donation. Thanks for your support!

[\*\*CLICK HERE\*\*](#) to make a donation. Please know that **ANY AMOUNT** is greatly appreciated!

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## III. Article News at CasePerformance

One New Article was added to CasePerformance since our last newsletter...

'Tis the season for great food... Fa-la-la-la-la, la-la, la, la!



Our CasePerformance Christmas meals from around the world grew a bit larger this year as more individuals shared their holiday meals with us. Included...

Australia - John Giggins

Brazil - Paolo Altoé

Canada - Mark Oxer

Denmark - Viktor Lundager Axelsen

France - Charles Dmn

Greece & England - Dino Tassigiannis

Germany & Poland - SuppVersity's Adel  
Moussa

India - Manjari Pillai Goel, Shiba Banerji,  
Arnav Sarkar

Ireland - Ed Barrett-Shortt

Netherlands - Alexandra Faber

Norway - Børge André Fagerli

Serbia - Стојановић Лука

Spain - Molly Marie

USA - Myself

Top Article at CasePerformance during the month of November...

**Tribulus Part 1: Testosterone Booster or Marketing Hype?**



This blast from the past article, originally written in 2012, saw resurgence in popularity during the past month. I'm guessing that more than a few people are looking for a few natural T-boosters to bolster their 2015 performance. Will Tribulus help you reach new heights? Reach this article (which focuses on theory and animal data), as well as [Part II of our Tribulus report](#) (which focused on Human Studies) to find out!

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## IV. Building Better Athletes Exercise of the Month

**BBA**  
*Building Better Athletes*

Alright, to kick off our inaugural BBA Exercise of the month we're going to highlight ... (drumroll)....

### Lateral Lunge (Squat) with Band Resistance



#### NOTES:

Many individuals train predominantly in the sagittal plane (front/back) with lunges, squats, etc. However, many athletic movements as well as "every day" type movements take place in the frontal (left/right) and/or transverse (rotational) planes. Movements in these planes also need to be trained for optimal physical function! Furthermore, if you happen to pitch in a sport like baseball, lateral power is one of the predominant factors determining throwing velocity (Read [Michael's article](#) for more info). Amongst many other great exercises that can be used to develop lateral strength/power is the lateral lunge (squat) with band resistance shown in the images above. The use of the band makes use of accommodating resistance, something CP's Phil Stevens discussed in our [Oct '14 newsletter](#). **Video Link:** [Click Here](#)

Also, at risk of pointing out the obvious, before accelerating straight to the banded version, make sure you can do a straight DB version 1<sup>st</sup>!

If you're interested in training/doing a nutrition consult "in person" with us at BBA, send an email to us at [scaseybba@gmail.com](mailto:scaseybba@gmail.com)

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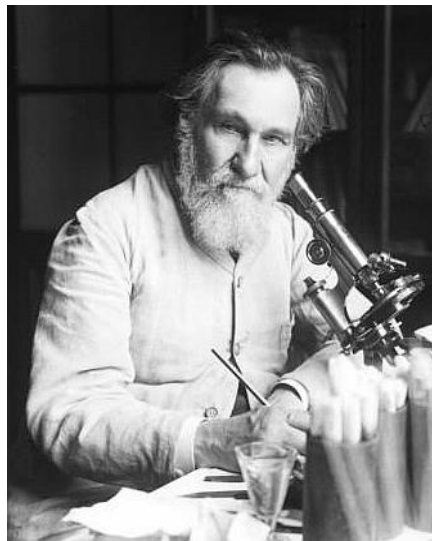
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## V. CP Performance Discussion

### Part II: Prebiotics, Probiotics and My Approach to Optimizing the Gut Microbiome

By Sean Casey



**Figure 1.** Elie Metchnikoff – An early advocate of the microbiome. Image Source.<sup>1</sup>

#### **Recap of Part I**

In Part I of *Prebiotics, Probiotics & My Approach to Optimizing the Gut Microbiome*, featured in the [November '14 CP Newsletter](#) I discussed my thoughts in regards to promoting a healthy gut through the use of probiotics ("healthy" bacteria) and prebiotics, the food upon which "healthy" bacteria feed on. As mentioned there, although I do like probiotics and think it's great if someone receives benefit from them, I'm a much bigger fan of prebiotics because...

1) Although there is some interesting research with respect to probiotic intake during times of sickness, etc., I have yet to experience/read anything that indicates they have much effect in healthy individuals already eating a sound diet.



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2) There is a lot we do not now about probiotic use (good, bad & indifferent). Pertinent questions include...

- Do we really know what the 'good' bacteria are at certain stages of life?
- Do we TRULY understand the symbiotic relationship between the 'good' bacteria, the 'bad' bacteria as well as their relationship with us, the human host?
- To what degree does the "optimal" gut microbiome vary from individual to individual?
- How much and what strains of probiotics are needed to achieve desired results?

3) Probiotics ultimately need prebiotics in order to grow and prosper. Research has shown that prebiotic ingestion alone increases the amount of "healthy" bacteria in our gut.

4) When taken in supplemental form, prebiotics are generally much cheaper.

### **Prebiotics – Digging in a Bit Deeper**

There are many questions I receive with respect to prebiotics. Assuming they are representative of ones you may have, let's get straight to them...

#### **Where can they be found?**

Prebiotics can be found in a lot of places. Speaking in terms of generalities, if the food you're eating has soluble fiber in it (oatmeal, fruit, etc.) it contains prebiotics. Likewise, you may have heard that a food has "resistant starches" in them. If this is the case, you can chalk it up as a prebiotic source. (I refer you to Alex Leaf's article, [The Humble Spud](#), featured in our March '14 newsletter, which discussed the resistance starch content of white potatoes.) Although this list is by no means "all inclusive" here are the some easy ones that can be incorporated into your diet ....

\* Banana (particularly green ones)

\* Asparagus

\* Garlic

\* Onions

\* Beans/Peas

\* Saurkraut

\* Oats

\* Berries

\* Apples

\* Leeks

\* White potatoes (see Alex's article)

You may also see added prebiotics in "health foods" or supplements; these are termed "functional fibers." Some names to watch out for on ingredient labels include...

- |                                     |                                 |
|-------------------------------------|---------------------------------|
| * Wheat Dextrin                     | * FOS (Fructo-oligosacharrides) |
| * Inulin (probably the most common) | * Pectins/gums                  |
| * GOS (Galacto-oligosacharrides)    | * Polydextrose                  |
| * Acacia Gum                        |                                 |

### **What health benefits have been attributed to them?**

The health benefits of prebiotics are twofold. First, they've been shown to enhance growth of "healthy" bacteria such as Lactobacilli and Bifidobacteria in the gut.<sup>2</sup> Furthermore, upon being fermented, prebiotics are converted into short chain fatty acids (SCFA) which can then be used throughout the body:

Acetate → Metabolized by brain, muscles, & other tissue

Butyrate → Metabolized by cells of colon

Propionate → Metabolized by liver

In terms of interventional studies, a quick review of prebiotic fibers on Pubmed reveals that they positively impact ....

Diarrhea → Decrease prevalence in travelers;<sup>3</sup> increase bowel function in those with IBS.<sup>4</sup>

Calcium Absorption → Increased absorption and bone mineral density attributed to the pH lowering effect of SCFA .<sup>5,6</sup>

Cardiovascular/Diabetes → Reduction in total cholesterol (-25%) and LDL-c (-22%) in overweight/obese individuals.<sup>7</sup>

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Weight management → Reductions in fat mass and trunk fat (~1 kg) in overweight/obese following 12 weeks of supplementing with 21g oligofructose brought on by reduced energy intake.<sup>8</sup> These changes are likely the result of alterations in gut peptides (GLP-1, peptide YY) which influence appetite.<sup>9</sup>

## How to implement them in my diet?

I recommend getting your prebiotics from a variety of sources as each food (listed above) is jam packed with other healthy nutrients. Be careful though; some of these prebiotic's may cause GI distress due to them being rapidly fermented, thus leading to flatulence. Thus, it may be wise to incrementally increase intake of these foods. Eventually, you may be able to compete with CP Contributor Alex Leaf, who consumes about 140-160g of fiber and resistant starch daily from a 4000 kcal diet based on whole-foods.



The one supplemental source of fiber that I'm particularly a huge fan of is Acacia, which comes from the acacia tree pictured to the right. Unlike other supplemental prebiotics, due to its structure, acacia fiber...

- I. Does not result in GI distress (for the most part)
- II. Does not alter flavor of items you put it in
- III. Does not change viscosity of liquid

I was first turned onto acacia fiber a couple of years ago after reading the study by Babiker et al. which found that the addition of 30g/d of acacia to a daily diet over a 6 week period led to a 2.18% decrease in fat mass in 30 healthy females with a mean starting bodyweight of 72.3 kg and BMI of 27.3.<sup>11</sup> This occurred despite no other interventions. The only side effect occurred during the 1<sup>st</sup> week when there was a slight increase in flatulence which completely resolved by week 2.

As for myself, I currently eat a wide variety of fruits and non-starchy vegetables to obtain my prebiotics (Taste wise, white potatoes don't do much for me... otherwise I'd

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probably eat them a bit more). Additionally, I take acacia fiber (~15g/d) and oat bran powder (~2/3c) per day, usually mixed with fruit.

Interestingly enough, on a purely anecdotal note, after adding acacia fiber to my diet, minor acne that I always had (since high school) cleared up within two weeks. This occurred despite A) no expectations of this potential benefit and B) no other dietary/lifestyle changes. Thus, the placebo effect and confounding factors are somewhat mitigated. However, this is purely anecdotal on my end and I'm not suggesting it will have the same benefit for you.

### Wrapping it Up

In the past two newsletters, we've covered a lot of ground with respect to my philosophies on optimizing the gut microbiome via probiotic & prebiotic interventions. I'm confident you've found something useful in them. What's your experience with pre/probiotics? Let us know on [Facebook!](#)

### *References*

1. Russian microbiologist Ilya Ilyich Mechnikov (1845-1916). Accessed November 30, 2014 from: [http://commons.wikimedia.org/wiki/File:Ilya\\_Ilyich\\_Mechnikov\\_1913.jpg](http://commons.wikimedia.org/wiki/File:Ilya_Ilyich_Mechnikov_1913.jpg)
2. Slavin J. Fiber and prebiotics: mechanisms and health benefits. *Nutrients*. 2013 Apr 22;5(4):1417-35.
3. Cummings, J.H.; Christie, S.; Cole, T.J. A study of fructo oligosaccharides in the prevention of travellers' diarrhoea. *Aliment. Pharmacol. Ther.* **2001**, *15*, 1139–1145.
4. Drakoularakou, A.; Tzortzis, G.; Rastall, R.A.; Gibson, G.R. A double-blind, placebo-controlled, randomized human study assessing the capacity of a novel galacto
5. Abrams SA, Griffin IJ, Hawthorne KM, Liang L, Gunn SK, Darlington. G, Ellis KJ. A combination of prebiotic short- and long-chain inulin type fructans enhances calcium absorption and bone mineralization in young adolescents. *Am J Clin Nutr.* 2005;82:471–6.
6. Abrams SA, Griffin IJ, Hawthorne KM, Ellis KJ. Effect of prebiotic supplementation and calcium intake on body mass index. *J Pediatr.* 2007;151:293–8.
7. Beserra BT1, Fernandes R1, do Rosario VA1, Mocellin MC1, Kuntz MG1, Trindade EB. A systematic review and meta-analysis of the prebiotics and synbiotics effects on glycaemia, insulin concentrations and lipid parameters in adult patients with overweight or obesity. *Clin Nutr.* 2014 Oct 20. pii: S0261-5614(14)00256-8.

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8. Parnell, J.A.; Reimer, R.A. Weight loss during oligofructose supplementation is associated with decreased ghrelin and increased peptide YY in overweight and obese adults. *Am. J. Clin. Nutr.* **2009**, *89*, 1751–1759.
9. Cani, P.D.; Lecourt, E.; Dewulf, E.M.; Sohet, F.M.; Pachikian, B.D.; Naslain, D.; De, B.F.; Neyrinck, A.M.; Delzenne, N.M. Gut microbiota fermentation of prebiotics increases satietogenic and incretin gut peptide production with consequences for appetite sensation and glucose response after a meal. *Am. J. Clin. Nutr.* **2009**, *90*, 1236–1243.
10. Marco Schmidt. Acacia seyal. Humid savanna near Kikidéni, Burkina Faso. 2002. Accessed November 30, 2014 from: [http://commons.wikimedia.org/wiki/File:Acacia\\_seyal\\_Bild0830.jpg](http://commons.wikimedia.org/wiki/File:Acacia_seyal_Bild0830.jpg)
11. Babiker R1, Merghani TH, Elmusharaf K, Badi RM, Lang F, Saeed AM. Effects of Gum Arabic ingestion on body mass index and body fat percentage in healthy adult females: two-arm randomized, placebo controlled, double-blind trial. *Nutr J.* 2012 Dec 15;11:111.

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## VI. Opening of New Strength Guild Facility!

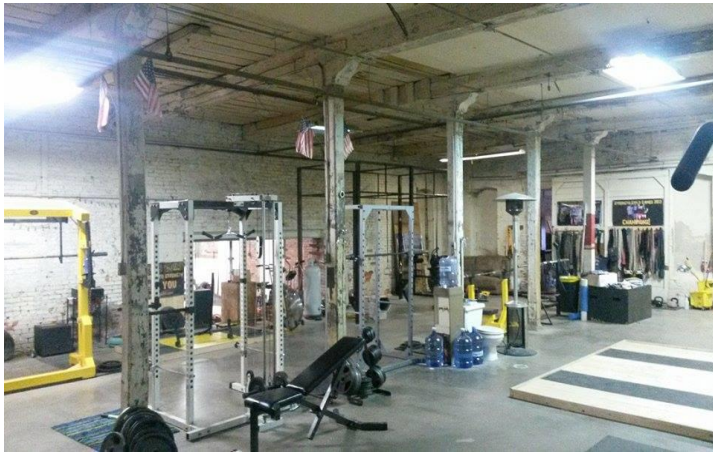
CasePerformance [contributing writer](#) and [strength coach](#) Phil Stevens is pleased to announce the opening of their brand new Strength Guild facility!

As Phil informed me,

*“SG has expanded and is going nationwide this month with new facilities raising the Strength Guild flag nationwide...More weightlifting, powerlifting and even exercise racing teams are in the plans.”*

Below are a few pictures...

For those in the Topeka, KS area looking to train with the SG team, Phil's email is [phil@strengthguild.com](mailto:phil@strengthguild.com)



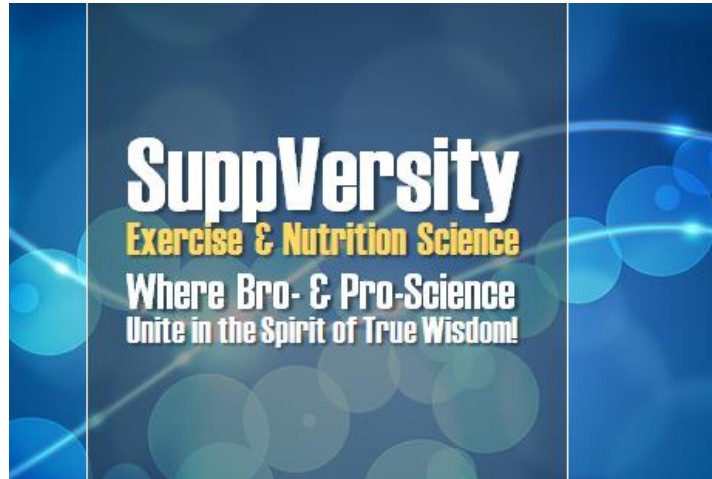


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## VII. SuppVersity Corner Report!



[SuppVersity](#) is one of my favorite sites. It's run by my friend [Adel Moussa](#). One of the things we do on the CasePerformance [FACEBOOK](#) page is highlight one of their excellent posts each week. Here they are for the past month...

### Week of Dec 1<sup>st</sup>-7<sup>th</sup>

[Whole Body Vibration Training as an Adjunct to Classic Resistance Training is Particularly Effective in the Early Phase of Training - New Exercise Stimulus, News Gains!](#)

#### CP Quick Thoughts

One of the places I once worked at had vibration platforms. They're pretty cool training "toys". Where they seemed really effective was increasing range of motion. I saw individuals who could barely bend over and touch their toes jump on one of these machines, and walk off with the flexibility to not only touch their feet but also kiss their own @\$\$\$. OK, maybe a slight exaggeration but none the less, very effective in that regard.

Unfortunately they're wicked expensive... much more so than the often overlooked activity known as stretching. :-/

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## **Week of December 8<sup>th</sup>-14<sup>th</sup>**

[Timed Ingestion of 3x21g of Whey Protein + Exercise Sheds 14% Abdominal Fat in Overweight Subjects Within 4 Months](#)

### CP Quick Thoughts

Increased protein and increased exercise does a body good and when it comes to abdominal fat, as shown in this write-up, the changes can occur pretty quickly in overweight individuals.

## **Week of November 15<sup>th</sup>-21<sup>st</sup>**

[The A to Z of Effective & Less Effective Immuno-Nutrients to Prevent and Combat Respiratory Tract & Other Infections](#)

### CP Quick Thoughts

It was really a tough choice in selecting the SuppVersity post of the week for Dec 15-21st. I found most of them pretty interesting. There was a great one on [baking soda](#) (and you do know I LOVE baking soda for ergogenics), [tomato juice](#) to help slim the waste (I'm a lover of any tomato based product... juice/paste/salsa/marinara/etc), and more. However, after careful consideration, being that we're in the winter months, I decided to go with this one.

Pay particular attention to Adel's focus on whey protein and its beneficial effects on immune system health. Interesting how the best OTC ergogenic supplements (whey, creatine, taurine, etc) also are great for your health!

## **Week of December 22<sup>nd</sup> - Dec 28<sup>th</sup>**

[The Overfeeding Overview: High Fat, Carb, Protein, MCTs, Leptin, Testosterone, T3 & Reverse T3 - Get an Overview of the Consequences of Short- & Long-Term Overfeeding](#)

### CP Quick Thoughts

With respect to optimizing one's figure, some people find "the cut"/dieting to be the most stressful event. That said I've seen individuals endlessly torment themselves on macros,



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kcal, etc of the "bulk". With that as a backdrop, I felt Adel's article on "bulking"/overfeeding was a nice summary of current research pertaining to this topic.

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That wraps up this CasePerformance newsletter. Thanks for being a part of the team. We look forward to hearing your feedback on anything and everything so drop us a note on [FACEBOOK](#).

And as always... Train smart, train hard and leave the excuses to someone else!

Sincerely,

[The CasePerformance Team](#)