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Flex Lewis celebrates becoming the first Arnold 212 champion in 2014.

ARNOLD AWAITS

THIS MONTH'S ARNOLD CLASSIC IS THE FIRST BIG EVENT OF WHAT COULD BE A FRUITFUL YEAR FOR BRITISH IFBB PROS.

■ After the Mr. Olympia, the Arnold Classic in Columbus is the most prestigious bodybuilding contest on earth. It has been held every year since 1989, but sadly no British competitor has won it. In fact, you have to search hard through the archives to find any British success.

Charles Clairmonte's third place in 1995 remains the high watermark—six-time Mr Olympia Dorian Yates never competed at the event. In recent years, nobody has improved on Ernie Taylor's 10th place in 2004.

The Arnold Classic is the highlight of the four-day Arnold Sports Festival, which includes numerous bodybuilding events. Britain has enjoyed success in

some of these: Flex Lewis won the 212 class when it was first staged in 2014 and Ryan Terry was fourth last year in men's physique. But it's been slim pickings at the main event.

Reigning British champion Luke Sandoe was the only Brit awarded an invitation to this year's Arnold Classic. It was a fabulous opportunity for Sandoe to make a name for himself and with Nathan De Asha winning two pro shows in 2016 and Sasan Heirati also emerging as a force there is cause for optimism. Let's hope, as Arnold might say, we'll 'be back' in the not-too-distant future.

Sandoe was one of five British athletes awarded pro status at the end of 2016. Turn to Last Set

to find out more about our rookie pros and their prospects.

We also feature British heavyweight champion Jenev Varghese, who has some of the craziest quads ever seen on a British stage. They're so enormous, he's actually skipping leg day for a while to allow the rest of his physique to catch up.

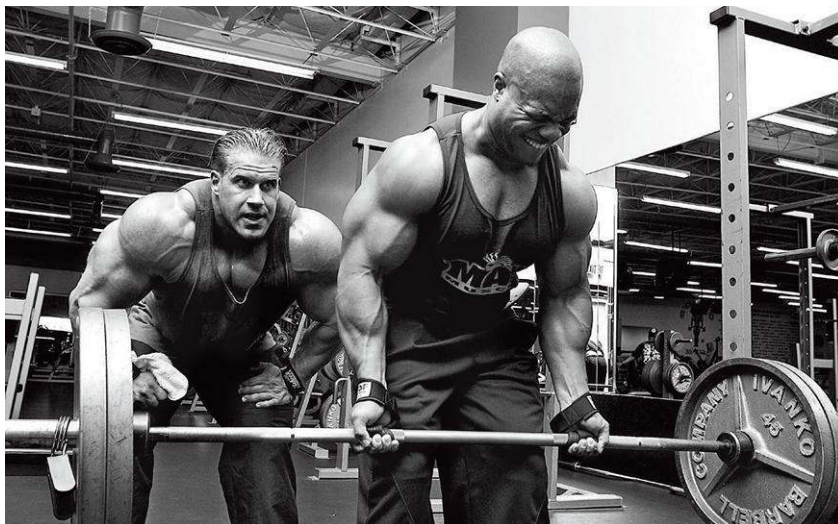
We also talk to Britain's sole remaining pro female bodybuilders, Lisa Cross and Rene Campbell, who are keeping the flame flying for the extreme look. For fans of the more mainstream look, our Classic Muscle section includes interviews with world championships high flyers Reno Banks and Andrea Corbett.

ONLINE NOW

JOE WEIDER'S OLYMPIA EUROPE

In October 2016, the Olympia made its way overseas to Germany for the introduction of Joe Weider's Olympia Europe! It was an impressive lineup in Dortmund, with the 2008 Mr. Olympia, Dexter Jackson, taking the title. You can relive the excitement on FLEXonline.com with video coverage of the posing routines, the posedown, and the crowning of the champ.

FLEXonline.com/2016olyMPIAEurope



KEVIN HORTON

BEFORE THEY WERE MR. OLYMPIAS

Jay Cutler and Phil Heath have 10 Mr. Olympia titles between them. These two champs are longtime friends, spanning back to before either of them had ever taken home the coveted Sandow. This month, we draw some inspiration by looking back at these two legends training together before they were Mr. Olympias and appreciating just how far they've come.

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SOCIAL ALL-STARS

PHIL HEATH

Time to get back to the grind!

FLEX LEWIS

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BIG RAMY

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STEVE KUCLO

It's important to be a representative of your brand...you are your brand. Live the lifestyle you love!

WILLIAM BONAC

When you start doubting yourself remember how far you've come. Remember everything you've faced, the battles you've won, and all the fears you've overcome.

SHAWN RHODEN

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"Once again, I placed an ad for used training equipment in the local newspaper."

MEMOIRS OF A HOME TRAINER

■ When I think about it, I've always been a home trainer, despite the fact that, for 30 years, I was fortunate enough to have trained right next to some of the greatest champion bodybuilders of all time in some of the best gyms in the world.

My fascination and love for this unique and sometimes weird activity now known throughout the whole world as bodybuilding, started inside a six-foot-by-six-foot outside washhouse, which was detached from my mother's house, way back in 1963.

With training instructions from the Reg Park Journal and Joe

Weider's brilliant *Muscle Builder* magazine, the washhouse was my very first home gym, and I christened it 'Larry Scott's Gym' because he was all the rage and a true inspiration at that time. Larry became bodybuilding's first Mr. Olympia in 1965. He won it again in 1966 then retired from competition.

I obtained, at very little cost, one barbell, 200 pounds of second-hand assorted weights, two adjustable dumbbells, a ladder which I attached to the outside roof of the wash house so that I could perform parallel grip chin ups, and an old wooden bench.

Reading *Muscle Builder* every month, I marvelled in awe at the fantastic black & white training shots taken by the late great Artie Zeller, who became an inspiration, and, later on, a true friend. These photos were taken in fantastic looking gyms in Southern California, and all of the bodybuilders seemed to use lots of different exercises, some of which I had never seen before, especially various pulley setups which were a totally new experience for me.

Frustrated with my own lack of training equipment and knowledge, I decided to join the Sunderland

YMCA, which was the only place in town that had a weight room. On Mondays, Wednesdays, and Fridays, the men used the place down in the old basement and on Tuesdays and Thursdays it was ladies days. During the next few years, a grand total of five of us trained under the expert guidance of a huge Reg Park lookalike called Big Steve. Weighing a massive 19 stones, to my 11 stones, 7 pounds, Steve was the spitting image of Reg Park. Needless to say, Reg was Steve's idol, but then again the whole British bodybuilding fraternity worshipped the ground

Reg Park walked on back in 1963.

Big Steve really knew how to train and we worked out religiously and hard every Monday, Wednesday and Friday after work. We trained the whole body at each workout, and there was no time for any messing about. This was all serious stuff—pure nonstop hard work from the word go. I had never worked harder in my life. In true Reg Park fashion, our workout went something like this: squats, front squats, bench press, incline dumbbell press, chins, bentover rows, deadlifts, press-behind-neck, barbell curls, standing incline dumbbell curls, lying triceps extensions, parallel dips, and, finally, 15 minutes of donkey calf raises at the bottom of the stairs. Needless to say, my muscles ached like never before, even though we must have all been terribly overtrained from working every muscle three times a week. Despite this, I personally built more muscular mass and strength than I had ever built in my entire life, plus my bodyweight soared, thanks to six pints of milk and 12 raw eggs every day!

In 1967, Steve emigrated to Australia, and I never saw him again. The YMCA basement gym was never the same without his guiding influence and the remaining gang of four dedicated young bodybuilders broke up. A year later, I joined the Sunderland Borough Police Force, and faced 17 weeks training at Dishforth in Yorkshire. But, then I suddenly panicked. What if they didn't have a weight room? How could I survive 17 weeks without a workout? A plan was required, and believe it or not, three future cops, plus their luggage, a six-foot barbell and at least 200 pounds of loose weights scattered all over the car, made their way to Dishforth, in a Mini!

When I arrived at the camp, my fears were completely unfounded. "There's a load of weight lifting gear in the Decontamination Centre. Check out Inspector Purcer. He hangs out there," said one of the instructors.

I immediately headed over to the Decontamination Centre in a state of pure anticipation, and when I opened the door I simply couldn't believe my eyes. There, to my total astonishment was a fully

equipped bodybuilding gym, complete with lat machine, dumbbells, chin bar, squat racks, benches, barbells and lots of discs of all denominations. I was delighted. For the next 17 weeks, this Decontamination Centre became my own personal home gym, despite the fact that literally hundreds of different personnel from all over the world passed through the camp every week. That's right, no one else came to the Decontamination Centre to work out while I was there, which shows you how popular bodybuilding was back in 1968! No one,

In 1980, I decided to sell up and move to Canada, and one of the major reasons we were able to sell the house so fast, was the garage home gym. The person buying the house was a young bodybuilder, and he was knocked out with his new home gym, especially when he discovered it had a Reg Park, 310-pound barbell and dumbbell set, complete with bent bar from all the squats!

Buying a house in the country, 40 miles outside Toronto meant two things: A long and sometimes hazardous car journey, especially in winter (when the temperature

I COULDN'T, AND DIDN'T, WANT TO TRAIN AT A COMMERCIAL GYM. WHENEVER I MOVED HOUSES, MY HOME GYM ALWAYS CAME ALONG WITH ME.

that is, except Inspector Fred Purcer who once placed fourth at the NABBA Mr. Universe.

Fred Purcer was a true bodybuilder, but he was also a hardworking police Admin Officer who had a fantastic physique and amazing strength. However; when he did squats, he always lifted the barbell up from the floor and placed it behind his neck before doing the exercise. After his last rep of squats, he dipped his knees then lifted the bar from behind his neck and placed it back on the floor again. This really had me a bit confused, so I asked him why he did this, considering there were some good heavy squat racks available. "Because, the next place they send me might not have squat racks!" he replied.

When I left Dishforth, I immediately placed an advert in the local newspaper for used weightlifting equipment, because I couldn't, and didn't, want to train at a commercial gym. I was bombarded with all kinds of stuff that people had bought in good faith at the time, but then, as usual, had lost interest in. From then on, whenever I moved houses I always built another home gym.

often dropped to minus 25 degrees) and the building of yet another home gym. Once again, I placed an ad in the local newspaper and got everything required to outfit a great basement home gym. Five years later, I returned to England to work for Joe Weider, and immediately placed another ad for used training equipment in the local newspaper. This time, I was absolutely inundated with responses, and had no trouble picking up everything I needed to build another home gym.

During the next 25 years or so, whenever I was in the USA taking photographs for FLEX magazine, I always spent my free time training alongside the greatest bodybuilders in the world, at either Gold's Gym, Venice, or Club MetRx, in Costa Mesa or the Koloseum Gym in Fullerton. Even though all these great gyms had the finest training equipment that money could buy, I never got the same satisfaction that I did working out in my own home gym!

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AND KEEP TRAINING,**

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CURCUMIN CAN BEAT DOWN INFLAMMATION

■ Lots of spices are known to be full of antioxidants, often delivering more punch per gram than other all-stars like dark chocolate and red wine. One of the most potent compounds is curcumin, the active ingredient in curry spice turmeric. New research has shown that a daily dose of 200mg of the anti-inflammatory can help reduce the markers of muscle damage that result from intense training.

CANOLA OIL BEATS BELLY FAT

A Penn State study found that the monounsaturated fats in canola (rapeseed) oil may specifically burn the visceral fat that accumulates around the stomach. Researchers tested how canola, high-oleic acid canola, high-oleic acid canola with omega-3 DHA, corn/safflower, and flax/safflower oils affected the amount of abdominal fat in 101 people over four weeks. Those who got the oils with canola in it lost about an eighth of a kilo of belly fat.

MULBERRIES MAY ACTIVATE BROWN FAT

■ Brown fat—adipose tissue that generates heat in the body—has been in the news a lot lately because of its ability to rev up our metabolism, but the only sure way to activate it is to hang out in chilly temps. But new research out of the Chinese Academy of Sciences discovered that there's no need to freeze your balls off to get the fat working for you—all you may need is mulberry extract. A natural compound in the berry, called rutin, can trigger brown fat thermogenesis, helping increase metabolism and drop unwanted kilos



FAST FOODIES CAN'T STOP THEMSELVES

If you're lucky enough to have kept clear of the fast-food trap that so many people fall into, it may be because you're the type of person who is able to delay immediate gratification, says a new study in the journal *Preventative Medicine*. Scientists took a look at survey results from almost 6,000 people and found that those who were willing to wait to be given a larger amount of money at a later date were 26% less likely to chow down at a fast-food joint.

30%

The amount that three low-carb meals within 24 hours lowers insulin resistance, says a U. of Michigan study. High-carb meals support insulin resistance, which leads to high blood pressure and diabetes.

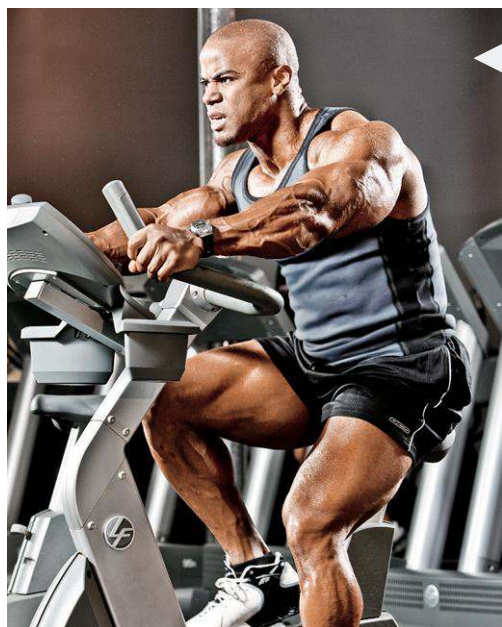


MUNCH BUGS FOR MORE MINERALS

■ King's College London examined the mineral content of edible insects and created a nutritional rundown. Bugs contained twice as much available iron as red meat and also had more absorbable minerals like copper, calcium, magnesium, and zinc. Artisanal bug bars: coming soon to a hipster neighbourhood near you!

EGGS BOOST VITAMIN E IN SALADS

A study from Purdue U. found that tossing three hard-boiled eggs in your daily salad can increase absorption of vitamin E by nearly sevenfold. Vitamin E—found mostly in leafy greens, oils, seeds, and nuts—has potent antioxidant and anti-inflammatory properties, supports the immune system, and may help prevent heart disease. This could help those who don't get their daily dose of veggies up their vitamin E without taking supplements.



DO CARDIO AFTER

■ A study performed by the Department of Health and Exercise Science at The College of New Jersey demonstrated that aerobic exercise performed before resistance exercise significantly reduced resistance exercise performance even when unrelated muscle groups were involved.

DON'T POUR COLD WATER ON IT

The ability of cold-water immersion to reduce inflammation and speed recovery was tested by Australian researchers at Queensland University of Technology. Cold-water immersion did not differ from light cycling for reducing inflammation and cellular stress.

EASE INTO IT

Researchers from Italy examining the changes in tendon structure following an abrupt stop in training warn that getting back in the gym should be done with caution. In short, after a layoff, even if you feel like jumping right back in where you left off, it is better to ease into your previous level of intensity to avoid risk of injury to tendons.

GO HEAVY AND LIGHT

■ According to a paper published in the *Journal of Strength and Conditioning Research*, the classification of training routines by their sets, reps, and weight loads as either for bodybuilders or for strength athletes, is an oversimplification. The paper shows that both heavy-weight/lower-rep and moderate-weight/higher-rep routines appear to elicit similar gains in muscle growth.



50

Times per second the brain must send a message to the quads to contract during a single rep of leg presses.



THE SHOULDER KING



**IFBB PRO STEVE KUCLO MAKES A
STRONG SET OF DELTS EVEN
STRONGER WITH THIS ONSLAUGHT OF
LATERAL AND REAR DELT RAISES**

BY **JOE WUEBBEN** PHOTOS BY **IAN SPANIER**

WITH SO MUCH ATTENTION PAID TO THE “SHOWTIME” BODY PARTS LIKE CHEST, ARMS, AND ABS, THE DELTOIDS OFTEN GET LOST IN THE SHUFFLE.

But if there's one bodybuilder whose shoulders never get lost in the mix, it's Steve Kuclo.

Known as the King Snake, Kuclo's shoulders give him the classic American Hero image, and it's not just for show: He's a former firefighter and EMT. “Delts are a genetically gifted body part for me,” the Dallas resident says. “I'm wider than the average guy because of it, and it gives me a wider X-frame, so I'm fortunate in that regard.”

The deltoids are a group of three muscles (front, middle, and rear) that can be brought up with hard training and a little persistence. And we're talking about doing not just more, and heavier, overhead presses to build size. According to Kuclo, raises can be just as effective at creating greater width, even though you'll be training with much lighter weights compared with presses.

“I always tell people to do more lateral and rear delt raises,

particularly the latter,” Kuclo says. “People often neglect the rear delts, but that's a muscle that will really help create more width from a front-to-back perspective—like with side chest and side triceps poses. Even looking straight on, like with a front lat spread, good rear delts will help bring out more width.”

In the gym, Kuclo practises what he preaches, evidenced by the shoulder workout described on these pages. As you'll see, much attention is paid to side and rear delt raises, including a brutal reverse pyramid drop set for standing laterals. Give it a try to bring up a weak pair of shoulders—or even to make a strong set of delts even stronger, as Kuclo does.

“Having a monster set of delts gives you that crazy wide visual that can take you over the top,” he says, obviously speaking from personal experience. “If you have width, you'll look 10 kilos bigger in the same weight class.”





SNAPSHOT

HEIGHT 180 cm
WEIGHT 123 kg (contest)
BIRTHDATE Aug. 15, 1985
RESIDENCE Dallas, Texas
NICKNAME "King Snake"
CAREER HIGHLIGHTS 2016 California Pro, 1st; 2014 Arnold Classic Brazil, 1st; 2013 Europa Super Show, 1st; 2011 NPC USA Championships, super-heavyweight and overall winner (earned pro card)

SEATED DUMBBELL SHOULDER PRESS

KUCLO'S COMMENTARY "I don't go to full extension at the top of the rep—I'm not locking out the elbows, and I'm not clanging the weights together. By stopping a little bit short, like you see in the photo here, I'm keeping constant tension on the delts. Another thing I do on these is I arch my back a bit and press from there. On shoulder day [Friday], I do only one pressing exercise—either a dumbbell or barbell seated overhead press."



TRAINING SPLIT

SUNDAY

Legs (quad-dominant workout)

MONDAY

Chest, abs

TUESDAY

Back

WEDNESDAY

Legs (glute/

hamstring-dominant workout)

THURSDAY

Triceps, biceps, abs

FRIDAY

Delts, traps

SATURDAY

Rest

NOTES: "In the off-season, I may take one more rest day per week," Kuclo says. "But [pre-contest] I train six days a week. I've backed off training calves, since it's a strong body part for me," he says. "I train calves maybe every two weeks, usually after shoulders [in the Friday workout]."



STANDING **DUMBBELL** LATERAL RAISE

KUCLO'S COMMENTARY "I always try to lead with my elbows on laterals to remove the traps from the exercise as much as possible. Also, do your best not to swing the weight up; don't use momentum. To keep tension on the delts, sometimes I'll stop a little short at the bottom, where the dumbbells are 30 centimetres or so from my legs—I typically do this with the lightest weight on the final dropset [20 reps]. When your arms are hanging straight down toward the floor with dumbbells, the tension is pretty much off the delts at that point. If you're doing laterals with a cable, you wouldn't have to worry about that, but with dumbbells it comes into play."

**"HAVING A MONSTER SET
OF DELTS GIVES YOU THAT
CRAZY WIDE VISUAL
THAT CAN TAKE YOU OVER
THE TOP. IF YOU HAVE
WIDTH, YOU'LL LOOK 10
KILOS BIGGER IN THE
SAME WEIGHT CLASS."**



TRAINING SPLIT

EXERCISE	SETS	REPS
----------	------	------

Delts

Seated Dumbbell Shoulder Press (warmup)	2	15-20
Seated Dumbbell Shoulder Press (working sets)	3	12, 10, 8*
Standing Dumbbell Lateral Raise	3	10/15/20**
Seated Dumbbell 45-degree Lateral Raise	3	12-15
superset with Seated Dumbbell Rear Delt Raise	3	12-15

Traps

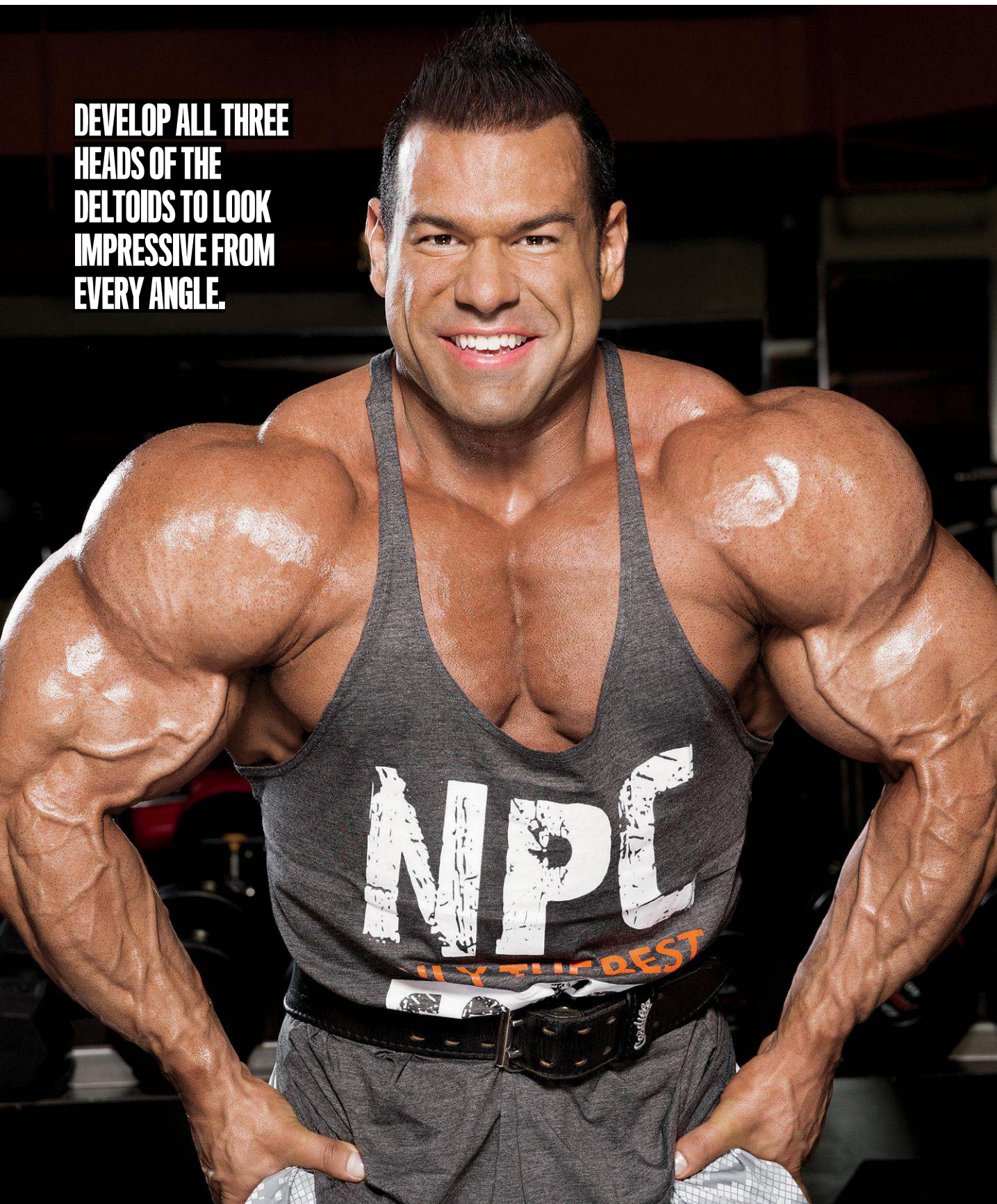
Cable Face-pulls (not pictured)	3	12-15
superset with Hammer Strength Shrug (not pictured)	3	15

*Increasing weight on each set (pyramid).

**Kuclo does a "reverse dropset" on each of the three sets, where the weight is decreased and the reps increase on each drop. One set = 22.7-kg. dumbbells x 10 reps, 18-kg. dumbbells x 15 reps, 14-kg. dumbbells x 20 reps, with no rest between weight changes.



**DEVELOP ALL THREE
HEADS OF THE
DELTOIDS TO LOOK
IMPRESSIVE FROM
EVERY ANGLE.**





SEATED DUMBBELL 45-DEGREE LATERAL RAISE

KUCLO'S COMMENTARY

"I use a neutral, thumbs-up grip on this exercise, and I lift my arms up at around a 45-degree angle with my torso—so it's sort of a cross between a standard lateral raise and a front raise. I don't like to do much front delt work, since I'm already hitting that area with chest presses and shoulder presses, so this is about all the isolation I give it. If I do too much front delt work, I'm

afraid it will overtake my chest. In a physique-based sport, you always have to be thinking about proportion.

"Don't go too heavy on this exercise. You should be using a little more than half of what you'd use for standing lateral raises. A lot of people go too heavy and don't feel it enough."



SEATED DUMBBELL REAR DELT RAISE

KUCLO'S COMMENTARY "I always try to keep my traps out of this exercise. To do this, reach out to the sides as you lift the weights up—reach out instead of back. I feel like this technique gets those rear delts to fire better. Another key for making sure the rear delts are working is turning the palms so they face behind you, not down toward the floor. When the palms are down, you tend to turn it into more of a rowing movement where you're pulling with the elbows; this ends up hitting more of the upper back and upper traps than the rear delts.

"The key to this exercise is finding that sweet spot where the rear delts are taking on the brunt of the work, so try different paths of motion to find what targets that area best." **FLEX**

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**"DELTS ARE A
GENETICALLY
GIFTED BODY PART
FOR ME. I'M WIDER
THAN THE AVERAGE
GUY BECAUSE OF IT,
AND IT GIVES ME A
WIDER X-FRAME."**



THE KING SNAKE IS ONE OF THE NEW CROP OF YOUNG PROS ON THE CUSP OF OVERTAKING THE ESTABLISHED VETERANS. WILL HE MAKE THE LEAP TO THE TOP TIER THIS SEASON?





THE QUAD FATHER

JENEV VARGHESE MADE THE JUDGES AN OFFER THEY COULDN'T REFUSE WHEN HE DISPLAYED HIS FREAKY LEGS AT THE BRITISH CHAMPIONSHIPS.

BY **JOHN PLUMMER** PHOTOGRAPHS BY **CHRISTOPHER BAILEY**

LET'S START WITH THE QUESTION everyone asks: how did Jenev Varghese get such freaky legs? "I do get asked that all the time," he smiles. "People are always saying 'pull your trousers down, let's have a look', even when I'm out in town." There are worse things in life than being known for having spectacular legs, although being asked to strip in Luton town centre on a Saturday afternoon can't be much fun. Buying trousers is a nightmare, too. "That's why I always wear shorts, even in winter," he says. ►

It's easy to understand the fascination. Many guys strive a lifetime for a decent thigh sweep. Varghese has more of a boomerang going on. It's partly genetic. "Everyone in my family has good legs...my mum, dad, and brother," he says. But none are quite like his. Years of sprinting, kickboxing, and football in his teens developed them and when he started bodybuilding they exploded. He credits his slow and precise leg training methods, which we'll discuss later, for the current state of affairs.

Varghese and his older brother competed in small shows in India before the family moved to the UK, where Indian heritage bodybuilders remain something of a rarity. "Most Asian parents want their sons to be doctors or engineers," he says.

Varghese made his UKBFF debut in 2011 and his legs have been drawing gasps ever since. But in a sport that's as much about proportion as size, an oversized body part can be as much of a curse as a blessing. Sure, his physique had impact and had won a clutch of trophies—but was it complete enough to challenge for the British title?

ACETO GAINS

Varghese signalled his intent for 2016 when leading US prep coach Chris Aceto agreed to oversee his nutrition. Teaming up with Aceto was quite a coup. "I showed Chris some photos of me and he must have seen something he could work with," he recalls.

Aceto vastly increased his calories and when Varghese's weight rocketed to 121 kg he felt sure he'd be a super-heavyweight until an intense pre-contest cardio regime saw the fat fall away. "I didn't do any cardio off-season, but during prep I was on that Stairmaster for at least two hours a day," he says. He lost 28 kg and weighed in at 93 kg, making him one of the lighter guys in the 100-kg heavyweight division. "In eight months, Chris changed my physique," he says. "I weighed the same on stage in 2016 as I did in 2015, but I looked much fuller and my condition was bang on point. I normally stay leaner offseason, but Chris wanted me to put extra weight on. That's what old school bodybuilders used to do—bulk up. You have to put on that extra



weight to add that extra 4-6 lbs of muscle." Better still, much of the new muscle had gone on his upper body, balancing out his physique.

Varghese breezed through the final qualifier, then took the heavyweight title in Nottingham, defeating junior sensation Azeez Salu. "It was amazing...mind-blowing," he says. "But I was confident because I knew I had improved and done everything right." The only negative was losing to Luke Sandoe for the overall title and IFBB pro card. "I'd be lying if I said I wasn't disappointed, but I wasn't wide enough when I turned to the

back," he says.

A week later, Varghese rounded off a great year by finishing second at the Diamond Cup, a prestigious international event in Liverpool. He's now focussed on defending his British title in October and winning the overall. He's training hard at Xplosive Ape Fitness Gym in Watford and, for the time being, skipping leg day. "I've got orders from Chris not to train them for a while," he says. Back and shoulders are the priorities.

SIX-WEEK ROTATION

Varghese follows a six-week

JENEV VARGHESE

SNAPSHOT

AGE: 32

PLACE OF BIRTH: Dubai

LIVES: Luton

HEIGHT: 178 cm / 5 ft 10

CONTEST WEIGHT: 93 kg /
205 lbs

CAREER HIGHLIGHT: 2016
UKBFF British heavyweight
champion

AMBITION: To be an IFBB pro

TRAINING ADVICE: Train smart

SPONSORS: BPI Sports UK and
Maximum Nutrition, Luton.

ONLINE: Facebook Jenev
Varghese; Instagram Jenev_
Varghese

TRAINING SPLIT

MONDAYS

Back, rear delts, and calves

TUESDAY

Chest and side and front delts

WEDNESDAY

Legs*

THURSDAY

Shoulders and back

FRIDAY

Arms and calves

SATURDAY

Rest

SUNDAY Rest*

*Varghese is not currently training legs

**VARGHESE HAS
ADDED NEW
MUSCLE ON HIS
UPPER BODY,
BALANCING OUT
HIS PHYSIQUE.**

rotational split that combines elements of Neil Hill's Y3T system, Dante Trudel's Doggcrapp methods, and ideas picked up from British trainer Jordan Peters. "Over the years, I've learned how my body responds and what works, so I mix and match different styles of training to maximise the results," he says. "The human body is smart. It adapts quickly, so I constantly change the exercises, the order I do them, and how I do them."

He credits this constantly changing approach, along with strict and slow form, for his leg development. "I do a lot of front

squats and other squat variables, mixing up wide and narrow stances," he says. "A lot of guys shy away from training legs. They try and go heavy, but their form goes out the window. When I do squats, I always concentrate on the negative—I take three or four seconds to go down and I go all the way down, arse to the floor and focus on the mind-muscle connection all the time. I also do a lot of stretching. Muscles get tight when you train hard, and if you don't loosen them, they don't recover as well."

Varghese squats a maximum of 230 kg, although, right now, he

isn't doing any leg training in an attempt to further reduce his physique's lower body dominance. But he's shared a two-week leg programme that has helped him yield results—just remember to do everything in a slow and controlled manner rather than worrying about the weight.

Varghese, who works as a personal trainer, will always be known for his legs. Those quads are just unreal. But in 2016, he proved he was so much more. He's now got two sponsors, a British title, and the respect of his family. His mission for 2017 is simple—earn an IFBB pro card.

TRY VARGHESE'S LEG PROGRAMME

WEEK ONE

Exercise	Sets	Reps
----------	------	------

WARMUP

Lying hamstring curls (20 secs rest in between)	3	10
Leg extensions	3	10

QUADS

Front squat (close stance) or reverse hack squat	4	8-10
Single leg press (wide stance)	4	10
Walking lunges (pause only briefly between sets)	4	15
Quad stretch – hold stretches for 30 secs		

HAMSTRINGS

Superset stiff- legged dumbbell deadlifts and lying hamstring curls	4	15
Standing hamstring curls	4	10-12
Hamstring stretch - hold stretches for 30 secs.		

CALVES

Superset leg press calf raises and standing calf raises	4	10-12
---	---	-------

**“THE HUMAN BODY
ADAPTS QUICKLY
TO A ROUTINE ,
SO I CONSTANTLY
CHANGE THE
EXERCISES,
THE ORDER I DO
THEM, AND HOW
I DO THEM.”**



LEG EXTENSIONS



WALKING LUNGES



**"A LOT OF GUYS
SHY AWAY FROM
TRAINING LEGS.
THEY TRY AND
GO HEAVY, BUT
THEIR FORM
GOES OUT THE
WINDOW."**

WEEK TWO

Exercise	Sets	Reps
----------	------	------

WARMUP

Seated hamstring curl	3	10
Leg extensions	3	10

QUADS

Back squat (wide stance) or hack squat	4	8-10
Leg press (narrow stance)	4	10
Split squat (pause only briefly between sets)	4	15
Quad stretch – hold stretches for 30 secs		

HAMSTRINGS

Superset stiff-legged barbell deadlifts and seated hamstring curl	4	10-12
Lying dumbbell curl	3	15
Hamstring stretch – hold stretches for 30 secs		

CALVES

Superset leg press calf raises and standing calf raises	4	10-12
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REVERSE HACK SQUAT

I DO A LOT OF STRETCHING. MUSCLES GET TIGHT WHEN YOU TRAIN HARD, AND IF YOU DON'T LOOSEN THEM, THEY DON'T RECOVER AS WELL."





HACK SQUAT



SIX-WEEK BREAKDOWN

Week 1:

Heavy weights, compound movements, 6-8 reps of simple sets.

Week 2:

Medium-heavy weights, super-setting compound movements and isolated movements, 8-10 reps.

Week 3 and 4:

Doggcrapp-style training doing push-pull movements and hitting legs twice a week.

Weeks 5 and 6:

Medium weights, high reps to allow joints, ligaments, and tendons to recover.

MIKE HILDEBRANDT
HEALTH CLUB DIRECTOR
NPC PHYSIQUE COMPETITOR
FATHER



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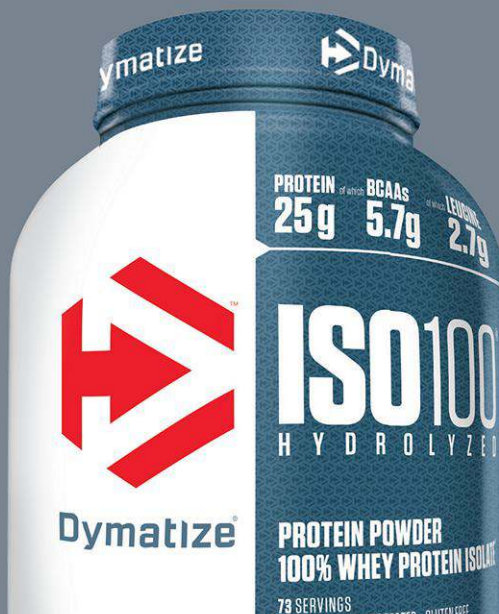
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WORLD STARS

BRITS EXCEL IN BIG INTERNATIONAL EVENTS. BY JOHN PLUMMER

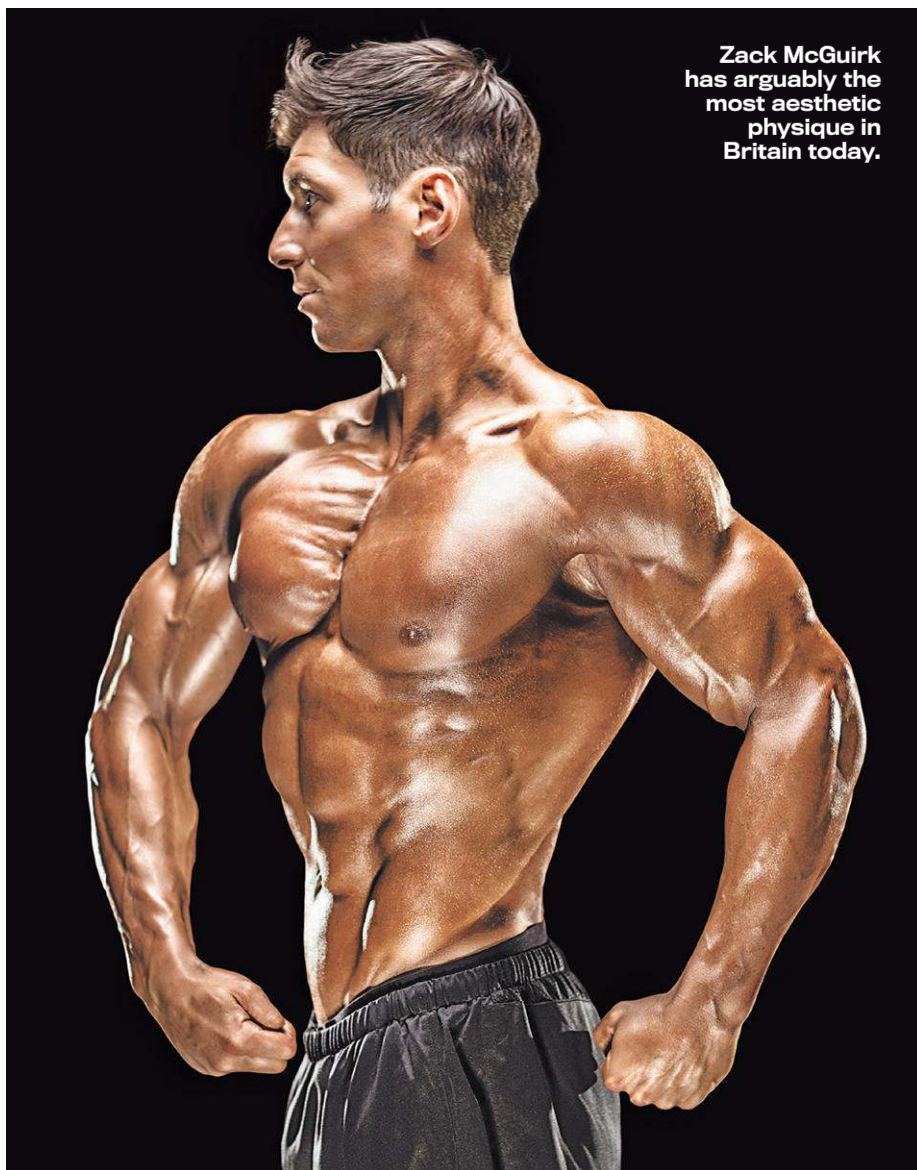
■ British athletes rocking the classic look featured prominently at the 70th IFBB World Bodybuilding Championships in Benidorm.

Seasoned international competitor Zack McGuirk finished second in the new Games Classic category, which, like classic bodybuilding, restricts weight according to height, but the maximum permitted weight is lighter to encourage clean athletes.

McGuirk, who has opened his own healthy eating restaurant in Blackpool, plans to compete at the IFBB Elite World Cup in May, but his longterm dream is to compete at the Olympics. He hopes that the introduction of Games Classic is another step in that direction. London dentist Reno Banks also dazzled in Spain by finishing fourth in Games Classic.

There was more success the following week at the IFBB World Fitness Championships where men's physique star Meite Niamba won silver in his height class and Emma Paveley rounded off her amateur career with bronze in the up to 163-cm fitness division.

Andrea Corbett finished fifth in women's physique on her international debut and Alla Meijer was sixth in an outstanding bikini fitness lineup.



Zack McGuirk has arguably the most aesthetic physique in Britain today.

CHRISTOPHER BAILEY

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COSMETIC SURGERY

DENTIST RENO BANKS IS PROVING TO BE AS ADEPT AT RECONSTRUCTING HIS PHYSIQUE AS HE IS TEETH.

■ Reno Banks started in men's physique, but since switching to classic bodybuilding, he's enjoyed some impressive results, including fourth place at the 2016 IFBB World Bodybuilding Championships in Spain in the new Games Classic class.

FLEX: Why do you prefer the classic look?

Reno Banks: I love the old school physiques. They say bodybuilding is an art and what appeals to me is how good nutrition and exercise can sculpt the human body into something graceful and beautiful. Creating size, symmetry, proportion, and making it aesthetically pleasing is something I have always aspired to.

Have you always been muscular?

I was an active kid active but not muscular. I played sports and got excited about packing my PE kit but my parents always made sure my homework or assignments were done before playtime in the evenings. Academia always came first; sports were always seen as a hobby.

How did you get into competing?

Work can be stressful, so I always trained to de-stress and for the health benefits. I had a nasty knee injury four years ago jumping on plyometric boxes. It required two reconstructive surgeries and the surgeon said I would not walk for a year. He made a grown man cry. I knew after surgery I needed a goal to work towards, so I decided to compete in men's physique at the UKBFF Stars of Tomorrow contest in 2014.

How was the experience?

I felt like a winner for getting on stage and was happy to be fit and walking again pain-free. But I was

in the wrong category. Shortly afterwards, I met Helen and Sean O'Reilly from Panther's Gym and they took me under their wings. We decided classic bodybuilding suited my physique better. After that, I started winning trophies.

How often do you train?

I train twice daily, five times a week, and day six is mainly for posing practice. I do HIIT training in the mornings before work and weight training in the evenings. It is not easy, but I manage to get things done with good time management.

Describe a favourite gym workout.

I am falling in love with training legs

again: quads, abductor, adductor, gluteus, hamstrings and calves—all things lower body and, yes, I enjoy the DOMS.

Give us some tips on training chest.

I have always been chest-dominant so I train chest lightly these days. Incline chest press are best for creating that full chest look. My tips are to squeeze at the peak of every contraction to force as much blood as possible into the chest during slow, exaggerated pause sets. The weights do not have to be heavy to get a good chest pump. Muscle under tension always works better for development and growth.

How do you stay on top of your nutrition?

I actually enjoy cooking meals en masse and freezing them so I don't have to worry about it. Having meals ready prevents unhealthy snacking during the day and reduces spiking insulin levels with poor food choices when hungry.

What do you eat in a typical day?

With work, I do not have the time to eat five or six meals, but I make time for three good meals and one mid-morning snack. I keep it simple so that my enzymes are not working overtime to digest and to give my body time to absorb the nutrients efficiently through the day. A typical day would be:

Breakfast: Oatmeal pancake with egg whites, blueberries and a banana.

Mid-morning: Chicken or turkey breast with broccoli.

Lunch: Basmati brown rice with salmon and vegetables.

Dinner: Lean steak with sweet potatoes and leafy green vegetables.

RENO BANKS

AGE 36

PLACE OF BIRTH

Lagos, Nigeria

LIVES London

HEIGHT 180 cm / 5 ft 11

WEIGHT 80 kg / 176 lbs

CAREER HIGHLIGHT

2016 UK Nationals Classic Bodybuilding Champion.

AMBITION To win the Arnold Classic, Olympia, and World Championships.

TRAINING ADVICE

Exercisedoes not have to hurt to be effective.

SOCIAL MEDIA

Facebook and Instagram: Reno Banks

**“GOOD NUTRITION
AND EXERCISE
CAN SCULPT THE
HUMAN BODY
INTO SOMETHING
GRACEFUL AND
BEAUTIFUL.”**



LATE BLOOMER

ANDREA CORBETT DIDN'T START LIFTING WEIGHTS UNTIL SHE WAS 37. THREE YEARS LATER SHE IS FIFTH IN THE WORLD.

■ 2016 was a memorable year for Andrea Corbett. She finished fifth in women's physique at the IFBB World Championships but training also helped her deal with a far more personal struggle—depression.

FLEX: Why did you start lifting weights?

Andrea Corbett: I got into weight training in March 2014 only because a personal trainer at my local gym suggested I should look into competing.

How did this lead to the stage?

Once I start something, I get really obsessive about it. Soon, I was training twice a day, before and after work. I did not want to leave anything to chance. I did some research and found my first competition, the UKBFF Stars of Tomorrow in November 2014, which gave me enough time to prepare. I did bodyfitness and placed third but stood out, as I was very muscular.

Why does women's physique appeal?

It did not at first. It actually worried me. I had no knowledge about bodybuilding and did not think I could build my body to such a standard. When someone suggested I do women's physique, I laughed at them. Then at the 2015 UK Nationals, I was moved from bodyfitness to women's physique because I was too big.

How does training help with depression?

Training is my safe haven. It gives me something to focus on. I was signed off work and the gym was the only thing that kept me sane. Some days I would not leave

Muscle Mania Fitness gym because when I returned home depression would kick in. On other days, I would attempt to train only to drive back home, as I was unable to function. That's when I realised I had to leave my worries at the gym door. I genuinely believe if I did not have training, I would not have made it out of the dark place so quickly.

How difficult was getting on stage?

The first time I stepped on stage, Tracey-Ann King had to hold my hand and walk me onto the stage. I begged her not to let go. Ever since then, I have loved the adrenaline and buzz of going on stage.

What's your training split?

At first, I just did whatever I felt like. Then, I started training with Lucas Thomas last year, and we focused on building my hamstrings and glutes. Now, I am being coached by Rosie 'Rascal' Harte and this is my split:

Day 1 Back and biceps
Day 2 Chest and triceps
Day 3 Cardio and stretching/
 foam rolling
Day 4 Hamstrings and calves
Day 5 Cardio
Day 6 Shoulders and abs
Day 7 Rest day
Day 8 Quads and glutes
Day 9 Cardio and stretching/
 foam rolling (upper body)

What do you eat in a typical day?

I follow a meal plan from Rosie, which helped so much during the last four weeks of prepping for the world championships.

Meal 1 5 egg whites and a yolk with porridge

ANDREA CORBETT

AGE 40

PLACE OF BIRTH
London

LIVES London

HEIGHT 152 cm / 5 ft 10

WEIGHT 70 kg / 154 lbs

CAREER HIGHLIGHT
2016 IFBB World Championships 5th in women's physique.

AMBITION To own my educational establishment.

TRAINING ADVICE
Leave your worries at the gym door, otherwise you'll be thinking about them whilst training and the two do not mix well.

SPONSORS
Harlequin Bikinis, Go Fuel Meals and GetinShape London

SOCIAL MEDIA
Instagram and Facebook: Andrea Corbett

Meal 2 White fish and sweet potato

Meal 3 Steak and white rice with spinach

Meal 4 Chicken and asparagus with rice cakes

Meal 5 Salmon and spinach

Last year, I also battled with alcohol, which does not help when you suffer with depression, so I made the decision to stop drinking. I did not even have a drop to celebrate my 40th birthday.

What do you do for cardio?

I have a spinning bike and cross-trainer at home, so I roll out of bed and do fasted cardio for at least 30 minutes during offseason and one hour leading up to a show.

**"I WAS SIGNED OFF WORK AND
THE GYM WAS THE ONLY THING
THAT KEPT ME SANE."**



Andrea Corbett with UKBFF vice-president Dennis 'Sugar' Christopher and her world championships trophy.

RONNY 'THE ROCK' ROCKEL

LIVING THE LIFE OF A
PROFESSIONAL BODYBUILDER





■ Ronny Rockel was born and raised in Schlema, East Germany on July 12, 1972, and grew up under communist rule, which meant he wasn't even aware of bodybuilding until the Berlin wall came down in 1989. At 17 years of age and weighing only 143 pounds Ronny Rockel idealized Arnold Schwarzenegger after seeing him play Conan the Barbarian. However, at that time there was no such thing as a bodybuilding gym in the town where he lived, so he was forced to make his own gym equipment!

When the very first gym eventually opened in Ronny's home town, he immediately signed up and for the next several years

of his life he was totally consumed with bodybuilding, absorbing as much information as he could about training and diet from bodybuilding magazines.

He placed last in his class at his very first competition, the Hessian Championships, but was far from discouraged. Only one year later Ronny won the 1995 NABBA German Nationals, and the following year he placed third in the medium class at the 1996 NABBA World Championships. In 1998, 1999 and 2000 he placed second in the medium class at the NABBA Mr Universe, and also first in the short class at the WABBA World championships. Two years later he won the overall title at the

WABBA International German Championships, and then in 2003 he became a fully fledged pro bodybuilder when he joined the IFBB.

Pretty soon the name Ronny Rockel started being noticed in world class bodybuilding events, and for the next 13 years he competed in almost every single IFBB pro show that was held. He also earned the reputation of always placing in the top six, or top 10 in every show he entered. Plus, you could always count on Ronny Rockel to turn up in super rock hard condition every time.

Last October I tracked Ronny down in his home town Ulm, Germany where he lives and trains with his girl friend Daniela Herzog, sister in law to the gym owner, and successful German bodybuilder and IFBB judge. I asked Ronny if he wanted to look back over his great career as one of the world's greatest bodybuilders.

I started out by asking him how it all began:

Well, as a kid I was into wrestling and playing football, and it seems truly amazing now, but back then bodybuilding simply did not exist in East Germany. Of course there was always weight lifting, but, I wasn't interested in that. There was no bodybuilding at all, and believe or not, I had never seen the inside of a gym until after the wall came down!

It was the movies of Arnold and Sylvester Stallone that gave me the strong desire to become better developed and much stronger. As a 15 year old young boy I had to build my own training equipment. I did a lot of push-ups and pull-ups as well as free weights with dumbbells etc. I was a pretty thin 15 years old boy, and kind of wiry looking, if you know what I mean? But the funny thing was, I made muscular gains pretty fast, probably because I totally ate everything I wanted. Nothing fancy and I never ever got fat, no matter what I ate. I made my first diet with Nugatcreme breads which is Nutella. Anyway, it worked even though I only weighed about 70kg.

I had always loved doing sports at school so moving onto bodybuilding was an easy and



I had never
seen the inside
of a gym until
after the wall
came down.



quite smooth transition for me to make. Believe it or not, I never once woke up not wanting to train, because I loved it so much.

When did you actually move to the west?

Well, my sister moved to Frankfurt before they tore the wall down. I moved there afterwards and lived with her for about four years. I worked as a tiler, and got the chance to train at my first real gym. The whole experience between the east and west is actually indescribable; however, in my case I was really lucky because I received some wonderful advice and help from a great German female bodybuilder named Vera Bendel. She was a great competitor and I received lots of professional help from her. She taught me in the very beginning to train with intensity, and that's exactly how I've always done it. Besides, I've also never experienced a serious training injury throughout my career.

Ronny, you are known for your incredible shape and contest conditioning, despite the fact you competed in countless contests every single year. How did you manage to do this?

Everyone on stage is trying to be the best. They all want to be number one, which of course is impossible, but it really feels good when you know you've done your home work. You stand onstage with pride. Now it's up to those judges!

You started your bodybuilding career with NABBA, but in 2003 you became a fully fledged IFBB pro bodybuilder. Why did you do this?

With NABBA they never really seemed to call me out enough. Sometimes I thought I was invisible! There was always someone in front of me, which prevented me from displaying my muscularity properly. It's my opinion that some of these judges do not appreciate what we have to go through to get in 100% condition. I mean there's all that training, and contest dieting, plus a huge amount of dedication involved to reach your peak. There was no doubt in my mind that the

IFBB was a superior organization. After all, the greatest champion bodybuilders of all time were members of the IFBB, so I made the decision to compete against the very best in the world.

Between 2003 and 2016 you competed in so many contests and hardly gave yourself a rest. Why did you do this?

I think it was around 70 competitions actually. So, to be honest with you, I have to say that I really do enjoy competing. If I am in top shape. Why shouldn't I compete? Sometimes; however, I must admit that I had to qualify for the Mr. Olympia, which meant that I had to compete more often, because let's face it; the Mr. Olympia is the number one event. At least it is for me anyway. I have been fortunate enough to have competed in 10 Mr. Olympias throughout my career and I'm quite proud of that.

Do you feel that you've always been fairly judged?

This is certainly not so, but what can you do? But, to be honest, this has not discouraged me at all, and as you know I have competed again and again. Either you accept this game as it is, or stay at home. There's no other way.

What is your favourite contest diet?

MEAL ONE Scrambled eggs.

Consisting of two whole, and six egg whites.

MEAL TWO Protein shake.

MEAL THREE Chicken breast, brown rice and vegetables.

MEAL FOUR Protein shake.

MEAL FIVE Chicken, rice and vegetables.

MEAL SIX Protein shake.

TRAINING

MEAL SEVEN Protein shake.

MEAL EIGHT Beef, salad and rice.

MEAL NINE Protein shake.

What have you been doing since I last photographed you, and did you live in California at one point?

Entering lots of contests! But seriously, apart from contests I do many guest posing and seminars every year, because I live the life of a professional bodybuilder, and that's enough for me. A lot of people wrongly think that I lived in



**I NEVER
ONCE WOKE
UP NOT
WANTING
TO TRAIN,
BECAUSE
I LOVED IT
SO MUCH."**





California, but I didn't. I just visited my friend Cathy LeFrancois who helped me before the Mr Olympia. Cathy is a very nice person and I'm very thankful for all the help she has given me.

OK Ronny, let's talk about training. You said earlier that you learned to train with high intensity from very early on. Do you still train this way?

For most of my bodybuilding career I always trained hard and intense, but I don't have to work out with really heavy weights anymore to build my muscles. I actually train with about 25% less poundage than I used to use 10 years ago. For example, I used to do 5 reps with 440 pounds on the front squat, but today I do 5 reps with 330 pounds. Today at 44 years old I have more mature musculature so I no longer need extremely heavy workouts. Besides, I don't believe it's wise to train with heavy weights. It's not good for the joints. Toi, toi, toi. Which means good luck because I have no problems with my joints!

How do you normally train during the week?

MONDAYS chest & triceps. Plus

cardio for 30 minutes.

TUESDAYS back & calves. Plus cardio for 30 minutes.

WEDNESDAYS shoulders, biceps & abdominals. Plus cardio for 30 minutes.

THURSDAYS rest.

FRIDAYS legs.

SATURDAYS biceps & triceps.

SUNDAYS back, shoulders & calves. Plus cardio for 30 minutes.

This is the most effective routine I've ever followed, and I have tried many different combinations over the years. This work-out routine allows me to train each body part as intense as I possibly can, but it also allows me plenty of time to rest and recuperate, so that I can continue to grow. I like to do two sets of 20-25 reps of each exercise so that I can get more blood into the area, which helps to warm-up the muscle and gives me a better pump. Then I do 3 working sets of 8-12 reps with a heavier poundage and work as hard as I possibly can each set.

CHEST & TRICEPS

Chest

1. Incline barbell press.
2. Incline dumbbell press.
3. Flat bench press.
4. Dumbbell flies.

5. Cable crossovers.

6. Parallel dips.

Triceps

1. Close grip bench press.
2. Lying ez bar triceps extension.
3. One arm dumbbell triceps extension.
4. Reverse grip triceps press downs.

BACK & CALVES

Back

1. Chins.
2. Close grip bent over row.
3. Pullover machine.
4. Seated lat row.
5. One arm dumbbell row.
6. Dumbbell shrugs.
7. Close grip bent over row.

Calves

1. Donkey calf raises.
- 5 Sets.

SHOULDERS, BICEPS & ABDOMINALS

Shoulders

1. Seated dumbbell press.
2. Seated press behind neck.
3. Seated front press.
4. Dumbbell side laterals.
5. One arm cable side laterals.
6. Dumbbell shrugs.

Biceps

Today at 44 years
old I have a more
mature musculature
so I no longer need
extremely heavy
workouts.



**“I AM A
BODYBUILDER,
NOT A POWER
LIFTER!”**



1. Barbell curls.
2. Dumbbell curls.
3. Reverse grip barbell curls.
4. Dumbbell hammer curls.

Abdominals

1. Situps.
2. Crunches with cable.

LEGS

1. Adductor machine
2. Dumbbell sumo squats.
3. Leg extension.

4. Front squats.
5. Squat machine.
6. Leg press.
7. Lying leg curls.
8. Seated leg curls.
9. Stiff leg dead lift.

**Do you believe in short
harder work outs or are you
a volume trainer?**

I prefer volume training because
I believe that a muscle grows

better with that form of training.
The risk of injury is also mini-
mized. Although I did use more
weight when I was younger, I
never made training for maxi-
mum strength my priority.
Onstage nobody sees how heavy
you can lift. Therefore, it makes
no sense to me to do sets of only
1-3 reps, just to move a lot of
weight. I am a bodybuilder,
not a power lifter!



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CAREER

■ 1996

World Championships
- NABBA, Medium,
3rd

■ 1998

Mr Universe - NABBA,
Medium, 2nd

■ 1999

Mr Universe - NABBA,
Medium, 2nd

■ 2000

Mr Universe - NABBA,
Medium, 2nd
World Championships
- WABBA, Short, 1st

■ 2001

Mr Universe - NABBA,
Medium, 8th

■ 2003

Grand Prix Holland -
IFBB, 7th
Grand Prix Hungary -
IFBB, 4th
Maximum Pro
Invitational - IFBB,
6th
Night of Champions -
IFBB, 15th

■ 2004

Grand Prix Australia -
IFBB, 7th
Grand Prix England -
IFBB, 7th
Grand Prix Holland -
IFBB, 7th
Hungarian Pro
Invitational - IFBB,
6th
Ironman Pro Invita-
tional - IFBB, 10th
Night of Champions -
IFBB, 14th

■ 2005

Grand Prix Australia -
IFBB, 3rd
Olympia - IFBB, Did
not place

■ 2006

Grand Prix Australia -
IFBB, Winner
Grand Prix Austria -
IFBB, 5th
Grand Prix Holland -
IFBB, 3rd
Olympia - IFBB, Did
not place

■ 2007

Arnold Classic - IFBB,
8th
Colorado Pro
Championships -
IFBB, 4th
Grand Prix Australia -
IFBB, 2nd
Olympia - IFBB, 11th
Santa Susanna Pro -
IFBB, 3rd

■ 2008

Arnold Classic - IFBB,
13th
Grand Prix Australia -
IFBB, 6th
Grand Prix New
Zealand - IFBB, 6th
Grand Prix Romania -
IFBB, 2nd
New York Pro
Championships -
IFBB, Open, 3rd
Olympia - IFBB, 14th

■ 2009

Arnold Classic - IFBB,
10th
Ironman Pro
Invitational - IFBB,
3rd
Olympia - IFBB, 7th

■ 2010

Arnold Classic - IFBB,
6th
European Pro - IFBB,
Winner
Olympia - IFBB, 6th

■ 2011

Arnold Classic - IFBB,
6th
Arnold Classic Europe
- IFBB, 3rd
British Grand Prix -
IFBB, 4th
European Pro - IFBB,
Winner
FIBO Germany - IFBB,
2nd
New York Pro
Championships -
IFBB, Open, 2nd
Olympia - IFBB, 9th

■ 2012

Arnold Classic Europe
- IFBB, 6th
British Grand Prix -
IFBB, Open, 5th

Nordic Pro (Finland) -
IFBB, 3rd

Olympia - IFBB, Open,
13th

Olympia - Masters -
IFBB, 5th

Prague Pro
Championships -
IFBB, 7th

■ 2013

Arnold Classic - IFBB,
13th
Arnold Classic Brasil -
IFBB, 9th
European Pro - IFBB,
Open, 6th
FIBO Germany - IFBB,
5th

■ 2014

Ferrigno Legacy Pro -
IFBB, Winner
Grand Prix Russia -
IFBB, 2nd
Nordic Pro (Finland) -
IFBB, 4th
Prague Pro
Championships -
IFBB, Open, 10th
San Marino Pro - IFBB,
Open, 9th

■ 2015

Dayana Cadeau Pro -
IFBB, 3rd
Ferrigno Legacy Pro -
IFBB, 2nd
Nordic Pro (Finland) -
IFBB, 4th
Olympia - IFBB, Open,
14th
Prague Pro
Championships -
IFBB, Open, 7th
San Marino Pro - IFBB,
3rd

■ 2016

Arnold Classic Brazil
- IFBB, 5th
Artic Pro - IFBB,
Lightweight, 2nd
Europa Dallas -
IFBB, Light-
weight, 2nd
Levrone Classic
Poland - IFBB, 8th
Mozolani Pro - IFBB,
Lightweight, 2nd
Olympia - IFBB,
Lightweight, 9th

In their pro debuts, Porter Cottrell beat Kevin Levrone at the 1992 Chicago Pro. Check out how this '90s bodybuilding fireman built delts that relegated a future legend to runner-up status.



CHRIS LUND

1ST SET

**ALL THE HOT
TOPICS IN
BODYBUILDING
& FITNESS**



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Q My back is my weakest body part and doesn't seem to be improving. Any advice?

No bodybuilder wants a weak body part, especially back. You can't hide a weak back! There are usually two factors behind poor development in this area:

1 Too much weight combined with poor form.

2 Lack of mind-muscle connection. Because you can't SEE your back when you're training it, some people have a hard time FEELING the muscles work.

Back is a large muscle group. I break it up into four movements.

1 PULLOVERS (MACHINE OR DUMBBELL)

To isolate and pre-exhaust the lats without recruiting the biceps.

2 UNDERHAND GRIP PULLDOWNS

To hit the upper back. I like a narrow underhand grip. The old saying 'wide grip for a wide back' is a myth. A narrow underhand grip gives a much better stretch and contraction.

3 BARBELL ROWS

Drive the bar into the lower abdomen to hit the mid and lower lats.

4 DEADLIFT

For overall thickness. Squeezing your shoulders back at the top of the deadlift will also bring the traps into play more. Traps make up a large portion of the back. Many trainees think the traps are part of the shoulder group. Traps are back muscles!

I normally perform two warmup sets of each exercise and increase the poundage for the second set. Then I do one all-out heavy set of 6 to 10 reps as a main working set.

Form is particularly crucial on back. I suggest dropping your poundages and concentrating on form. This is what I did in 2012 when I won the British Championships and I feel I made good improvements. Poundage is important—after all, heavy weights build muscle. But never sacrifice form for weight—especially with back training.

The back that won the British: Anth winning the national title in 2012.



BACK ESSENTIALS

- ▶ Think of your hands as hooks and avoid pulling with the biceps.
- ▶ Drive from the elbows.
- ▶ Get a full stretch, be very controlled on the negative then explode on the positive.
- ▶ Get a good contraction and squeeze the shoulder blades back and pull your chest up. You can't get a full lat contraction if your spine isn't arched.

TIME-OUT!

**MR. O TAKES A
BREAK AND CONSIDERS
THE YEAR AHEAD**



Q Did you take a break after the Olympia?

Sure did. Went to Playa del Carmen, which is near Cancún, Mexico. It was an outstanding and much needed chance to take a break from everything—no autographs, no posing for pictures, just me and my girl, laying out and enjoying ourselves.

Q Did you have resolutions for the new year?

Okay, the first was to eat clean in the off-season. I'm thinking I will probably go up to 130 or so in this off-season, and I want to do it by eating cleaner than I ever have before. The second was important, and that was to spend more quality time with my family and my inner circle of friends. And the third would be to take time out to reflect on my career and my life, not just let it sweep past me.

Q What was your last Google search?

I googled "Why are incline treadmills so popular?" I was looking into the big ones, not the 10%, but the ones with 30% or 40% maximum incline. I was curious how much more beneficial the increase in the incline was, and I was wondering how much they cost.

I look at competition this way: At the beginning of class, everyone has an A. Everyone can hold onto that A by doing the work that's required. Some people drift—maybe their grade drops to a B or a C—before they get on it, and start working to bring it back up. For me, I'm going to stay at that A level from the start and not let myself drift. I'm going to get the work done to hold on to that A.



ASK MERLIN

A NEW MONTHLY COLUMN ANSWERING QUESTIONS ON TRAINING, DIET, SUPPLEMENTATION, MINDSET, AND MORE

Q How can one continue to train with tendinitis? How does one lessen inflammation between workouts?

—MATTHEW F.

In situations in which tendinitis is severe, I would recommend completely resting the area for up to a week so as not to make a bad situation even worse. However, in cases when the pain is tolerable, it's certainly possible to still train while continuing to heal. Just follow these rules:

- 1.** Begin the workout by increasing your core temperature with 10 minutes of moderate cardio activity.
- 2.** Flush the injured joint with plenty of blood by engaging in several light warmup sets before your first "work set."
- 3.** Avoid any exercises that cause pain to the extent that you cannot focus on the target muscle.
- 4.** Keep sets at about 15 to 20 reps so you don't force the inflamed joint to withstand too much resistance.

5. Use perfect form and a slow tempo on every rep. After the workout is complete, the injured area should be iced for 20 minutes every hour or so till bedtime. In addition, NSAIDs can be utilized to reduce inflammation as well, but not for more than a few days since these medications can interfere with the anabolic process.

Q Which are the top three ingredients (aside from macronutrients) you believe should be in a pre- and post-workout supplement for it to effectively aid in building muscle?

—MAXIMILIAN A.

This is a difficult question—mostly because you wish to narrow it down to only three specific ingredients for each supplement. However, after giving it some thought, I have decided on the following response. **For**

pre-workout, my choices are:

1) caffeine, for its ability to enhance energy, focus, and fat burning while blunting our perception of pain; **2)** beta-alanine, for its ability to help clear lactic acid, increasing a muscle's ability to contract over a longer period; and **3)** beetroot extract, for its ability to maximize blood flow (vasodilation), allowing for a greater and more sustained pump in the working muscles. **As for a post-workout product, my choices are:** **1)** creatine, to replace what is lost during an intense workout, as this nutrient is necessary for igniting strength, power, and several mechanisms directly related to hypertrophy; **2)** L-leucine—a branched-chain amino acid that heightens muscle growth via the mTOR pathway; and **3)** phosphatidic acid, a compound that also stimulates mTOR (through a different pathway than leucine) and has been shown in recent studies to markedly enhance both hypertrophy and strength.



**ASK
MERLIN**

If you have something you would like to ask Merlin, send him an e-mail at bodyfx2@aol.com.

MAN IN THE MIRROR

THOUGHTS ON POSING,
REFLECTIONS ON LAST
YEAR'S OLYMPIA

Q After a contest, do you watch videos to see how you looked onstage? Did you watch your Olympia performance?

Honestly, if I can find a contest online somewhere afterward, I'll watch it. To see how I did with my own eyes. With some contests and, of course, with the Olympia and all that happens over the O weekend, there are legalities involved, and so videos of those contests get pulled really quickly because they're unauthorized. It's usually something someone shot from the audience. That night after the O, I did watch a video, but the link was taken down before it was morning.

Q Does posing and flexing in front of a mirror help with muscle development?

Posing in front of a mirror can be either a mind mess or a help in many regards. I personally have two mirrors in my life—the one I look into when I brush my teeth and one at the gym to judge my physique. I always use the same mirror set in the same position when judging my physique because changing mirrors, changing mirror positions, can make self-assessment more challenging. As far as muscle development, that happens in the gym. Posing is all that happens in a mirror.



Q Other than winning, what was the highlight of the 2016 Olympia?

Without a doubt, it was bringing my daughter up onstage with my wife. Some background here: Long ago, I'd seen a photo in FLEX of Sergio Oliva onstage with his son, Sergio Oliva Jr., when he was only a few weeks old. That was in my head when I promised

in 2015 that if I was blessed to return to the O and win again, I would bring Adiana up onstage. I fulfilled that promise for myself and for my fans, who, seriously, throughout the months of the year have been saying, "Hope you get the chance to bring your daughter onstage." It was a dream come true.

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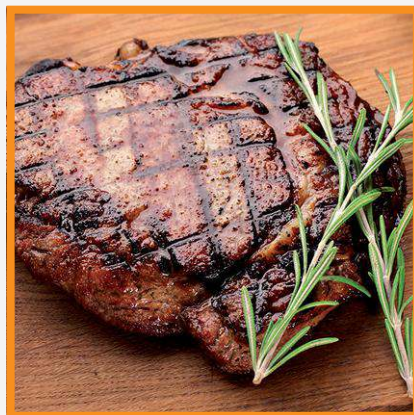


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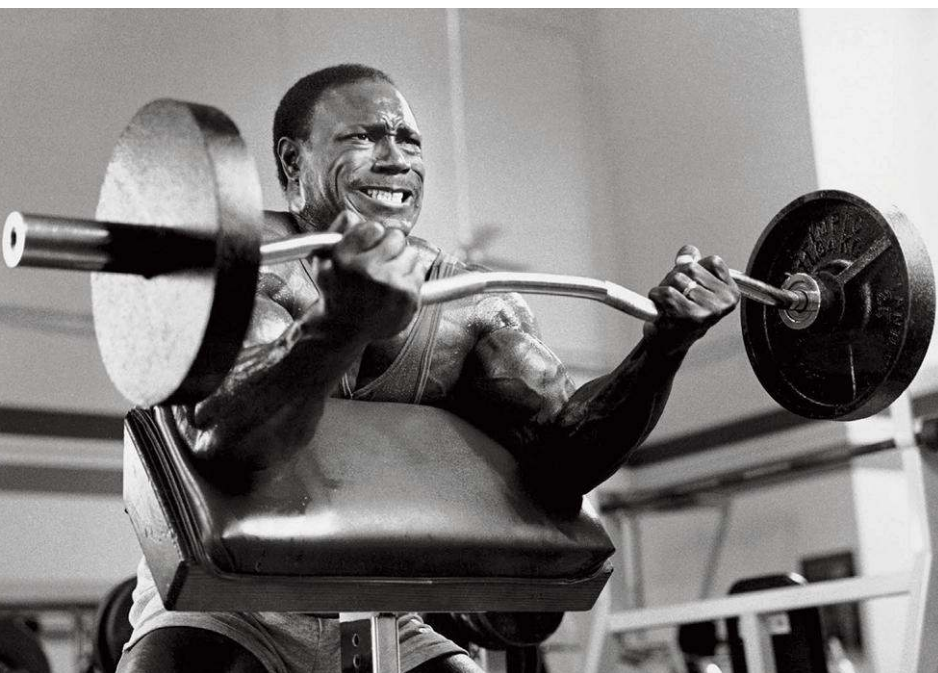
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BODYBUILDING LANDMARKS

**“INTENTIONAL”
NUTRITION AND
TRAINING ARE THE
KEYS TO A BALANCED,
PLEASING PHYSIQUE**



NO. 2: QUALITY TRAINING

The other thing that has to be intentional is your training. Everyone knows that in order to put on more muscle size, for the most part you have to use a heavier weight. But there has to be a happy medium there. You can't just train for mass and not take care of quality at the same time. There has to be the right balance between exercises to develop mass and size and ones that create more shape and detail in the muscles.

Let's use biceps as an example. Heavy barbell curls should still be done for size. Preacher curls should also be done to promote growth but also quality. Then do concentration curls to finish up and work on the peak of the biceps. You can't just go in and do heavy barbell or dumbbell curls and that's all. If you're trying to develop a quality physique, you have to be mindful of using several different types of exercises that all have a different effect on the physique.

A lot of bodybuilders in today's era focus only on mass movements, and you can tell. When the training combines different exercises, you see more cross striations, particularly in the pecs, delts, triceps, and quads. You see a more finished type of physique. Mass and quality have to be combined together.

I'm happy to say, however, that the classic physique is making its way back.

I think guys like Phil Health, Shawn Rhoden, Dexter Jackson, and Cedric McMillan are keeping it in check. There are a lot of great quality physiques right now that possess the classic characteristics, and the judges have taken notice.

We're getting back to those "ancient landmarks" again!

Q What do you think is lacking in the sport of bodybuilding today?

There's a passage of scripture in the Bible (*Proverbs 22:28*) that says: "Remove not the ancient landmark, which thy fathers have set."

We can relate this proverb to bodybuilding: The "landmarks" are the criteria the bodybuilders and founders of our sport said our physiques should look like—specifically that, first and foremost, the physique had to be pleasing, with a foundation of balance and symmetry that includes having a nice waist and shoulder taper.

The problem is, we've come to a place where that's no longer the criteria, and in many ways this has gotten the beauty and art of bodybuilding off course. As a result, fans and other members of the bodybuilding community have cried out—people want to see the classic physiques again.

So how do we get back there to a place of rediscovery? I think there are two ways:

NO. 1: SMALL MEALS

Nutrition has to be intentional. In my opinion, the classic physique is achieved by eating small quantities of food on a frequent basis during the day. And eating the right types of food—foods that digest fast and get to the muscles and provide growth without lying around in the gut for long periods of time, which causes the gut to protrude.

During my era, bodybuilders ate mostly chicken, fish, eggs, and beans. Today you have a lot of athletes eating steak. There's a lot of beef in the diet. And my personal opinion on beef is this: If you eat a cow, you're going to look like one! Red meat takes a long time to digest, up to 48 hours; it hangs out for a long time and stretches the abdominal area, which I believe causes that protruding gut.

So again, smaller meals have to be looked at. You have to be intentional with your nutrition to keep your waist nice and tapered.

PORTER COTTRELL

THE REMARKABLE
BODYBUILDING SUCCESS OF
AN UNDERSIZED FIREFIGHTER

■ If he had quit after his rookie year, Kevin Levrone would be celebrated as one of the greatest bodybuilders of all time on the basis of two pro wins and a second in the Mr. Olympia. However, what's largely forgotten about 1992 is Levrone's loss in his pro debut to another rookie, Porter Cottrell, who won his first two pro shows. The two were going back and forth then. Levrone won the 1991 NPC Nationals as a heavyweight, while Cottrell won the light-heavy class. And a week after Cottrell beat Levrone in Chicago, the results were reversed in a New York pro show.

Cottrell's success came despite his relatively diminutive size. He weighed only 90 to 95 at 170 cm, but he nevertheless impressed via classical lines and proportionate development. He won all three contests he entered in 1993, and in 1994 he was third in the Arnold Classic and fifth in the Olympia. All the while, he toiled on daylong shifts as a firefighter in Louisville, Kentucky. Cottrell retired from bodybuilding in 1999 and fire-fighting in 2009 and today works as a personal trainer. Long before there was a 212 division, he proved that a symmetrical "David" can slay bodybuilding's Goliaths.

COTTRELL ON SHOULDER TRAINING

■ "I do one or two lighter sets before my working sets, to warm up but also to get in the groove." ■ "Dumbbells are the perfect tool for working shoulders. I never have to leave the dumbbell rack." ■ "I hit shoulders after chest in the same workout." ■ "I like higher reps on shrugs to really feel my traps working over a longer set."

FLEX FACT

CINEMATIC HERCULES STEVE REEVES INSPIRED COTTRELL TO TAKE UP BODYBUILDING AT 12.

CHRIS LUND

COTTRELL'S SHOULDER ROUTINE

EXERCISE	SETS	REPS
Dumbbell Press	4-5	8-12
Dumbbell Side Lateral	3-4	8-12
Dumbbell Rear Lateral	4-5	8-12
Dumbbell Shrug	3-4	15-20

SUPERSET FOR SUPER SIZE

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■ Sure, single-set training has its place in our workouts and should always be retained. But a routine blended with superset combinations—two exercises performed back-to-back—floods the muscle with blood-laden oxygen and tissue-building nutrients, causing greater growth.

I instinctively gravitated toward a nonstop training style to maintain enthusiasm and momentum during my training. Without the downtime between sets, you become more involved in your training. There's no time for daydreaming, wishing you were somewhere else, or becoming bored. In fact, a most desirable attitude of training develops, one that we wrongly think is reserved for athletes on the fringe of competition. This training attitude is a valuable tool of confidence and provides a very real psychological benefit.

With a little time and a little practice your training becomes more athletic as you move through the gym from one exercise to another. Your heart rate remains higher, you stay warmer, and you near the edge of aerobic training. Concentration becomes automatic, and the harmony of movements will lure you onward.

Listed below are some of my favourite combinations to splice into your regular exercise programme. Two or three sets of 10 to 12 reps of a superset performed at a moderate pace with a moderate weight will bring this all into focus.

DAVE'S FAVOURITE SUPERSETS

- ▶ Dumbbell Incline Press/Dumbbell Pullover/Seated Lat Row
- ▶ Bench Press/Wide-grip Pulldown
- ▶ Bent Bar Curl/Lying Triceps Extension
- ▶ Steep Dumbbell Shoulder Press/Sidearm Lateral Raise
- ▶ Incline Dumbbell Curl/Overhead Triceps Extension
- ▶ Chinup/Dip/Rope Tuck
- ▶ Leg Extension/Leg Curl/Calf Raise

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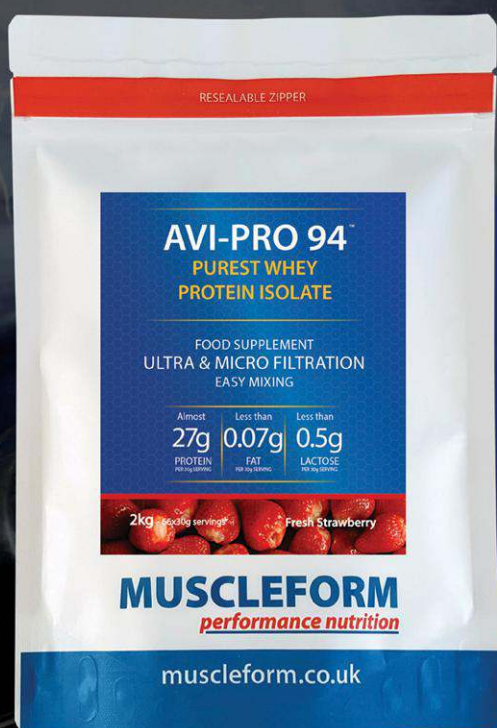
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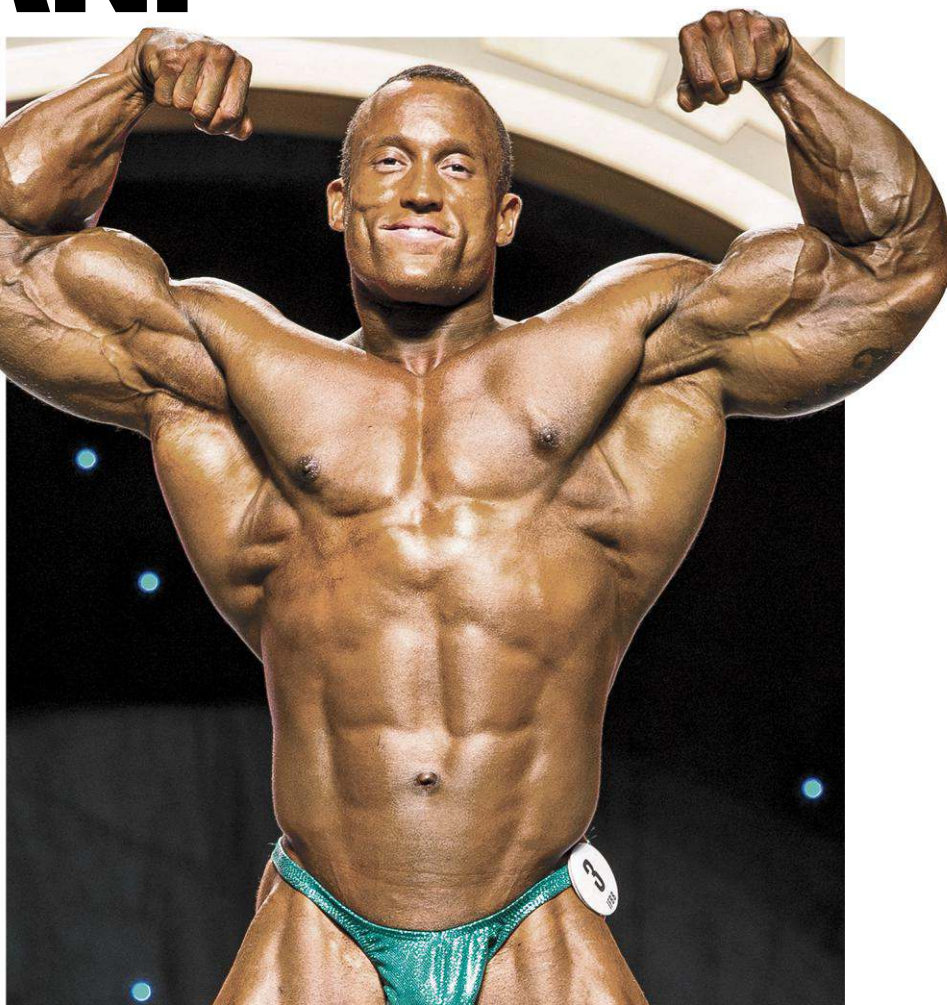
■ One look at Kevin Jordan's home and you can see he was destined to get into weight training. "My dad did bench competitions, and we had a home gym with a bench, incline, crossovers, etc. I also was a three-sport athlete in high school—football, basketball, and baseball—so that was a part of it as well."

That love of training grew into a passion for bodybuilding after working for a gym in St. Louis. "My boss was a competitor, and I decided I could do this. Then I began reading FLEX, and I knew I wanted to be in those magazines and compete in the Olympia."

After scratching that initial competitive itch, Jordan was hooked, and it showed in his placings—including a win at the 2011 Junior Nationals, followed two years later by a victory at the 2013 NPC Nationals that earned Jordan his pro card. Although he's been a pro for only a couple of seasons, Jordan is knocking on the door for that first pro win.

Jordan's training philosophy is simple to understand: "High volume. I would get knocked for not training intense, but I still lift moderately heavy."

Jordan isn't sure about which shows he'll enter in 2017, but he knows he will compete more than in the past. "I plan on doing more shows to qualify for the Olympia. I plan on talking with [nutritionist and trainer] Chad Nicholls and coming up with a plan."



JORDAN'S ARM WORKOUT

EXERCISE	SETS	REPS
Rope Pressdown	4	12-8
Cable Curl	4	12-8
Skull Crusher	4	12-8
Dumbbell Curl	4	12-8
Single-arm Extension	4	12-8
Hammer Curl	4	12-8

NOTES: Jordan alternates triceps and biceps exercises.

KEVIN JORDAN

AGE
35

HEIGHT
173 cm

WEIGHT
111 kg (contest),
127 kg (off-season)

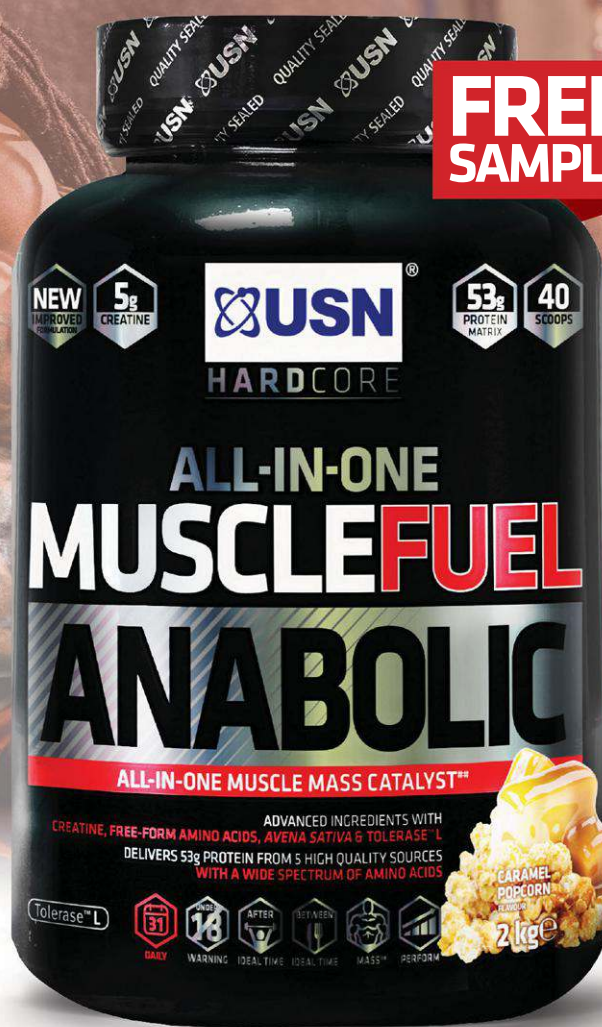
RESIDENCE
Naperville, Illinois

FACEBOOK
kevin.jordan

INSTAGRAM
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EXTREME STRETCHING

HOW STATIC HOLDS CAN BOOST MUSCLE GROWTH



EXTREME STRETCHING BASICS

- ▶ Attain the maximally stretched position and hold it for 60 to 90 seconds.
- ▶ Stretch a body part only after training it.
- ▶ Such stretches will increase mobility and may also boost growth.
- ▶ Do one or two stretches per body part per workout.

what is known as extreme stretching is an essential component of the Doggcrapp training system. Let's break down exactly what it is and how you can "make space" for every body part to expand.

STRETCHING THE TRUTH

There are two stretching categories: dynamic and static. Dynamic stretches utilize movement. Examples include high kicks and trunk twists. These can increase your mobility in exercises, and they should be done as a warmup or between sets. In contrast, static stretches are motionless. Once you've positioned yourself properly, you remain locked in place. These

stretches should be performed when your tendons and muscles are most pliable. Do them after weight training, not before.

Intense static holds may have advantages beyond simply increasing flexibility. Studies with birds indicate that such stretches can cause hyperplasia in muscle cells—the splitting and thus multiplication of those cells.

Another theory proposes that expanding the fascia (the layer of connective tissue tightly surrounding muscles) will foster growth by literally making room for easier expansion. Some bodybuilders, including Heath, regularly get deep-tissue massage in part to loosen their fascia, but another way of doing this is via static holds. In fact,

■ The biggest change Phil Heath made in 2016, other than prioritizing leg training, was a greater focus on stretching. "I realized I had to stretch more in order to make space for new muscle," he said the night he won his sixth straight Mr. Olympia. Others have successfully employed this strategy. In fact,

when this technique was first popularized in the '90s by trainer John Parillo, it was called fascia stretching. The originator of Doggcrapp, Dante Trudel, credits Parillo for originating what he calls extreme stretching. David Henry, a DC adherent for years, did extreme stretching as part of every workout.

An extreme stretch puts your muscle into the maximally elongated position and keeps it there, sometimes with slight changes, for 60 to 90 seconds. Of course, you never want to wrench your joints, but you do want to fully stretch. There will be pain. If there's not, you're not doing it right. Extreme stretches can be done with weights, equipment like chinning or dipping bars, or with only your body and your will to self-torment.

CHEST

Grab two dumbbells that are slightly heavier than those you would use for a set of flies. Then lie on an incline bench and lower the dumbbells as if doing flies. Go as low as you can go and hold that position, keeping your hands wider than your elbows. When you start to give out, bring your hands in, so you're mimicking the lowest position in a press. This can also be done on a flat or decline bench. Another chest stretch is done by pressing one forearm against a vertical bar and revolving your body to maximally tauten the pec. Repeat with the opposite forearm to work the other pec.

BACK

You can intensely stretch your lats simply by holding onto a chinning bar. Use additional weight if necessary to make it painful to keep hanging. You can also accomplish something similar by gripping a vertical bar with both hands, standing close to that bar, and then leaning backward so you're supporting your body weight with your lats maximally stretched. Experiment with a low or high grip on the bar because each will stretch different areas of the lats.

SHOULDERS

Grab the ankle supports on a decline bench with your feet in



front of you and your knees bent as if you're sitting on air. Bend your arms. Then roll your shoulders forward and down until you feel the maximum stretch. Hold this position. This can also be done unilaterally by "sitting" parallel to the bench.

QUADRICEPS

Again at the decline bench, rest the top of an ankle on the ankle supports, tucked behind you with your knee bent and your other foot on the floor. Bring your hips back and your forward knee down to maximally stretch the quads of the tucked leg. Repeat

for the other side. You can do another quad stretch in a power rack by grabbing a bar set about hip-high and squatting all the way down. Then lean back while you bring your knees forward to find the maximum squat position. Hold and embrace the pain.

HAMSTRINGS

Nothing beats the hurdler's stretch for hams, but you need to up the intensity. Set a bar in a squat rack or Smith machine at least hip-high. Set one ankle on the horizontal bar, and keeping that leg straight, press down until you reach the point of maximum

tension and then hold. Repeat with the other leg.

CALVES

Stand with your toes on a riser, whether at a standing calf machine or a stair, and lower yourself as far down as you can go. Hold this position. This can also be done with one leg at a time.

BICEPS

You can stretch each biceps in a way similar to the way you did each pec. Hold a vertical bar with one hand, and while keeping that arm straight rotate your shoulder away until you feel the maximum pressure on your biceps. Repeat for the other arm. Another great biceps stretch is done by holding a stationary horizontal bar, such as a Smith machine's, behind your lower back and keeping your arms straight. Then lower yourself, as if squatting to feel your biceps tauten.

TRICEPS

Grab a dumbbell with one hand and lower it behind your head, as if to do a one-arm triceps extension. Go as low as you can go, and hold that position. Another excellent triceps stretch can be done with dipping bars. Drop into the lowest dip position while keeping your torso perpendicular to the floor. Hold that stretch and embrace the pain.

EXTREME STRETCHING TIP SHEET

- ▶ **Don't place your joints in an unnatural position, but do maximally stretch the targeted muscle(s).**
- ▶ **To be effective, this must be painful.**
- ▶ **Build up your tolerance by gradually increasing the duration of the stretch until you can do 60 to 90 seconds.**
- ▶ **Try following each stretch with a self-massage of the area.**



ERECTOR SET

START YOUR LOW BACK
ATTACK EARLY THIS YEAR



■ The musculature of the lower back is made up of the erector spinea muscles, also called spinal erectors. These are the muscles that meet the origin of the lats to create the “Christmas tree” shape at the lower back when doing a rear lat spread. The spinal erectors are also part of your core muscle groups and are actively involved in many exercises as either primary movers and/or stabilizers. The most effective and safest movement to train the low back is the hyperextension. When doing so, it is important to stabilize and immobilize the hips to reduce the involvement of the hamstrings. I consider hyperextensions to be

safer than other low-back movements such as deadlifts because the compression forces on the lumbar spine are greatly reduced while doing hyperextensions. Warming up the low back with hyperextensions is a good idea, but actual training of the low back should be done last in a workout when other exercises involving the low back have been completed.

ALTERNATIVES

Half deadlift, modified low-cable row, Supermans/swimmers

FORM AND FUNCTION

The origin of the erector spinae is at the sacrum and iliac crest. The

insertion spans up the thoracic and cervical vertebrae. The function of the spinal erectors is to extend the vertebral column.

LOW-BACK- ATTACK WORKOUT

EXERCISE	SETS	REPS
Half Deadlift*	3	8-12
Modified Low Cable Row**	3	10-12
Hyperextension	3	15-20

*Lift starts with bar supported at knee level.

**Arms remain straight, emphasizing lower-back movement.

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performance-associated genes that could predict an individual's response to power or endurance training. These 15 genes are involved in the regulation of muscle-fibre-type composition as well as muscle size, cytoskeletal function, muscle-damage protection, metabolism, circulatory homeostasis, mitochondrial biogenesis, thermogenesis, and angiogenesis. They then created two different training regimens, one for strength/power and the other for strength/endurance. After mapping their subjects' DNA for the 15 genes of interest, they had them train using one of the two programmes. The hypothesis was that those whose genes favoured power would respond better to the power workouts and those who had endurance genes would respond better to the endurance workouts.

FINDINGS

■ The main finding was that matching individual genotypes with the appropriate mode of training led to more substantial resistance-training benefits for both power and endurance genotypes.

CONCLUSION

■ The results of this study suggest that using genetic profiling to better match individual genotypes with specific training modalities may be a powerful tool to aid more personalized, and precise, resistance-training prescriptions in the future.

IS IT THE GENES?

HOW GENOTYPING CAN BENEFIT YOUR TRAINING

HYPOTHESIS

■ Studies have clearly shown that not all individuals respond equally to training, even when training variables are tightly controlled. This indicates that there is a genetic component to how well someone responds to

resistance training. What are some of the genetic differences that play a meaningful role in one's response to resistance training?

RESEARCH

■ British researchers hypothesized that there are 15

APPLICATION

I personally have had my genome mapped and know that my muscles are built for power and not endurance, but this is something that I had come to realize many years ago by experience. With a little effort, individuals today can get their genomes mapped for less than 150 pounds, identify whether or not their genes favour strength/endurance or strength/power using the 15 genes from this study, and follow a training routine that matches their genetic profile.



FIBRE TYPING

SHOULD YOU TARGET INDIVIDUAL FIBRES?

OPENING ARGUMENTS

Muscle fibres can be classified as either slow twitch (type I) or fast twitch (type II). Slow-twitch fibres are dependent on slow-oxidative energy pathways and fatigue slowly. Fast-twitch fibres are dependent on fast-oxidative energy pathways and fatigue quickly.

Defence Because all muscle groups have a mix of fast- and slow-twitch fibres, in order to make sure the slow-twitch fibres get a good growth stimulus, you must fatigue them with high reps. Without high-rep sets, slow-twitch fibres will never get fatigued enough to grow.

Prosecution Hypertrophy isn't necessarily triggered by fibre fatigue. Mechanical loading is the primary stimulus for muscle growth. If mechanical load is the

stimulus for growth, then all fibres should hypertrophy as load goes up.

EVIDENCE

■ Muscle fibres are “mechanocytes” and respond to mechanical strain biochemically through a process called mechano-transduction.

■ Researchers from Ohio University compared three different rep schemes (high = 20–28 reps, intermediate = 9–11 reps, low = 3–5 reps) for their effects on muscle-fibre hypertrophy. They demonstrated that the degree of hypertrophy of all fibre types was dependent on the weight loads used, with heavier weight producing greater hypertrophy in all fibre types.

■ In the Ohio University study cited above, using reps from

20–28 taken to failure increased slow-twitch fibre growth by 10.3%, whereas reps from 3–5 taken to failure increased slow-twitch fibre growth by 12.4%.

VERDICT

All fibre types will hypertrophy when using weight loads that are sufficient to stimulate growth.

SENTENCING

■ An effective training plan designed to elicit maximum gains in size should include both high and low reps, but fibre type should not be the guiding principle.

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Calories

451

Protein

61g

Carbs

18g

Fat

14g

RUMP STEAK

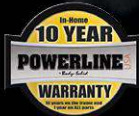
WITH CAULIFLOWER MASH SERVES 1

INGREDIENTS

- ½ tsp olive oil
- 175 g trimmed rump steak
- Salt and pepper
- 1 cauliflower head, chopped
- 2-4 garlic cloves
- 2 tbsp low-fat cream cheese

DIRECTIONS

Rub oil on steak and sprinkle with salt and pepper. Bring 2.5 to 5 cm of water to a boil, ideally with a steamer rack, then add cauliflower and 2 garlic cloves. Cover until tender, 5 to 10 minutes. Cook steak on a preheated grill or cast-iron pan, turning once (5 to 6 minutes per side for medium-rare). Add half the cauliflower to a food processor with cream cheese, rest of garlic, and a pinch of salt and pepper; pulse. Add other half of cauliflower and pulse until it reaches your desired texture.



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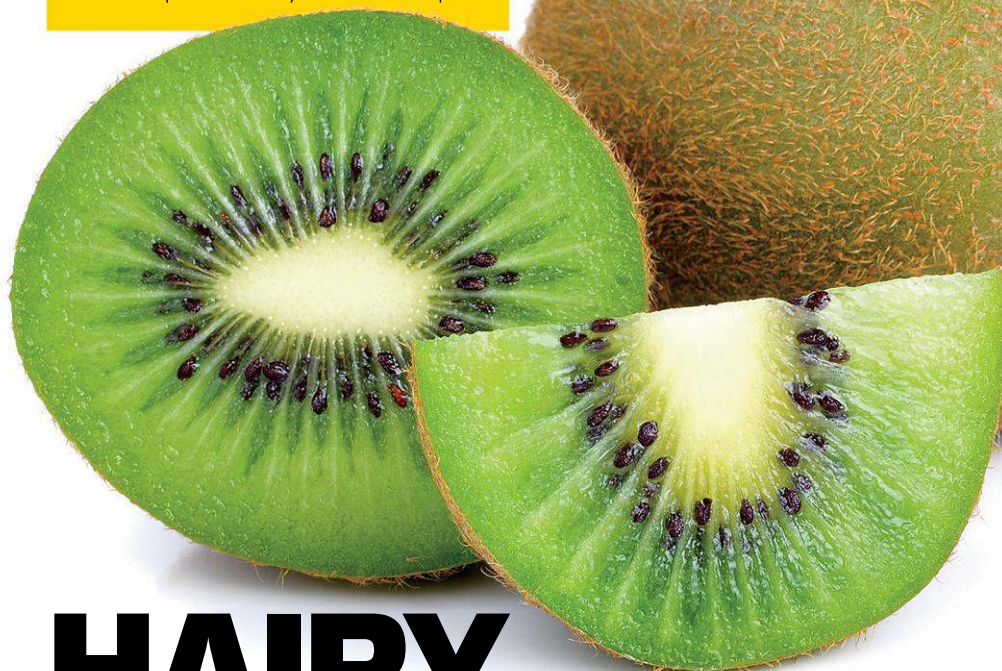
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Buy kiwi fruit that are firm with just the slightest yield to pressure. If the store only has hard kiwis, you can leave them out at room temp for a few days to a week to ripen.



HAIRY BERRIES

ADD TART AND DELICIOUS KIWI FRUIT TO YOUR DIET FOR A NUTRIENT-DENSE AND ANTIOXIDANT-RICH TREAT

■ One of the most overlooked and underappreciated cold-season fruits is the kiwi fruit. The hairy and big berries were known as Chinese gooseberries when they were introduced to New Zealand but their name was changed to kiwi fruit by some genius marketing executive.

These fuzzy fruits with the bright green flesh are packed full of vitamin C, providing 117% of the recommended daily amount, more than practically any other commonly eaten fruit, including oranges. "Vitamin C is an essential nutrient that is required to make collagen, the main component of the body's connective tissue, which also keeps skin, hair, and nails vibrant," says Toby Amidor, R.D., nutrition expert and author

of *The Greek Yogurt Kitchen*. "Vitamin C helps increase your body's absorption of iron, which helps transport oxygen throughout your body—vital when strength training. It also has antioxidants, which help decrease inflammation in fatigued muscles."

One kiwi fruit contains 46 calories, 11 grams of carbohydrates, 2g of fibre, 7g of sugar, and 1g of protein. They are free of fat and cholesterol and a rich source of vitamin K, and they bring a bounty of vitamin E, potassium, fibre, and folate. "Kiwi fruit is also a fabulous source of lutein and zeaxanthin, potent plant antioxidants naturally found in the macula (or centre of the eye's retina) that need to be replenished regularly for strong vision."

Studies have shown that when kiwi fruit is added to a normal diet, it can help platelets (the clotting part of red blood cells) become "less sticky" and reduce your risk of developing heart disease, says Amidor. The fruit can also help lower triglyceride, or blood fat, levels. A study that was published in *Nutrition Research* showed that eating kiwi fruit daily may protect DNA against damage that can lead to developing cancer.

Grab a few of these funny little fruits and taste the bright, sweet-tart flavour. Kiwi fruit's superb nutrition profile will keep your smoothies packed with antioxidants and fibre and give your muscles the boost they need to recover and grow.

TROPICAL-FRUIT AND ALMOND CRUNCH

SERVES 4

INGREDIENTS

- 2 scoops vanilla protein powder
- 500 g nonfat plain Greek yogurt
- 2 kiwi fruits, peeled and diced
- 1 mango, peeled and diced
- 6 fresh strawberries, sliced
- 70 g dry-roasted, unsalted, sliced almonds
- 4 tsp pure maple syrup

DIRECTIONS

Mix protein powder with yogurt until well combined. To assemble, place a quarter of the yogurt in each of four bowls. Top each with fruit, 2 tbsp almonds, and 1 tsp maple syrup.

Calories

308

Protein

31g

Carbs

32g

Fat

8g

COMMAND CRAVINGS

TRY THESE TIPS TO HELP TAMP DOWN AN APPETITE GONE AMOK



Q What are some ways I can help keep my appetite in check?

■ Thankfully there are several ways to curb your appetite (that don't involve dangerous drugs), and they all work together hand in hand.

The first thing you can do when getting up is eat a healthy and filling breakfast—for instance, a few eggs with avocado on a piece of sprouted grain toast or steel-cut oatmeal with a tablespoon of nut butter topped with berries or bananas.

Healthy snacking throughout the day between meals can also help keep you feeling full and less likely to overeat. Try noshing on snacks like string cheese, fruit, vegetables, lean protein, or nuts. Studies from 2011 and 2014 that were published in *Nutrition Journal* found that protein-rich snacking may control appetite, help you feel full, and assist weight loss. Getting adequate fibre is another good way to make sure you will feel fuller for longer—go for foods like bran, oatmeal, and beans.

Keeping on top of your water consumption is a simple way to rein in an out-of-control appetite. Drinking water will help you feel full and diminish the desire to overeat. Try to drink at least 475 ml of water with each meal and continue to sip water throughout the day.

You can also use psychology to trick your brain into suppressing your appetite. Try using a smaller plate when eating your meals—the smaller portions will give you fewer calories, but by filling the plate, you'll feel as if you are eating more. Another way to swindle your brain into turning off the hunger signals is by chewing your food longer because it takes around 20 minutes for your brain to signal that you're full.

ABOUT THE DIETITIAN

Jim White, R.D., A.C.S.M., is a spokesperson for the Academy of Nutrition and Dietetics and owner of Jim White Fitness & Nutrition Studios in Virginia.

PARTY HEARTY

BANISH FAT-FILLED FINGER FOOD WITH THESE HEALTHY BITES

BY **MATTHEW KADEY, R.D.**

PHOTOGRAPHS BY **BRIAN KLUTCH**

FOOD + PROP STYLING BY **SUSAN OTTAVIANO**

Whether you're hosting or attending a gathering, it's a good idea to take a preemptive strike against ruining your hard-earned buff-to-blubber ratio by getting in the kitchen and rustling up some better-body party foods. But there's no need to buy a stack of Martha Stewart cookbooks for inspiration—we've got some simple small bites with great flavours and much fewer nutritional pitfalls than glistening dips and pigs in a blanket. Party on!

CURRY DEVILED EGGS

What better way to entertain palates than with nature's perfect muscle-making protein? Beyond protein, eggs are a stealthy source of health-hiking antioxidants. For a creamier yolk texture, try steaming your eggs then plunging them into frigid water to help ensure they'll jump out of their shells.

SERVES
8

INGREDIENTS

8 large eggs
2 tbsp mayonnaise
1 tbsp Dijon mustard
2 tsp white-wine or cider vinegar
1 tbsp yellow curry powder
 $\frac{1}{4}$ tsp cayenne powder
 $\frac{1}{4}$ tsp salt
65 ml cup neutral oil, such as grapeseed or light olive
2 tbsp chopped coriander

DIRECTIONS

1. Bring 2.5 cm of water to a boil in a medium saucepan. Add a steamer basket and place eggs in basket in a single layer. Steam for 15 minutes, then immediately transfer to a bowl filled with ice water. Let rest 30

minutes. Alternatively, gently lower eggs into a pot of boiling water and boil for 30 seconds. Remove from heat and let stand, covered, for 17 minutes. Transfer eggs to ice bath and soak for 30 minutes.

2. Peel eggs and slice in half lengthwise with a sharp knife; remove yolks. Place egg yolks, mayonnaise, mustard, vinegar, curry powder, cayenne powder, and salt in a bowl and mash together. In a slow drizzle, add olive oil, stirring constantly until smooth. Using a small spoon, fill egg white cavities with yolk mixture. Arrange on a serving platter and garnish with coriander.

MACROS

(per serving)

Calories **148**

Protein **6g**

Carbs **1g**

Fat **14g**

PESTO YOGURT-STUFFED PEPPERS

The sweet, slightly spicy (and habit-forming!) South African peppers known as **peppadews**, or sweet piquanté, are perfect stuffers for an appetizer spread. Look for them in the deli section of supermarkets or order jars online. Jamming them full of Greek yogurt ensures your finger food has a bit of muscle-friendly protein, while adding a finishing touch of balsamic syrup makes you look like a kitchen badass.

INGREDIENTS

120 ml balsamic vinegar
Juice of ½ lemon
1 tbsp honey
240 g plain Greek yogurt
2 tbsp prepared pesto
16 peppadew (piquanté) peppers
2 tbsp chopped chives

DIRECTIONS

1. In a small saucepan, bring balsamic vinegar, lemon juice, and honey to a boil. Reduce heat to medium and simmer uncovered until syrupy and reduced to roughly 3 tbsp, about 6 minutes. Let cool. The syrup will thicken further upon cooling.

2. Stir together yogurt and pesto. Using a small spoon, stuff peppers with pesto yogurt.

3. Place peppers on a serving platter and drizzle balsamic syrup over tops. Sprinkle on chives.

SERVES
8

MACROS

(per serving)

Calories **88**

Protein **4g**

Carbs **13g**

Fat **2g**

MEDITERRANEAN SWEET POTATO PORK SLIDERS

While calories at festive gatherings can add up fast, these hand-to-mouth stacks provide quality nourishment so that you can enjoy soirees without sacrificing a shred of muscle. If you're keeping tabs on your fat intake, opt for pork labelled "lean" to get some less calorie-dense protein into your tummy.

SERVES
6

MACROS

(per serving)

Calories **316**

Protein **18g**

Carbs **12g**

Fat **22g**

INGREDIENTS

2 large sweet potatoes
450 g ground pork
20 g oil-packed sun-dried tomatoes, finely chopped
45 g kalamata olives, finely chopped
1 shallot, finely chopped
2 tsp Italian seasoning
1 tsp garlic powder
Salt and black pepper
1 tbsp rapeseed oil
113 g grated mozzarella
12 g rocket
1 roasted red pepper, sliced

DIRECTIONS

1. Preheat oven to 200°C/Gas Mark 6. Slice sweet potatoes into 12 1.25-cm rounds. Don't slice too thin or they won't be able to handle toppings. Lightly grease a baking sheet, arrange potato slices on sheet in a single layer, and lightly brush tops with some oil. Bake for 15 minutes, flip, and continue baking until fork-tender, about 15 minutes.

2. In a large bowl, gently mix together the pork, sun-dried tomatoes, olives, shallot, Italian seasoning, garlic powder, and a couple of pinches each of salt and black pepper. Form into 12 small patties.

3. Heat oil in a large skillet over medium. Cook patties for 3 minutes per side, or until cooked through. When the burgers are almost ready, top each burger with some cheese, cover skillet, and cook till melted.

4. To assemble, place a few rocket leaves on a sweet potato round, add a pork burger, and top with slice of roasted red pepper.



MAYAN CHOCOLATE BROWNIE BITES

Clean eating can come quickly undone if you fall prey to the fat bombs that often populate dessert trays. So present a gift to your midriff by having these slightly fiery bite-size brownies on hand so you'll be less tempted by the cheesecake. Nobody will be the wiser that you snuck in the superfood known as avocado, which just happens to give these treats their fudgy appeal. And because a party these days is sure to play host to one or more gluten haters, these use a gluten-free flour blend.

SERVES
8

INGREDIENTS

120 ml milk
2 large eggs
2 tbsp melted coconut oil or vegetable oil
1 avocado
50 g natural/unsweetened cocoa powder
75 g sugar
1 tsp vanilla extract
100 g 1-to-1 gluten-free flour blend
1 tsp cinnamon
¼ tsp cayenne powder
½ tsp baking soda
¼ tsp salt

DIRECTIONS

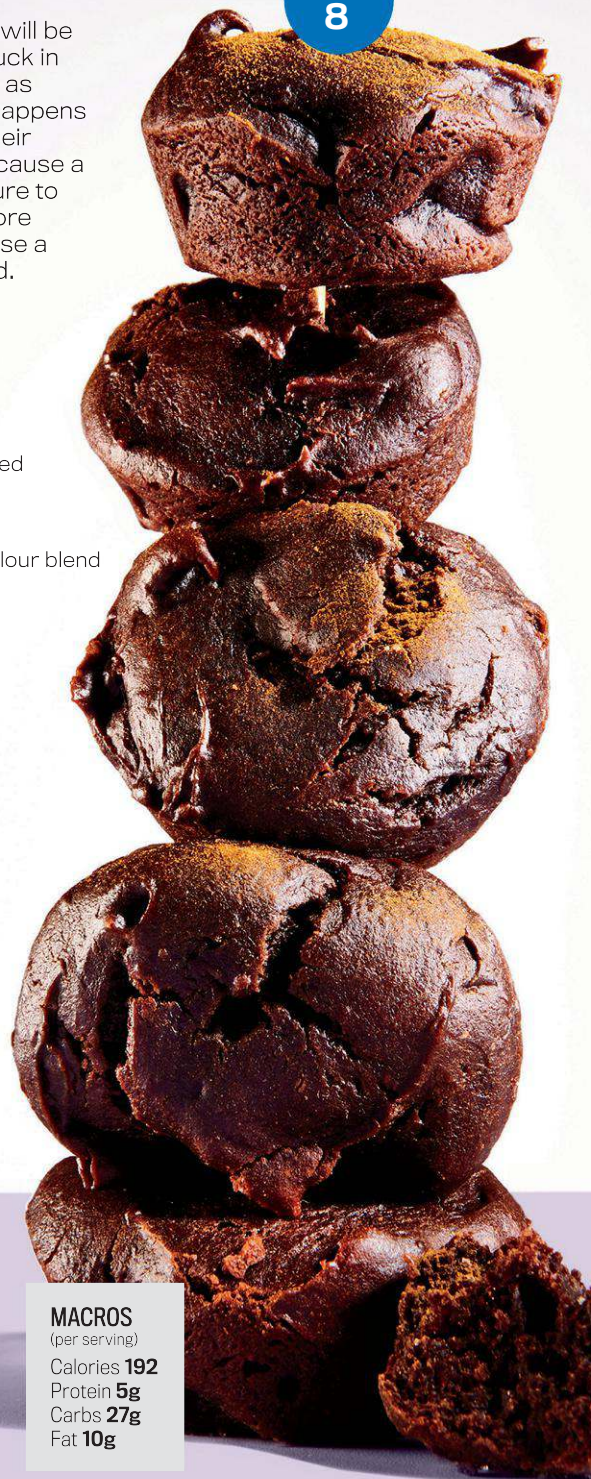
1. Preheat oven to 180°C/Gas mark 4. Place milk, eggs, oil, avocado flesh, cocoa powder, sugar, and vanilla in a blender and blend until smooth. In a bowl, stir together flour, cinnamon, cayenne, baking soda, and salt. Add avocado purée and mix until no dry flour remains.

2. Divide mixture among 16 mini-size greased or paper-lined muffin cups and bake for 15 minutes, or until a toothpick inserted into the centre of a brownie comes out nearly clean. Let cool for a few minutes before unmoulding.

MACROS

(per serving)

Calories **192**
Protein **5g**
Carbs **27g**
Fat **10g**



CHIPOTLE BEAN BALLS

Creamy and crispy at once, these great balls of nutrition will disappear quickly once put out in front of the hungry masses. Their duo of fibre and protein will help increase feelings of fullness, making it easier to resist double-dipping into the dessert tray. Serve these with salsa, soured cream, and/or guacamole.

INGREDIENTS

- 1 (400 g) can black beans, drained and rinsed
- 1 (400 g) can kidney beans, drained and rinsed
- Juice of 1 lime
- 1 small chipotle chili pepper in adobo sauce, finely chopped
- 1 tsp cumin powder
- $\frac{1}{2}$ tsp salt
- 2 tomatoes, seeded and chopped
- 150 g frozen or canned corn kernels
- 1 medium carrot, shredded
- 75 g finely chopped white onion
- 2 garlic cloves, minced
- 25 g + 45 g breadcrumbs
- $\frac{1}{2}$ tbsp canola oil

DIRECTIONS

- 1.** Preheat oven to 220°C/ Gas Mark 7 and grease a rimmed baking sheet.
- 2.** In a large bowl, mash together black beans, kidney beans, lime juice, chipotle chili pepper, cumin, and salt into only a slightly chunky mixture. Stir in tomatoes, corn, carrot, onion, garlic, and 25 g breadcrumbs. In a separate shallow bowl, stir together 45 g breadcrumbs and oil until breadcrumbs are coated. Form the bean mixture in balls. (You should get at least 18.) Lightly press each bean ball into the breadcrumb mixture, turning to coat. Place on the prepared baking sheet.
- 3.** Bake the balls until the breadcrumbs are golden brown, about 30 minutes.



SERVES
8

MACROS

(per serving)

Calories **170**

Protein **7g**

Carbs **28g**

Fat **4g**





SERVES
8

SMOKED FISH RYE BLINI

They sound upscale, but blini are essentially just mini pancakes. Make them out of hearty rye flour and adorn with a smoked fish mash and you'll surely be the hit of the party. As a nutritional bonus, richly flavoured smoked fish like mackerel delivers a boatload of mega-healthy omega-3 fats. Look for rye flour in supermarkets.

INGREDIENTS

- 120 ml milk
- 2 large eggs
- 100 g rye flour
- $\frac{1}{2}$ tsp baking powder
- $\frac{1}{2}$ tsp baking soda
- Salt
- 340 g smoked fish fillets, such as mackerel or salmon
- 80 g reduced-fat soured cream
- 3 tbsp chopped fresh dill
- $1\frac{1}{2}$ tbsp prepared horseradish
- 2 tsp lemon zest
- $\frac{1}{4}$ tsp black pepper

DIRECTIONS

1. Blend together milk, eggs, rye flour, baking powder, baking soda, and a couple of pinches of salt until smooth. Let batter rest 15 minutes. By the tablespoonful, cook batter in a greased skillet over medium heat until edges begin to brown and curl inward, about 2 minutes. Flip and cook for an additional minute. You should end up with about 16 mini pancakes.

2. Remove skin from smoked fish and break apart flesh into a bowl. Stir in soured cream, dill, horseradish, lemon zest, and black pepper. Top rye pancakes with fish mixture. **FLEX**

MACROS

(per serving)

Calories **208**

Protein **13g**

Carbs **13g**

Fat **20g**

The background features a network of black and white circles connected by lines, resembling a molecular or neural network. A single red circle is positioned near the top right of the yellow text box.

INSULIN

.....

**THE REAL FACTS AND
MYTHS ABOUT THIS
MOST CONTROVERSIAL
HORMONE**

...

**BY MARK GILBERT,
B.SC. (NUTRITION), CISSN**



THE FUNCTION OF INSULIN

Insulin is a hormone released in response to eating food or drink, and tells the body's cells to take up nutrients from the blood. **To find out how it affects performance, nutrition, and weight, read on...**

AS

most readers of this magazine will know, insulin is one of the most notorious hormones when it comes to sports, nutrition, and weight loss. Several “experts” have called it both the most lipogenic (increases body fat) and the most anabolic (stimulates growth / muscle) of all of the body’s

hormones. It’s also been blamed for causing excess hunger, storing carbs as fat, and inflammation. This month, I’m going to separate the facts from the hype. In the course of doing so, I’ll also look at a number of other controversial questions, like: “Does the GI of carbs determine insulin response?”, “Which foods spike insulin the most?”, “Does protein jack up insulin as much as carbs?”, “does fat reduce insulin response?”, “Can you build muscle without boosting insulin?”...and you’ll almost certainly be surprised by many of the answers! Finally, the degree to which much of the above information is relevant to you depends upon your parents because everyone’s insulin function is heavily governed by genetics, so I’ll take a look at the facts on insulin’s effects in different people too...

WHAT IS INSULIN?

As a very basic overview, insulin is a hormone that is released into the blood in response to eating food or drink. Its job is to signal the body’s cells to take up nutrients from the blood and it is especially important for keeping blood glucose / sugar regulated within a normal range. Without insulin, the body cannot carry out these crucial functions and death eventually ensues. This is why type-1 diabetics (who cannot produce insulin) must inject it a number of times per day.

GLUCOSE RESPONSE VERSUS INSULIN RESPONSE

OK, the first thing we have to clear up about insulin is that it is not all about carbs. Although the amount and type of carbs eaten is the best predictor of how much insulin is produced, much of what you have probably read about this topic over-simplifies this relationship. For instance, many

readers will have heard of the glycaemic index (GI). This is a measure of how much and how fast the carbs you consume in a meal appear as glucose in your blood. Generally, less-processed and higher-fibre carbs are broken down and absorbed into the bloodstream as glucose more slowly (low GI), while others do so more quickly (high GI). While these are important measures, blood glucose levels only partially predict how much actual insulin will be released. So if we want to discuss the effects of insulin, we have to consider the Insulin Index (II), not just the GI.

INSULIN INDEX, CARBS, FAT & PROTEIN

Fortunately, an insulin index has been established for many foods (See Chart). Ongoing research, over many decades, by scientists in Canada (who invented GI and started to develop the II) and Australia (who have further

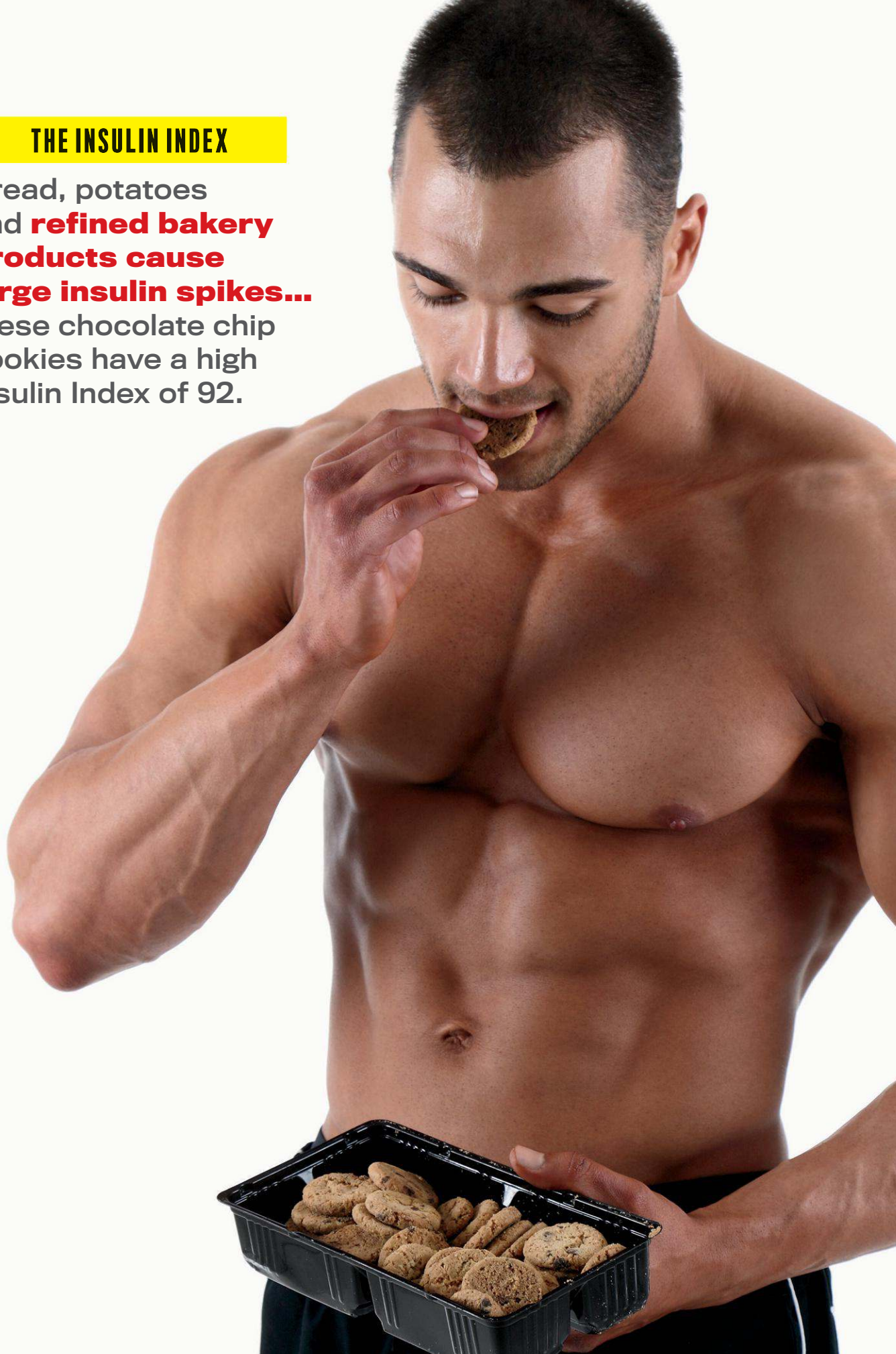
developed the II) has uncovered some surprising results. While bread, potatoes and refined bakery products predictably cause large insulin spikes and oatmeal and All Bran caused low ones, surprisingly, brown pasta, brown rice and whole grain bread were similar to their white, low-fibre counterparts. Also, fish and beef had higher insulin responses than many high-carb foods. So it is clear that fibre is not as important for lowering insulin response as previously thought and that the amino acids from proteins do cause fairly substantial insulin spikes. Even fat (at higher dosages than protein) causes a significant increase in insulin, so the theory that adding fat to meals curbs insulin response appears to be wrong.

Again, the amount and types of carbs in a meal are still the most important consideration but these results should give us pause to re-consider some established beliefs. For instance,

THE INSULIN INDEX

Bread, potatoes
and **refined bakery
products cause
large insulin spikes...**

these chocolate chip
cookies have a high
Insulin Index of 92.



these new revelations suggest that high-protein diets have their beneficial effects by mostly other means than minimising insulin response to meals.

DOES INSULIN MAKE YOU STORE CARBS AS FAT?

In a word, no. Studies which have gone to huge extremes trying to demonstrate the conversion of carbs to fat in the human body have not been very successful. Even when researchers fed study subjects several massive carbohydrate meals, this only increased lipogenesis (the making of fat in the body) by a small amount. However, this does not mean that insulin doesn't increase fat storage. Surprisingly, despite my best efforts at finding some, little research exists to directly show that insulin increases fat storage. However, fascinating studies show that mice who have had certain genes altered to lower their insulin responses, no longer get obese like their normal insulin-producing mates.

The mechanism behind this is that in the normal mice, higher insulin levels slow their metabolism and their ability to burn off excess calories as heat (a process called "thermogenesis", which is primarily caused by "uncoupling" or "UCP" proteins). This is in agreement with several other studies which confirm that when insulin levels are high, UCP activity is low. Interestingly, the modified mice were also protected from the health consequences of over-eating, like inflammation and fatty liver. The authors of this study concluded that too much insulin "drives diet-induced obesity". All of the above, and the fact that insulin activates lipogenic (fat making) enzymes like

INSULIN INDEX OF POPULAR FOODS

FOOD INSULIN INDEX (II)

CARBS

All-Bran	32
Porridge (Oatmeal).....	40
Muesli	40
Pasta (white & brown)	40
Popcorn.....	54
Rye Bread	56
Apples	59
Potato Chips (Crisps)	61
Brown Rice	62
White Rice.....	79
Grapes.....	82
Cookies	92
Mars Bar	112
Yogurt.....	115
Potatoes.....	121
Jellybeans.....	160

PROTEINS

Eggs.....	31
Cheese	45
Beef	51
Fish	59

OTHER FOODS

Peanuts	20
Lentils.....	58
Baked Beans	120

pyruvate dehydrogenase, fatty acid synthase and acetyl-CoA carboxylase and that it puts the brakes on fat breakdown by inhibiting hormone sensitive lipase, suggests that insulin creates an environment in which net fat storage is more likely to occur.

HUNGER

Similar to the case with fat storage, I was surprised how few studies looked directly at how increases in insulin after different foods affected hunger. However, despite a few studies showing

that insulin may actually decrease hunger, these were the exception, with over twice as many studies showing the kind of increased hunger effects of insulin. This, along with studies that broadly show that the kinds of foods that cause less insulin output after meals keep people feeling full longer, seem to confirm the hunger-producing effects of insulin. However, the small amount of studies in a limited number of subjects mean that we can't oversimplify this relationship. Fortunately, studies are quite clear that higher-fibre, higher-protein meals with higher liquid content will keep most people feeling fuller for longer.

IS INSULIN ANABOLIC?

You don't see it so much any more but for a while, it seemed like every article on insulin in the fitness and bodybuilding magazines and websites was calling it "the most anabolic hormone". In the strictest definition of the word "anabolic", this is probably true—anabolic means "to build up" and because insulin is required to store carbs, fat, protein, creatine, carnitine, etc in our cells, in that sense this argument is reasonable. However, a close look at all of the research tells a very different story if, by anabolic, we mean "muscle" growth. Of course insulin is needed for its crucial storage functions but only a tiny amount is needed for protein synthesis (the process that builds muscle) to occur—further amounts don't amplify this effect.

Some of the world's top protein and sports nutrition scientists have established that the primary effect of insulin is to inhibit muscle breakdown after exercise. So if insulin has a muscle-building effect it is achieved by



YOUR INSULIN FINGERPRINT

Everyone's insulin function is heavily governed by genetics. It is well-established that two people who are both inactive and obese **can have very different levels of insulin function**—one may be diabetic and the other may have better insulin function than a healthy athlete.

preventing the post-workout loss of amino acids from muscle and not the anabolic effect of protein synthesis. In fact, when scientists looked into this, they found that they had to give amounts of insulin which would be fatal if injected normally to cause a further boost in muscle-building activity. So it is pretty clear that, for instance, testosterone is a more anabolic hormone than insulin.

YOUR INSULIN FINGER PRINT

As with most of our characteristics—both physical and mental—much of how we respond to our environment is genetic and insulin is certainly no exception. So whether you carefully monitor the insulin index of the foods you eat or take more of a relaxed approach should depend upon your genetics. It is well-established that two people who are both inactive and obese can have very different levels of insulin function—one may be diabetic and the other may have better insulin

function than a healthy athlete... so much depends upon the luck of the draw. Unfortunately, we can't change our genetics (yet), so if you suspect you are at higher risk for poor insulin function, then I would suggest reducing the insulin index (II) of your diet for most foods and meals. Some hints you may be at risk are if you have a family history of type-2 diabetes or if you have a large waist circumference in comparison to your hips/glutes. You could also get tested by your doctor or get a gene test (some gene tests are better than others when it comes to insulin function / carb sensitivity).

CONCLUSIONS

So the take-home messages on insulin are many. Firstly, it's not all about GI—GI is important but just as important is II and when trying to manage insulin specifically, II is paramount. Next, adding more protein to a meal and even adding in a significant amount of fat actually increases insulin output but replacing carbs with either of

these two macronutrients will reduce insulin response in most cases. Thirdly, while insulin doesn't make you "store carbs as fat", it does seem to slow metabolism and have effects on multiple enzyme systems which would be expected to cause fat storage. In addition to causing fat storage, larger insulin surges after meals also seem likely to increase cravings and make you eat more later. From a muscle-building perspective, insulin helps reduce muscle breakdown but not increase construction and finally, insulin will have varying effects on people depending upon their DNA and those who suspect that they are at higher risk should pay attention to their II.



MARK GILBERT

is an expert in Sports Nutrition and has worked with elite level athletes and formulated supplements for many of the industry's biggest companies. See: www.MuscleDiet.net and the MuscleDiet YouTube channel!



choices today with respect to protein. They can eat real meat, combine certain vegetables with complimentary amino acids, or they can eat dairy sources (milk, eggs, etc). When it comes to protein powders, there are also many choices. Animal derived proteins (whey, casein, egg, goat, beef, fish), vegetable derived proteins (rice, hemp, soy, pea) and even hydrolysates (pre-digested peptides of whey and casein) are available. While there may not be a best choice for all people under all conditions, the most popular powder protein in the world by far is currently Whey Protein Isolate (WPI).

Whey protein is derived from the water-soluble portion of milk. Unlike whole milk, WPI has no lactose, cholesterol or fat, and this is the reason it is preferred by many consumers who are lactose intolerant and/or have problems with digesting protein powders. WPI is typically very high in protein content (i.e. usually 90% or greater) in comparison to other forms of protein that can range from only 10-50%. WPI is high in L-cysteine, all nine essential amino acids (histidine, isoleucine, leucine, lysine, methionine, phenylalanine, threonine, tryptophan and valine), and all three branched chain amino acids (BCAA = leucine, isoleucine and valine). L-cysteine helps regulate blood sugar, decreases

DYMATIZE ISO100

■ ISO100 is a super-premium combination of hydrolysed whey protein isolate and whey protein isolate product that delivers 25 grams of protein per serving, along with a paltry 3 grams of carbohydrate and less than 1 gram of fat. This premium whey protein isolate is

gluten-free, low-carb (sugar free), and tested for banned substances. Packed with 5.8 grams of BCAA (2.7 grams of which is leucine) per 32 gram serving, ISO100 is designed to be used 1-2 times per day (i.e. breakfast, before or after training, before bed).

Consumers have many

blood vessel inflammation and reduces exercise-induced oxidative stress. The BCAAs are useful for helping reduce muscle soreness and speeding muscle recovery from intense training.

Leucine is probably the most important amino acid of all as it can increase muscle protein synthesis all by itself. This “leucine trigger” has been well documented and requires a dose of at least 2.5 grams per food or drink serving to stimulate muscle protein synthesis. In other words, make sure your protein powder (WPI or otherwise) has a minimum of 2.5 grams of leucine in it. When WPI is cold micro-filtered, it retains very important fractions from milk that other proteins sometimes leave out. These native fractions (e.g., alpha-lactalbumin, beta-lactoglobulin, lactoferrin, various immunoglobulins, glycomacropeptide, etc) have immune-enhancing properties and help regulate over 200 different genes within our body.

WPI is considered a “fast” protein because it is absorbed and digested very quickly and causes sharp increases blood levels of amino acids that lasts for about 60-90 minutes. This is particularly useful for breakfast, and during the post-workout period, where a rapid delivery of amino acids to muscle can quickly reverse the catabolic effects of resistance exercise (in other words, WPI is a very

While there may not be a best choice for all people under all conditions, the most popular powder protein in the world by far is currently Whey Protein Isolate (WPI).

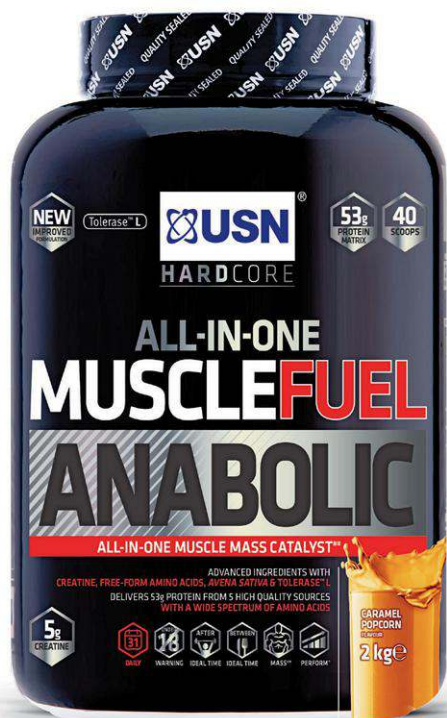
effective stimulator of muscle recovery after training). WPI is also quite versatile in that its digestion and absorption can be slowed down by co-consuming it with heart healthy fats and/or foods high in fiber, or even simply mixing it with cow's milk (which contains 80% casein by weight – a “slow” protein).

In addition to being an effective muscle builder, there are other good reasons to use whey protein. These include improved satiety (feeling of fullness), regulation of blood pressure, increased high-density lipoprotein (HDL-cholesterol), and lowering of triglycerides. These effects can be variable however, and depend on the individual's background health status as well as their overall dietary and physical activity habits.

A few recent studies have demonstrated that in younger subjects, 20-25 grams of WPI is a high enough dose to maximize muscle protein synthesis. In older subjects however, 30-40 grams seems to be necessary for the same effects in muscle. This is because as we age, muscles generally lose their responsiveness to anabolic stimuli. This is part of the reason it is so important to continue performing some kind of resistance exercise throughout life.

Gram per gram, WPI is one of the highest quality muscle building proteins on the market today. Although there may be times to use other proteins, or even a blend of proteins, WPI is currently the “king” of single source proteins.

USN ALL-IN-ONE MUSCLEFUEL



■ MuscleFuel is a low fat, low sodium, high protein food (powder) consisting of five different protein sources: whey protein concentrate, milk protein isolate, calcium caseinate, egg, and soya protein. Each 100 gram serving contains 1602 KJ (378 kcal) of energy and 36 grams of protein, while providing <2 grams of fat and 54 grams of carbohydrate (from 3 different sources). MuscleFuel also provides 18 vitamins and minerals as well as a flurry of evidence-based ingredients designed to increase strength, lean mass, and high intensity performance (e.g. creatine, hydroxy beta methylbutyrate [HMB], beta alanine, taurine, etc).

WHEY PROTEIN

CONCENTRATE (WPC) is a fast-acting protein that contains a high concentration of the branched chain amino acids (BCAA) leucine, isoleucine, and valine. BCAAs are revered by athletes for helping reduce muscle soreness and speeding muscle recovery from intense training. When WPC is cold micro-filtered and contains at least 80% protein by weight, it retains very important fractions from milk that other proteins (like whey protein isolate) sometimes leave out. These native fractions (e.g., alpha-lactalbumin, beta-lactoglobulin, lactoferrin, various immunoglobulins, glycomacropeptide, etc) have immune-enhancing properties and help regulate over 200 different genes within our body. One study that compared WPC to whey protein isolate reported greater improvements in peak power, work capacity and decreased body fat in the WPC group. Other studies have shown improved antioxidant status in subjects ingesting WPC. This doesn't necessarily mean that whey protein isolate is inferior to WPC, but it certainly shows that a high quality WPC has very powerful recovery effects.

Scientists consider WPC a "fast protein" because it is digested rapidly and causes sharp increases in amino acid levels in blood. This is exactly

what I recommend during the post-workout period, where a rapid delivery of amino acids to muscle can quickly reverse the catabolic effects of intense training. Many bodybuilders also use WPC first thing in the morning to quickly reverse sleep-induced muscle protein breakdown.

CREATINE has been the subject of hundreds of research studies in humans since 1992. In general, men and women who ingest 3-5 grams of creatine per day for 6-8 weeks gain an average of 2.8-3.2 kg of lean mass. Despite popular rumors of "water retention", these gains in lean mass have been shown to be the result of four main factors: 1) increases in muscle fiber protein content, an effect which results in a doubling of muscle fiber size compared to resistance training without creatine supplementation; 2) increases in several myogenic regulatory factors (i.e. proteins that activate gene expression in muscle); 3) increases the number of "satellite cells" (i.e. immature or baby muscle fibers that can eventually mature into muscle cells); and 4) increases in intramuscular IGF-1 content (a potent growth factor in muscle). In terms of improving physical performance and power output, creatine supplementation that results in an increase in intramuscular creatine stores

of 15-40% has been shown to enhance the energy capacity and production from the phosphagen energy system (which includes adenosine triphosphate [ATP] and phosphocreatine [PCr]). In addition, creatine supplementation is also thought to buffer changes in intramuscular pH due to hydrogen ion accumulation (translation = less fatigue during intense muscle contractions).

EGG PROTEIN is protein derived from whole eggs and is low in lactose, cholesterol and fat. Egg protein is considered a good source of riboflavin and biotin and has been called “nature’s perfect food” because its amino acid profile mirrors the amino acid requirements for humans. Although it does not increase muscle protein synthesis quite as much as whey protein isolate, it is more effective than casein. In addition, egg protein is a rich source of sulfur-containing amino acids that are important in hormone production. Before whey protein became the King, egg protein was the bodybuilder’s “gold standard”.

DEXTROSE, also known as d-glucose, is a monosaccharide (simple sugar). It is one of the primary sources of energy in the body, and is used both in aerobic metabolism as well as anaerobic metabolism. In other words, whether you are a triathlete or a weight lifter your body still uses d-glucose to fuel the production of cellular energy. Unlike fats and proteins, glucose is unique because it can be broken down aerobically (with oxygen), as well as anaerobically (without oxygen) to produce energy in the form of ATP (adenosine triphosphate). In addition, glucose molecules can be linked together to

form glycogen, the storage form of carbohydrate in the liver and muscles. Liver glycogen is used to help regulate blood sugar levels while muscle glycogen is the primary fuel source during intense exercise. Many endurance athletes, some multiple-sprint sport athletes, and even pre-contest body builders will use a process called “glycogen loading” to store more carbohydrate in their muscles prior to competition. For the athletes, it provides a boost in performance during the latter stages of match, while for the body builder it provides an accentuation of muscle size and definition. Although it is not technically an “essential nutrient”, the body needs dextrose (sugar) it for optimal performance. Try to train or compete without it and expect crappy results.

HMB is a potent anti-catabolic metabolite of the amino acid leucine that is thought to play a central role in regulating muscle mass by inhibiting protein breakdown. HMB is available in two forms, calcium-HMB and HMB-free acid. While the latter form appears to be much more powerful, there are a few published studies that demonstrate the benefits of calcium-HMB supplementation on lean mass and the acquisition of strength. Scientists believe that HMB helps stabilize cell membranes and, based on recent evidence in rats, may increase the short-term energy capacity of muscle fibers by increasing ATP and glycogen content. In order to reap these potential benefits, doses of HMB (the calcium salt form) need to be about 2-3 grams per day for approximately 8 weeks. Also, HMB works best when it is taken during intense periods of training. Wimps

and those who skip workouts should not expect any noticeable changes in body composition or strength levels.

When taken at appropriate doses during periods of intense resistance training, HMB can magnify changes in lean mass and muscle growth. This is particularly true in previously untrained subjects and/or those who are losing muscle due to the normal aging process (where catabolic processes are accelerated).

SOY PROTEIN ISOLATE is a moderately fast digesting protein that is rich in the essential amino acids and arginine. Arginine is a favorite of many bodybuilders for its effects on nitric oxide production (and enhanced muscle pumps). Soy protein is also rich in the phytonutrient genestein, which may also have nitric oxide boosting qualities, as well as several health-promoting isoflavones and saponins. Several studies have demonstrated the ability of soy protein to increase muscle protein growth, and although it is not as powerful in this regard as whey or milk protein, soy also contains beneficial antioxidants that may improve recovery from intense training. In addition, one study reported that soy protein increased growth hormone levels by 200%. Some bodybuilders and fitness gurus have claimed that soy protein might increase estrogen levels and/or decrease circulating testosterone levels. However, these claims have been largely debunked by recent research. Although using high doses of soy protein in isolation is usually not recommended, small amounts added to bars and or protein powders can actually improve lean mass and recovery from training.



ENDANGERED SPECIES

**LISA CROSS
AND RENE
CAMPBELL ARE
BRITAIN'S LAST
SURVIVING
PRO FEMALE
BODYBUILDERS.**

BY JOHN PLUMMER



THESE ARE STRANGE TIMES

for British female physique competitors. The number of categories and entrants has rocketed to levels hitherto unseen. Gyms are full of women wanting to get lean and muscular. But competitive female bodybuilders—women who take it to the extreme—are an endangered

species. The UKBFF discontinued female bodybuilding in 2013 when an incredibly lean Silvana Imbrogno became the last in a distinguished line of national champions that began with Lyndsay Summers in 1980 and included the likes of Jackie Parish (now a UKBFF judge), Kimberley-Anne Jones, Paula Bircumshaw, Joanne Lee, Lohani Rochi, Joanna Thomas and Wendy McCready.

At pro level, the Ms. Olympia stopped after 2014. When Wom-

en's physique took over, it looked like that might be the end for female bodybuilding. But the Wings of Strength competitions breathed new life—and some impressive prize money—into the scene and two British women are excelling.

WORLD AMBITIONS

Lisa Cross finished seventh at the Women's World Championships in Phoenix, Arizona, last year, making it her most successful season since she turned



LISA CROSS

Showing sensational shape and conditioning at last year's Tampa Pro, where she placed second.



pro after winning the 2011 British Championships. Cross, who is also an author, had planned to take off this year to write another book, but she has amended her plans and now aims to make the top five at this year's World Championships. "Thanks to the involvement of Wings of Strength, there is a real buzz around female bodybuilding," she says. "More girls are competing and the standard just continues to improve. I will; therefore, defi-

nately compete and am currently holed up in my private gym training hard to make improvements."

Rene Campbell, who succeeded Cross as British champion in 2012, is also making waves on the international scene. Campbell finished fifth at the Lenda Murray Pro in Norfolk, Virginia last year and also wants to get back on stage in 2017. "What I have achieved with my bodybuilding career has exceeded my expectations," she says. "I never thought it would be

possible to turn pro as an IFBB female bodybuilder at a time when women's bodybuilding was being phased out of the shows. Everything after that has been a bonus."

The revival may be gathering momentum. Wings of Strength founders Jake and Kristal Wood recently announced that they will be running a pro-am show in Chicago in July that will enable three women from around the world to turn pro. Perhaps there are more chapters to be written in the story.



RENE CAMPBELL

After an excellent fifth place at the Lenda Murray Pro in 2016, Campbell plans to return to the stage this year.



PART I

CONTEST PREP 101

**A LOGICAL, MANAGEABLE, EASY, AND
EFFECTIVE PROTOCOL FOR GETTING YOUR
BODY READY FOR COMPETITION!**

BY ERIC “MERLIN” BROSER

■ There is no doubt that preparing for a bodybuilding/physique contest can be quite intimidating, especially if it is your first time. There are so many vital components necessary for bringing to the stage a ripped, dense, full, and muscular body that it's very easy to become both confused and overwhelmed.

That is precisely why FLEX asked me to write a series of “how-to” articles on this very subject. I myself have competed in more than 20 bodybuilding competitions and have worked with clients all over the globe (novice to pro level), assisting in their contest prep for 25-plus years. And while each of us is unique in the way we respond to specific diets, training programmes, and supplement regimens, I have been able to create a sensible, efficient, and healthy foundation protocol that will help just about anyone hit the stage with the kind of physique that will definitely grab the judges' attention!

12-WEEK PREP PERIOD

Before I get into the nuts and bolts, I want to mention something regarding the off-season. It is my firm belief that those who are serious about competing and moving to the highest levels of the sport should keep their body fat in a range that will allow for a prep period of no longer than 12 to 16 weeks. I actually prefer the first four weeks (16 down to 12) to be a “break in” phase, starting by simply eliminating all junk foods (alcohol, too, if needed) from the diet while also getting used to consuming six meals per day on a regimented schedule. By keeping body fat at a respectable level year-round you will not only make contest prep easier and less mentally/physically exhausting but also allow for maximum retention of muscle mass.



Posing onstage is the culmination of a lot of hard work both in the gym and in the kitchen, as well as practising in front of the mirror.

DIET

Below you will find a list of high-quality foods that can be included in your diet for the first four weeks of prep, as well as a sample meal plan so you can see how to put things together. As we move along, more and more foods will be removed, and the macronutrient profile will be adjusted. This is to allow for continuous progress to take place every week right up till the show.

Proteins: lean beef, lean turkey, turkey breast, chicken breast, steak, egg whites, game meats, white fish, salmon, nonfat cottage cheese, protein powders (can be used for up to three meals per day)

Carbohydrates:

Brown rice, white rice, sweet potato, white potato, whole-grain bread, oatmeal, cream of wheat, quinoa, rice cakes, pasta, carb powder, all fruits

Vegetables: All green and coloured types

Fats: Walnuts, peanuts, almonds, avocado, cheddar cheese, olive oil, fish oil, flax oil, coconut oil, nut butters

Now that we have a solid list of foods in place, let me give you an example of what a typical day of dieting might look like at this point for someone weighing about 90 kg and carrying between 10% and 12% body fat.

MEAL 1

P Whey/casein protein powder mix (approximately 2 scoops)
C Oatmeal (90 g uncooked)
F No added fats

MEAL 2

P Chicken breast (200 g cooked)
C Brown rice (190 g cooked)
F No added fats

**MEAL 3
(PRE-WORKOUT)**

P Tilapia (235 g cooked)
C Large mixed salad
F Olive oil (1 tbsp)

**MEAL 4
(POST-WORKOUT)**

P Whey protein powder (approximately 2 scoops)
C White potato (285 g cooked)
F No added fats

MEAL 5

P rump steak (200 g cooked)
C Sweet potato (155 g cooked)
F No added fats

MEAL 6

P Casein protein powder (approximately 2 scoops)
C None
F Natural peanut butter (2 tbsp)

Totals: 300g protein,
200g carbs,
28g essential fats

SUPPLEMENTS

When it comes to supplements, always remember that no matter how much you take, they can never make up for a faulty diet or training programme! However, if everything else is on point, then certainly there are a plethora of excellent products on the market that will assist you in reaching your best condition. Here is what I recommend for this stage of your prep.

Creatine

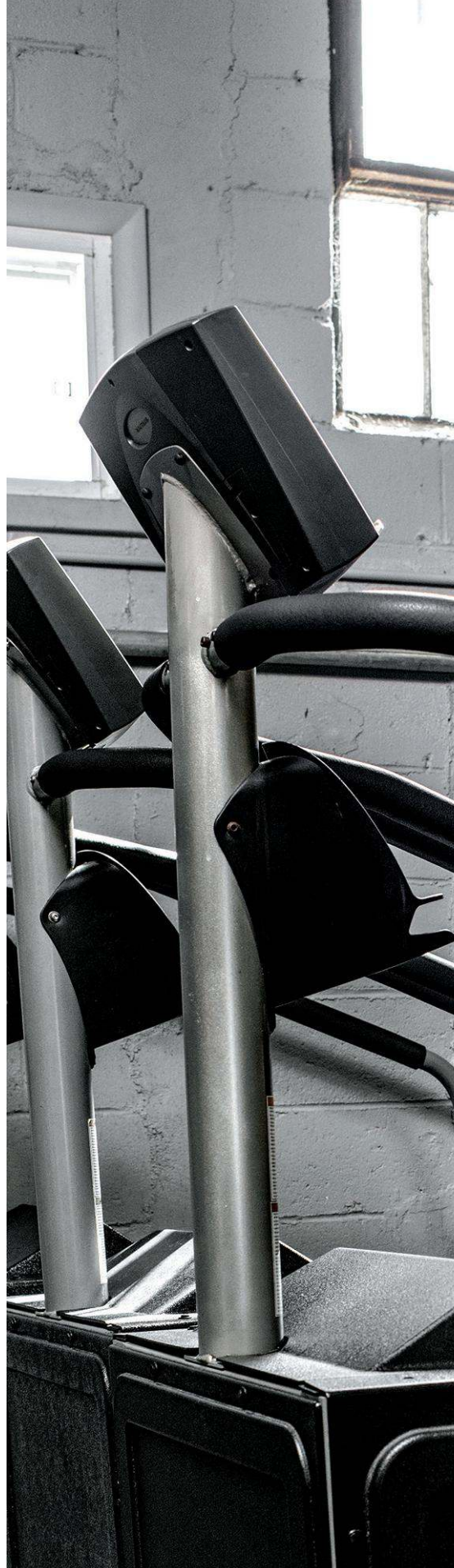
Beta-alanine

BCAAs

**Multivitamin/
mineral**

Fish oil

L-leucine



CARDIO

Yes, there are a few genetic freaks out there who have such naturally high metabolisms that they do not need to utilize cardio as a fat-burning tool leading up to a competition. However, for the rest of us mere mortals, cardio is a necessary evil. That said, there should never be a need for excessive amounts, which will only serve to burn off lean muscle—a definite no-no! As I mentioned earlier, the key to a truly successful, easy, and efficient contest prep is making sure you never let yourself get too out of shape during your off-season. I like to start competitors off with a base amount of cardio at the beginning of prep and then progressively increase the amount each week. I should also note that while there are tons of conflicting studies (and expert opinions) out there, my experience has shown me that morning/fasted cardio (except for five to 10 grams of BCAAs) is the best when melting body fat is the primary goal.

12 Weeks Out

30 minutes on non-workout days

11 Weeks Out

30 minutes on non-workout days and 15 minutes on workout days

10 Weeks Out

35 minutes on non-workout days and 15 minutes on workout days

9 Weeks Out

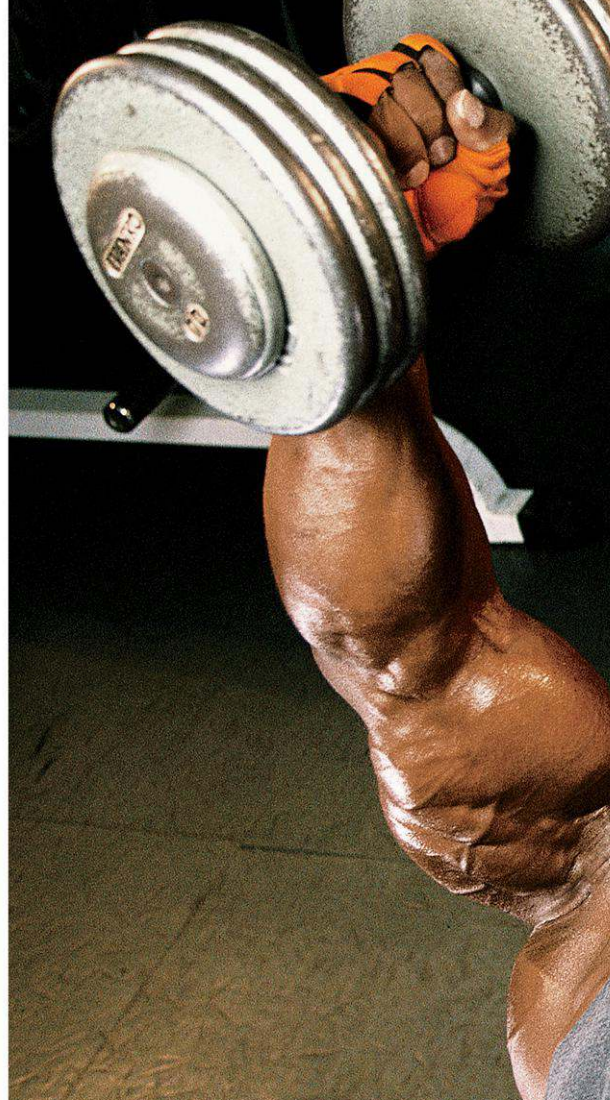
35 minutes on non-workout days and 20 minutes on workout days



PER BERNAL

TRAINING

The goal when preparing for a contest is to keep every gram of muscle you worked so hard to accrue during the off-season. In order to accomplish this, you must continue to train intensely but also vary your methods so that you are stimulating every pathway responsible for hypertrophy. At 12 weeks from a competition, I normally begin utilizing a workout protocol I developed around the year 2000, known around the globe as Power/Rep Range/Shock, or P/RR/S for short. While I cannot go into detail in this article about the specifics of this programme and why it is so effective, I can provide you actual sample workouts that can be used for the first four weeks of prep. I should mention that you can change the exercises from the ones I list below when necessary, but make sure to stick to the rep range, rep tempos, rest periods, and basic structure. Weeks 12 to 9 will have you training in the first phase of P/RR/S: power. **FLEX**



CONTEST PREP WEEKLY WORKOUT

MONDAY

EXERCISE	SETS	REPS	TEMPO	REST
Chest				
Flat Dumbbell Press	4	4-6	4/0/X	3-4 min.
Smith Machine Incline Press	3	4-6	4/0/X	3-4 min.
Incline Dumbbell Flye	3	4-6	3/0/X	3 min.
Biceps				
Alternating Dumbbell Curl	4	4-6	3/1/X	3 min.
Preacher Curl	3	4-6	4/0/X	3 min.
Forearms				
Seated Barbell Wrist Curl	2	4-6	2/0/X	2-3 min.
Hammer Curl	2	4-6	3/0/X	2-3 min.
Abs				
Seated Crunch Machine or Cable Crunch	3	10-12	2/0/1	2-3 min.
Lying Straight-leg Raise	2	Max	3/0/1	2-3 min.





CONTEST PREP WEEKLY WORKOUT

TUESDAY

EXERCISE	SETS	REPS	TEMPO	REST
Quads				
Leg Extension	3	4-6	3/0/X	3 min.
Hack Squat	4	4-6	4/0/X	4 min.
Single-leg Leg Press	3	4-6	3/0/X	4 min.
Hamstrings				
Seated Leg Curl	4	4-6	3/0/X	3 min.
Single-leg Lying Leg Curl	4	4-6	4/0/X	3 min.
Calves				
Calf Press	3	4-6	2/1/X	2-3 min.
Seated Calf Raise	2	4-6	2/1/X	2-3 min.

Train smart to keep your body proportionate from every angle onstage. Remember, judges see everything.



CONTEST PREP WEEKLY WORKOUT

THURSDAY

EXERCISE	SETS	REPS	TEMPO	REST
Back				
Cable Row (underhand grip)	4	4-6	2/0/X	3-4 min.
Wide-grip Pullup	3	4-6	3/0/X	3-4 min.
T-bar Row	3	4-6	2/0/X	4 min.
Deadlift	4	4-6	2/1/X	4 min.
Abs				
Weighted Hanging Bent-leg Hip Raise	3	10-12	2/0/1	2-3 min.
Weighted Incline Situp	2	10-12	3/0/1	2-3 min.

FRIDAY

EXERCISE	SETS	REPS	TEMPO	REST
Shoulders				
Seated Bent Rear Dumbbell Lateral	3	4-6	2/1/X	3 min.
Seated Dumbbell Press	3	4-6	4/0/X	3-4 min.
Barbell Upright Row	3	4-6	2/1/X	3 min.
Trapezii				
Barbell Shrug	4	4-6	2/1/X	3 min.
Triceps				
Incline Overhead Dumbbell Extension	4	4-6	4/0/X	3 min.
Weighted Triceps Dip	3	4-6	3/0/X	3 min.
Calves				
Seated Calf Raise	3	4-6	2/0/X	2-3 min.
Standing Calf Raise	2	4-6	2/0/X	2-3 min.



**Photographed at
M10 Fitness
in Nottingham.**





6 STEPS FOR DEVELOPING LAGGING BODY PARTS

Each month I bet you pick up FLEX, see all the incredible physiques, and ask the same question: Why aren't I changing? I spent many years thinking exactly the same thing. I tried all the workouts, switched up my programmes, ploughed through vast amounts of food, and gave it all I had in the gym. But you get to a point when you think you're just not destined for bigger muscles.

Well, you do if you're the kind of person who is happy to give in. But I'm not like that. I don't believe in "can't." I don't believe only certain people in the world can build serious muscle mass. In my eyes, anyone can do it, but the less you know, the slower you grow.

I developed my physique—and am still working on it—off the back of 22 years of playing rugby. I suffered all kinds of injuries, including a torn ankle ligament, a prolapsed disk, and shoulder reconstruction, so when I started bodybuilding, my body was slightly dysfunctional. The reason I'm telling you this is that if I can grow and balance out my physique, so can you.

BY **MARK COLES**

PHOTOGRAPHS BY **CHRISTOPHER BAILEY**

ONE BODY PART I ALWAYS STRUGGLED WITH was chest. It's by no means where I want it to be, but it's a million miles from where it was. What's interesting to note is that, just like many of you, I'd tried nearly every tip in the book. So why didn't they work?

When it comes to training and building muscle, most people focus on exercise choice, reps, load, sets, and rest. But if these variables were always the answer, why isn't everyone walking around with an oaklike chest, boulders for shoulders, and legs like Tom Platz's?

What many people fail to understand is the importance of biomechanics and how individual we are. We are structures built of muscles, bones, tendons, and ligaments. The goal when bodybuilding should never be to move a weight from A to B. If it is, your main focus is simply on what's happening to the dumbbell, cable, or barbell. Your primary focus should always be the working muscle and what's happening to it throughout the entire range of an exercise.

It wasn't until I took a step back and started to assess my own mechanics and muscles that my body really began to develop. Now, I'm not expecting you to start reading anatomy books before you go to bed, but I do want you to appreciate your muscles a bit more. So for the rest of this article, I'm going to share some of the main areas I focus on as a coach when I am helping others develop weak body parts.

1 IMPROVE YOUR POSTURE

THIS IS ONE OF THE MAIN ISSUES holding back most lifters with weak body parts. Rarely do I meet someone with a lagging body part who doesn't have poor posture. To have balanced posture, your muscular structure needs to be balanced and strong from front to back. Weak muscles create instability, and when they're placed under tension, overactive or stronger muscle groups take over. Rounded shoulders, which are a common example, create a lot of instability. You end up placing more tension on your shoulders and triceps when you bench-press rather than on your chest. You can change your setup all you like, but if you're unstable it won't make any difference. You need to work on strengthening the muscles that help stabilize your scapula and support thoracic extension (lower traps, thoracic extensors, and rhomboids). Not only will this improve your posture, it will also enable you to press from a more stable base and more tension will be felt where it should—on the pectorals. Posture isn't corrected by standing better; it's a sign that something is weak and needs to be strengthened.

2 TRAIN THROUGH A FULL RANGE OF MOVEMENT

I DOUBT YOU HAVE SPENT much time recently looking at anatomy books, so let me share something with you: Muscles have an origin and an insertion. By that I mean at each end they attach to the bone with tendons. Muscles have a fully lengthened range—think of the biceps when your arm is fully stretched out—and a fully contracted range—think of the biceps when you show off your guns. To fully develop a muscle, you need to train it through its entire range. But most people aren't prepared to lift a weight appropriate for their strength. There will always be parts of any movement where you're weaker. If you learn to train where you're weaker first, you will grow a lot quicker. However, because it's easier to throw a weight past the hard parts of a lift, this is what most people do, and their physiques suffer for it. This leads nicely to point 3.





ABOUT THE COACH

NAME

Mark Coles

STATUS

Competitive bodybuilder, physique coach, and owner of M10 Fitness

AGE

38

LIVES

Nottingham

HEIGHT

178 cm

WEIGHT

119 kg (off-season)

CAREER HIGHLIGHT

"Opening my own gym"

AMBITION

"To teach and inspire as many people as I can in the art of physique development"

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SOCIAL MEDIA

M10life.com or Mark Coles—Physique Coach on Facebook

IMPROVE YOUR MUSCLE CONTROL

YOU SHOULD ALWAYS be in control of the load you're lifting. Yet walk into most gyms and you immediately see weights being thrown around with little control. To grow, you need to stimulate as much of the muscle as possible, which means learning to lift with control. From the moment you move a joint, you need to be in control of the muscle you're training. You need to remain in control all the way to full contraction, then at every part of the lowering

(or eccentric) portion of the lift. This is where a training partner is helpful because he or she can keep an eye on the lift from start to finish.

I'm sure it will dent your ego to be seen lifting 50% of what you normally do, but you have to remember you're in the gym to change your body and nothing else. You also have to remember that you've remained the same for long enough, so what you're currently doing isn't working.

KNOW YOUR ACTIVE RANGE OF MOVEMENT

TRAINING BEYOND THE POINT at which you have control of a muscle could cause injury as well as turn off the working muscle. You must learn the range you can control a load through and remain within it. Go beyond it and other muscle groups kick in. For instance, think of the bench press: You lower the bar and feel your pecs working until the bar gets about five centimetres from your chest, then you suddenly feel your shoulders start to round and lose tension in your chest. At this point, the load has switched to your shoulders, traps, and triceps. This doesn't work the chest and leaves your shoulders open to injury, particularly rotator cuff pain.

“Training is more rewarding when you pay attention to your muscles rather than simply shifting load.”

5 LEARN TO INITIATE

IF I TOLD YOU it's important to start an exercise with the muscle you intend to work, you'd assure me you do. However, consider my third point about muscle control: You have a fully lengthened and fully shortened range of a muscle. You need to focus on developing the entire length.

When I ask someone to initiate with a working muscle, I mean he or she should contract it at the extremity before even starting the lift, which ensures the person fires up the muscle he or she wants to develop. Think about a dumbbell biceps curl: At the fully stretched position, most swing the dumbbell up for the first five centimetres. What they should do is contract the muscle in this fully stretched position, which is actually very hard. But if you don't initiate with the working muscle, you allow other muscles to do the lift. You also miss the chance to develop muscle tissue at the extremes of the range of movement.





3 KNOW WHEN TO STOP

TRAINING A WEAK MUSCLE FREQUENTLY is popular and rightly so—it works. But there is no point training a body part more than once a week if you're not stimulating it in the right areas. If you can't follow all the points in this article, you will derive little benefit from just increasing training frequency. A weaker muscle group can be trained more than once a week. But you need to train it only to the point when you fatigue. Let's say you stick to all the principles in this article and you get nine sets into chest and you're toast. This is when you should stop. Don't push on and do poor reps just to add volume. Leave the workout at nine intense and focused sets, then come back in 48 hours and do the same again. Instead of busting out 18 sets, with 50% poor quality, in one chest session, split the volume into two perfect sessions. A muscle will grow if it's stimulated correctly, so focus only on precise execution.

CONCLUSION

Developing lagging body parts goes way deeper than manipulating calories and reps and sets. It comes down to how you execute each and every exercise. Training becomes so much more rewarding when you pay attention to your muscles and their function rather than simply shifting weights. **FLEX**

MARK COLES owns M10 Fitness in Nottingham. He placed second in the over-90kg intermediates at the 2014 UKBFF British Championships and regularly prepares bodybuilders for contests. He can be contacted on Twitter @m10fitness, on Instagram at markcolesm10, and at m10fitness.co.uk.

BEHEMOTH

Biceps

IT'S ALL MACHINES, ALL THE TIME FOR **AKIM WILLIAMS** ON BICEPS DAYS. HERE, HIS DETAILED WORKOUT FOR FINE-TUNING AN AWESOME BODY PART.

BY **JOE WUEBBEN** PHOTOGRAPHS BY **PER BERNAL**





Known as one of the strongest bodybuilders in the IFBB,

with all-time personal records of more than 363 kilos on both squat and deadlift and more than 227 on bench press, Akim Williams might be expected to throw around barbells and dumbbells in every workout. With muscle groups like back and legs, he certainly does. But his arm training is a different story—nothing but machine exercises.

Imagine that: a 138-kg professional bodybuilder (120 onstage) who's afraid to curl a heavy barbell or even a pair of dumbbells. Rest assured, it's not a fear of hard work; it's a mind-muscle connection issue.

"I've always done exclusively machine curls for biceps," says Williams, who lives in New Jersey. "I don't believe in free weights for this muscle group. I think free-weight curls mess up your joints more than anything, and you don't isolate the biceps muscle as well as with machines. With free weights, you're able to cheat and swing the weight up, whereas machines make it a little easier to keep strict form."

Many would argue that an arm routine devoid of free-weight moves would limit one's ability to pack on size. This may be true, but biceps size isn't an issue for Williams, who has a "problem" most of us would love to have: 58-cm arms, much of that coming from enormous biceps that would throw off his symmetry if they grew any bigger.

For the average guy, there's no such thing as having arms that are too big. But for a competitive bodybuilder, biceps development that throws off balance and symmetry is an issue that calls for some restraint on arm day.

"I really need to keep my training volume for biceps in check to make sure I don't overdo them," Williams says. "I train triceps twice a week, but I hit biceps only once.

With a strong body part like this, you have to strike that balance between not overdoing it and not totally ignoring it so it becomes a weakness. I still like to keep the intensity high on biceps, so I just make sure I keep the volume relatively low."

In this workout, Williams focuses on two major biceps movements: machine preacher curls and cable curls, with one-arm and two-arm versions of each. As mentioned earlier, it's not about size; rather, it's about etching in every bit of detail by way of high rep counts, controlled negatives, and holding peak contractions at the top.

"I don't want my biceps to get any bigger right now," Williams says, "but you can never have too much detail."

ONE-ARM CABLE CURL

Stand facing the cable stack with a D-handle attached to the lowest pulley setting. Grab the handle with one hand, and start with your arm at your side and your palm facing forward. Curl the handle up while turning your little finger or palm outward to supinate the wrist for full biceps contraction. Squeeze at the top in the fully flexed position, then slowly lower back down. Complete all reps with that arm, then switch arms.

WILLIAMS SAYS:

"I like starting my biceps workout with one-arm curls

instead of two-arm versions. Reason being, one arm is almost always going to be stronger than the other, so you want to balance it out as best as you can with one-arm exercises, and I think doing that when the arms are still fresh is the best way. With one-arm cable curls specifically, I make sure to supinate at the top of the rep by turning the little finger up and out to really get a strong mind-muscle connection—you can't do this with the two-arm version using the bar. Supination helps you maximise the peak of the biceps, too."







SNAPSHOT

Akim Williams

HEIGHT 178 cm

WEIGHT
120 kg (contest);
138 kg (off-season)

BIRTH DATE
Aug. 20, 1984

RESIDENCE
Pompton Lakes,
New Jersey

CAREER HIGHLIGHTS

2016 Tampa Pro, 1st; 2016 Mr. Olympia, 15th; 2013 IFBB North American Championships, super-heavyweight and overall winner (earned pro card)



ONE-ARM MACHINE PREACHER CURL

Sit on the seat of a preacher curl machine, and grab the bar with only one hand, using the nonworking hand for a support on the top of the pad. From the down position, curl the weight up as far as possible, keeping your upper arm in contact with the pad the entire time. Squeeze the contraction at the top, then lower the weight under control to the start position. Repeat all reps with that arm, then switch sides.

WILLIAMS SAYS:

"On the one-arm version of preachers, I always make sure to squeeze hard at the top for one or two counts for a full contraction; you're going a little lighter here, so you can really squeeze it hard. I also make sure to lower the weight slowly on every rep—at least two seconds on the negative."





WILLIAMS'

Training Split

MONDAY

Chest, biceps

TUESDAY

Back, triceps

WEDNESDAY

Quads, hamstrings, calves

THURSDAY

Shoulders, biceps,

"a little bit of chest"

FRIDAY

Back, triceps

SATURDAY

Hamstrings, "a little bit of quads," calves

SUNDAY

Off



CABLE CURL

Stand facing a cable stack, holding a bar attached to a low pulley with an underhand grip, arms extended. Contract your biceps to curl the bar toward your chest, keeping your elbows at your sides. Hold and squeeze at the top, then

slowly return the bar to the down position.

WILLIAMS SAYS:

"Because I'm using both arms and a bar attachment, I like to go as heavy as possible on this exercise to make it a mass builder. And

I also don't go quite as slow on the negative here as with the one-arm version—I'm chasing the pump a little bit more at this point. The form is still pretty strict, and I'm not swinging the weight, but it's a slightly quicker up-and-down motion."

MACHINE PREACHER CURL

Adjust the seat of a preacher curl machine so that the backs of your upper arms are in contact with the pad (not just your elbows). Starting with your arms extended, grab the handles and curl the weight up as far as possible. Hold the contraction for a count, then lower back to the start position. At the bottom, stop just shy of full elbow extension to keep tension on the biceps while also

reducing injury risk.

WILLIAMS SAYS:

"I've always been a firm believer that your elbows need to stay on the pad when doing preachers. You always see people doing the exercise and lifting their elbows up off the machine. Keeping your upper arm flat against the pad will ensure that you isolate the biceps fully." **FLEX**





WILLIAMS'

Arm Workout

EXERCISE	SETS	REPS
One-arm Cable Curl	4	15-20
One-arm Machine Preacher Curl	4	15-20*
Cable Curl	4	15-20
Machine Preacher Curl	4	15-20*

*Perform two to three dropsets on last set.

Williams maintains a fast pace during this workout, resting only 30 to 45 seconds between sets.



BY GREG MERRITT

SIZE MATTERS

25 HUGEST OF THE BODYBUILDERS OF ALL TIME SHARE ADVICE FOR SIZING UP

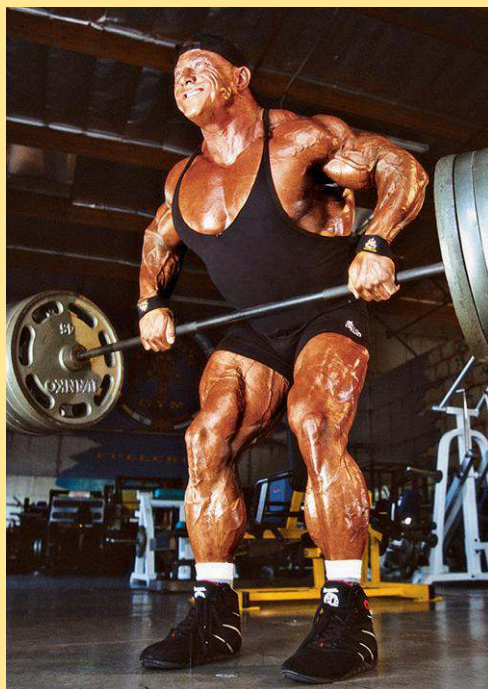
This is big—really, really big. We've compiled mass-making advice from 25 of the largest bodybuilders who ever tested the limits of a posing dais. The amateur superheavyweight division consists of competitors who weigh more than 102. To make our honour roll, these pros each competed at 114-plus, and some topped 136. These are bodybuilding's super-duper-heavyweights, and they've got a lot to say about sizing up.

01

MEAL PREP

"I'd say the most important thing is getting all your meals in. You have to stick to a schedule to make sure you eat at least six high-protein meals every day. The easiest way to do this is to prepare your meals in advance so you just need to microwave them and eat."

—Dallas
McCarver



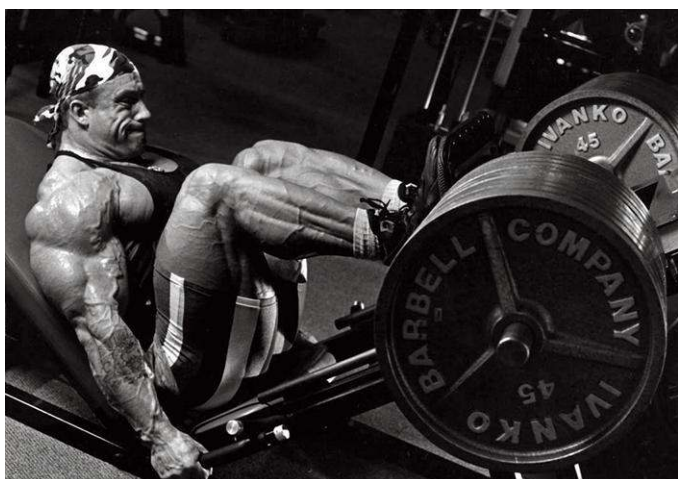
02

DIVERSE ATTACK

"I do a lot of exercises."

The bigger the body part, the more exercises I do. So for back and legs, I might do eight exercises each per workout. Sometimes I'll only do two sets of an exercise, but by getting in so many different exercises I'm able to hit big body parts from a lot of different angles and make sure I'm growing all the different muscles and areas of muscles. Most of the time I get more out of doing two sets of two exercises than four sets of one."

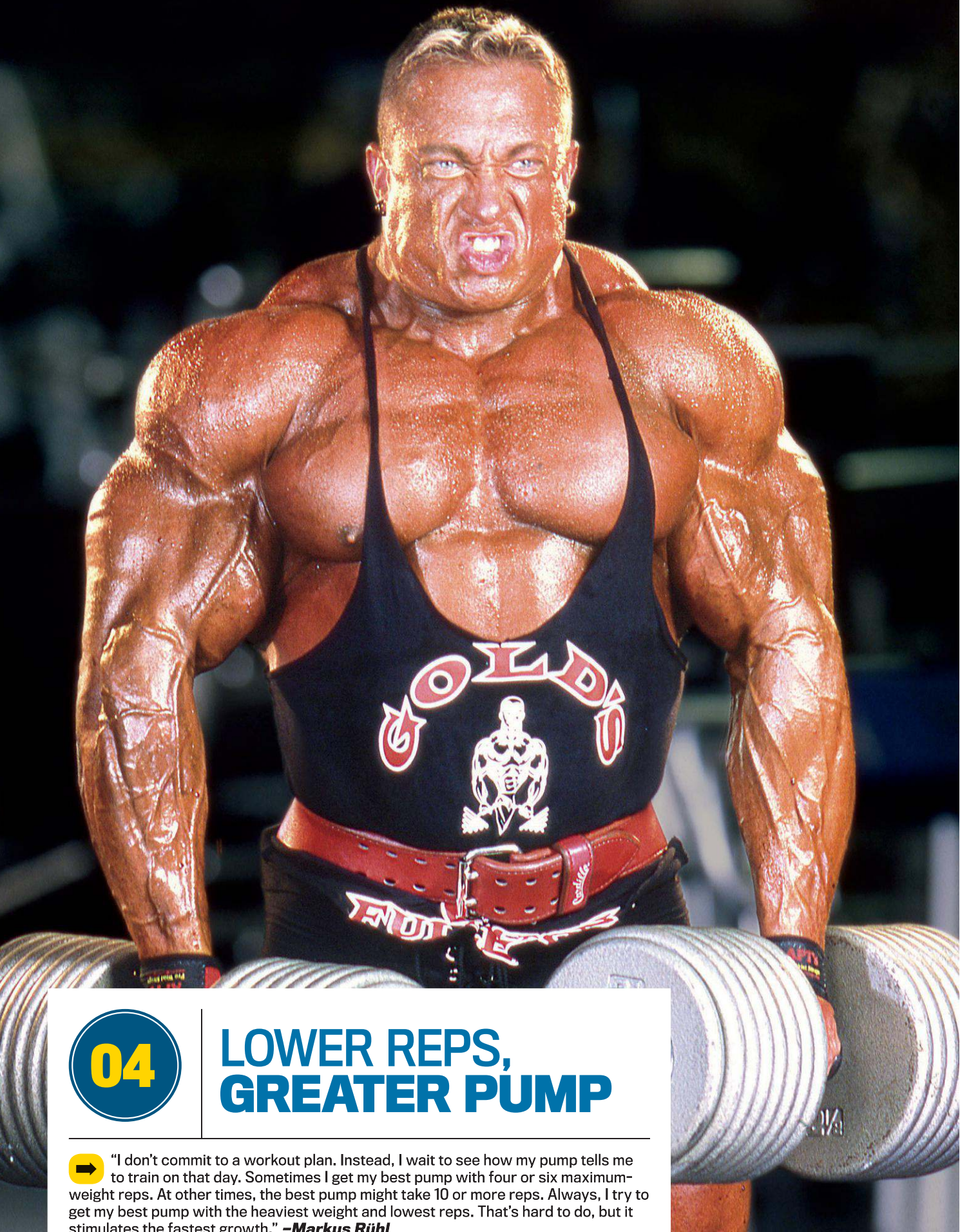
—Art Atwood



LESS IS MORE

➡ "One major mistake that most bodybuilders make is to increase training volume over time, feeling that this is how 'advanced' people should train. The problem is that even as you grow bigger and stronger, your ability to recover never improves much. And because you're able to work your muscles heavier and harder, they need less exercise and more recovery time. Most people get this exactly wrong."

-Dorian Yates



04

LOWER REPS, GREATER PUMP

➡ "I don't commit to a workout plan. Instead, I wait to see how my pump tells me to train on that day. Sometimes I get my best pump with four or six maximum-weight reps. At other times, the best pump might take 10 or more reps. Always, I try to get my best pump with the heaviest weight and lowest reps. That's hard to do, but it stimulates the fastest growth." **—Markus Rühl**

05

GROW DAYS

"I do my best growing only training four days a week. I'll do chest and triceps on Monday, quads and hams on Tuesday, delts and traps on Thursday, and back and biceps on Friday. It means my workouts last longer than when I train six days per week and hit most body parts alone. But it also means I have three days every week that I don't go to the gym. I think of those as my 'grow days'—those days that I'm eating and resting but not training."

—**Roelly Winklaar**

06

GAS UP THE CAR



➔ "You've got to eat real food to gain muscular weight, and you've got to eat often. Don't count your shakes as meals. Take the shakes out of the equation. How many food meals are you eating? You need to get in six real food meals. I always say if you're not getting your meals in, don't go to the gym. What's the point? You're not going to grow without food. It's like trying to run a car on no gas." —**Jay Cutler**

07

FOCUS MORE ON BIG PARTS

"When it comes down to adding a lot of muscular weight, you need to be aware of where you're carrying most of it. The two biggest areas are your legs—quads, hams, and butt—and your back—lats and traps, especially. Think about how much bigger your hamstrings are than your triceps, and yet most people do more work for tri's than hams. They might train bi's and tri's separately but quads and hams together. They've got it all reversed. They're undertraining their biggest body parts and overtraining their smallest body parts. Focus more on your biggest body parts and less on your smaller body parts and you'll see a real change in how much overall muscle you gain." —**Tom Prince**

08

GROW STRONGER

"There's no secret to getting big. You just have to eat right and train hard and always be focussed on growing stronger. Try to use a heavier weight or get more reps with the same weight every time you work a body part. As you get stronger for eight to 12 reps, you'll grow bigger." —**Mamdouh Elssbiay**

09

BASIC TRAINING

"For me, it's always been mostly the basics: squats, leg presses, barbell bench presses, barbell incline presses, barbell shoulder presses. If the choice is between two exercises and you can use more weight in one than the other, that's your best choice." —**Rasheed Oldacre**

10

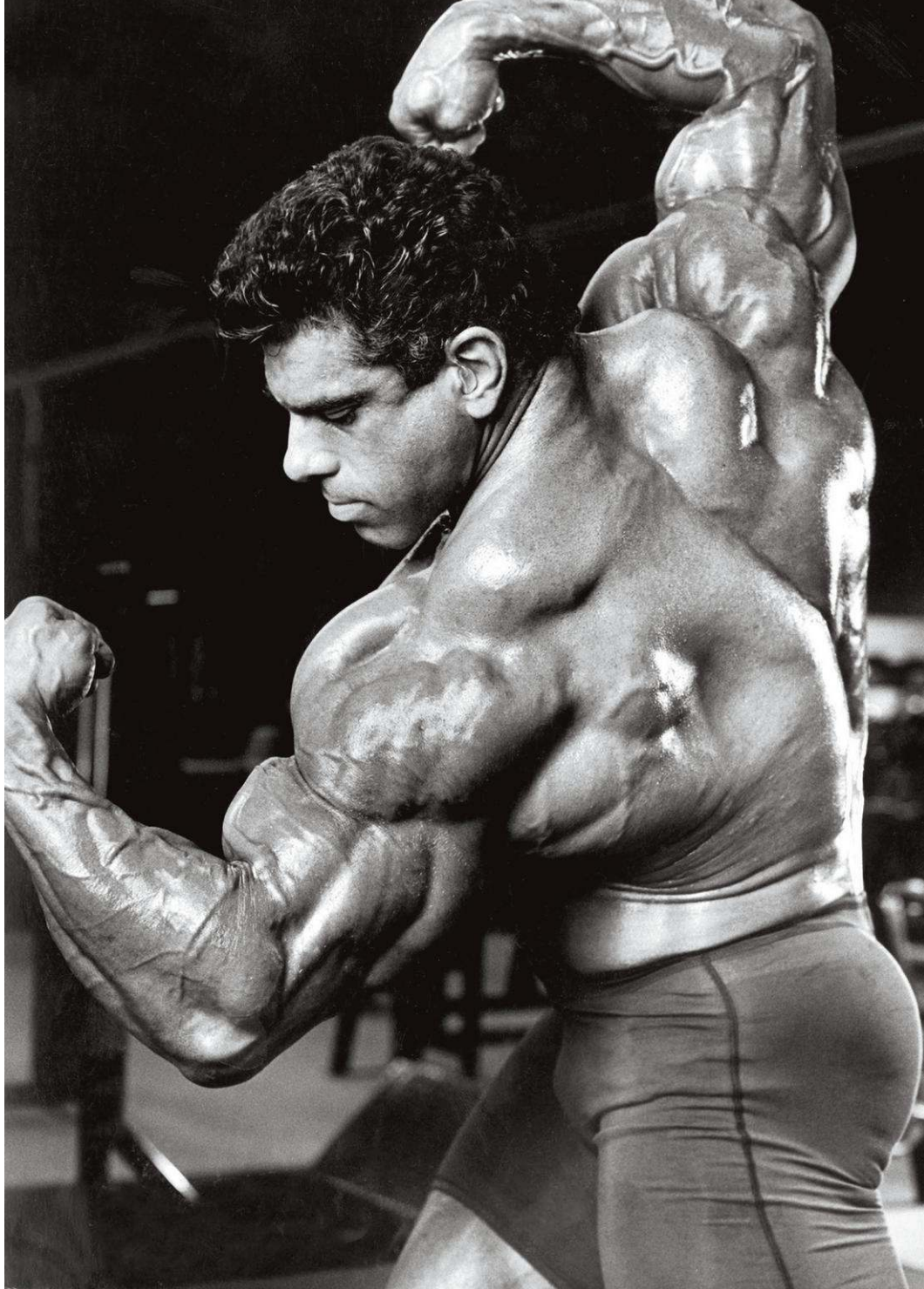
REST ASSURED

"You don't grow during the workout. You only grow after the workout when you've had the time and nutrition to recover and then add muscle. So if you look at it that way, rest is the most important part of bodybuilding. I have a whole week between training body parts, so I know I'm always getting enough rest to grow." —**Robert Burneika**

EAT BIG, LIFT BIG

➡ “The first time I got over 136 kg was back when I was just 20 in 1972, and I went way over 136. Nobody was anywhere near that big back then. Remember, Arnold was winning the Olympia at 104. I just wanted to see how big I could get, so I would eat 8,000 to 10,000 calories a day in seven to eight meals and train heavier. Always I was trying to get stronger and bigger. I put on too much fat then because I rushed on the weight. I wasn’t ready yet to weigh 150. But if you want to get bigger, you’ll have to eat more and train heavier.”

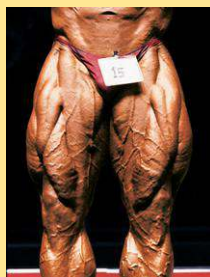
—**Lou Ferrigno**



12 HIGH AND LOW

“For legs, I like to do both higher and lower reps of every exercise. I’ll start with 20 reps and work my way down to six over four sets, going heavier each time. Then I’ll often do a fifth set of 20 reps to really blow out my quads or hams. The key is to push each set—whether it’s six or 20 or something in between—to failure.”

—**Paco Bautista**



13

HIT THE TARGET

“Training with Charles Glass made me realize I was missing the target a lot before. He has a specific purpose for every exercise and every exercise modification to hit different areas of the muscles. This can make all the difference in unlocking new growth.”

—**Günter Schlierkamp**

14

HEAVY
FIRST

"Do the heavy, barbell basics first in your routine when you're strongest. So do bench presses before flyes, and do EZ-bar curls before concentration curls. The more weight you can use on an exercise, the more effective it'll be for gaining size."

-Jean-Pierre Fux

15

FORM
FOCUS

"Proper technique and a full range of motion are the two most important components of training success. Most people focus on how heavy the weight is. I don't. If the weight feels heavy, it's heavy enough. Focus on form."

-Justin Compton

16

RAW
SQUATS

"More than any other exercise, squats grew my legs. I love to squat. I go up to 272 pretty much every workout. And I don't use [knee] wraps or a belt. I feel like they restrict my movement and prevent my tendons and joints from getting strong along with my muscles."

-Akim Williams

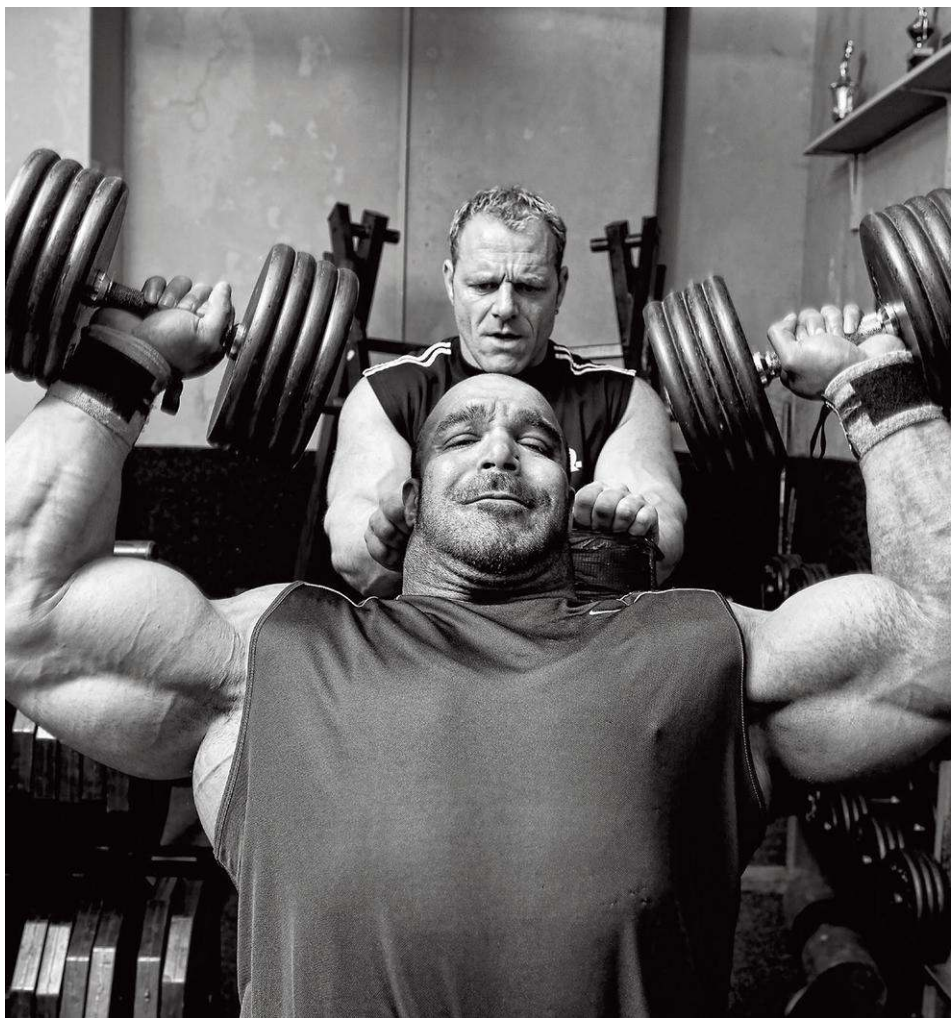
17

HIGHER IS
HARDER

"I've never been into powerlifting.

I don't even do deadlifts. I do like squats for legs, but I don't go really heavy. To me, a lighter set of 15 reps is a lot harder than a heavier set of five reps. It's the same with leg presses. It's a lot easier to do 10 than 30, even though the weight is lighter for the 30. So it might look like I'm training lighter, but I'm really training harder."

-Dennis Wolf



18

INJURY
AVOIDANCE

"The most important lesson I learned from my injury was to take all the proper precautions. Always warm up, always pyramid up to your heaviest set, and don't always go all out with maximum weights for maximum reps. In the long run, the best thing you can do to keep growing is avoid injuries."

-Zack Khan

19

BE
FREE

I mostly use machines for legs and back, and those are the most basic machines, like the pulldown and the leg extension. I prefer free weights because of the freer range of motion. Barbells and especially dumbbells make me work harder to balance the weights, and the best workout is the harder workout.”

—**Alexander Fedorov**

20

MASS VIA
MODERATION

“When I was young I got into going really heavy and training DC-style [Doggcrapp], and I definitely think that had advantages for building a foundation of strength and size. But it’s also easy to get burned out with that mindset. I think most people can get big just using moderate reps and moderate volume and making sure they get all their meals in.”

—**Steve Kuclo**

21

HEAVY
FOR 10

“People saw those videos of me squatting 363 or deadlifting 363 and thought that was how I trained all the time. I didn’t normally do such low reps, though, not after I gave up powerlifting to just be a bodybuilder. I used heavy weights, but I always aimed for 10 reps.”

—**Ronnie Coleman**

22

MARATHON MUSCLE

“**Bodybuilding is an endurance sport.** By that I mean it’s going to take years and years of training and eating to build the body you want if what you want is to get as big as you possibly can. It might take 10 or more years, and after the first couple of years, it’s going to be hard to see the changes from month to month or maybe from year to year. But you’ve got to stick with it, workout after workout, meal after meal, even when you’re frustrated. It’s not a sprint. It’s a marathon.”

—**Nasser El Sonbaty**

23

THE HARD
REPS

“If you’re just going to do what you’ve done before, you’re not going to grow. There’s a place in a set when you get to 10 reps and you could easily quit. The key to growing is to keep going when everything’s telling you to quit. Get another rep or another three. Those are the ones that count. Those are the reps that generate growth—those hard reps you don’t want to do.”

—**Branch Warren**



KEVIN HORTON

24

SWEET 15

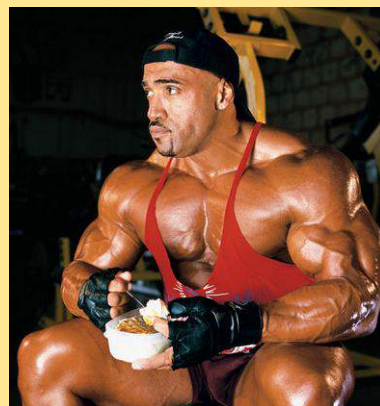
← “People look at me and think I must do all these crazy heavy sets for low reps. The truth is I could never grow much on reps lower than 10. I found I grow best on sets of 15. If you look at my routine, I stick at 15 for every exercise, whether it's for biceps or legs or abs. I do four sets of 15 for everything. It's not so high that I can't go heavy, but it's high enough that I can feel the muscle working for a long time each set.”

—Quincy Taylor

25 CALORIE SURPLUS

“You train and eat for size. Let the cardio and diet bring in the cuts. Don't confuse the two things. That's one of the biggest problems guys have. They try to train lighter with machines to dial in cuts, or they don't eat enough or train heavy enough when they're trying to add mass because they're afraid of getting fat. The easiest way to get big is to always eat at least a little more than the calories you'll burn, especially when those calories come from protein. Yeah, you'll gain some fat, but you'll also always get all the nutrients you need to grow, and that extra fat weight will help you use more weight, getting stronger and bigger. Everything has to be in moderation. I never advocate clients eating a lot of junk in the off-season, but you also can't stay really lean if you want to get really big.”

—Dennis James **FLEX**



THE PROFESSIONALS

MEET THE BRITISH ROOKIES LOOKING TO MAKE THEIR MARK ON THE IFBB PRO SCENE IN 2017.

2016 British bodybuilding and men's physique champs Luke Sandoe (right) and Abies Nosa are amongst the new crop of pros.



CHRISTOPHER BAILEY

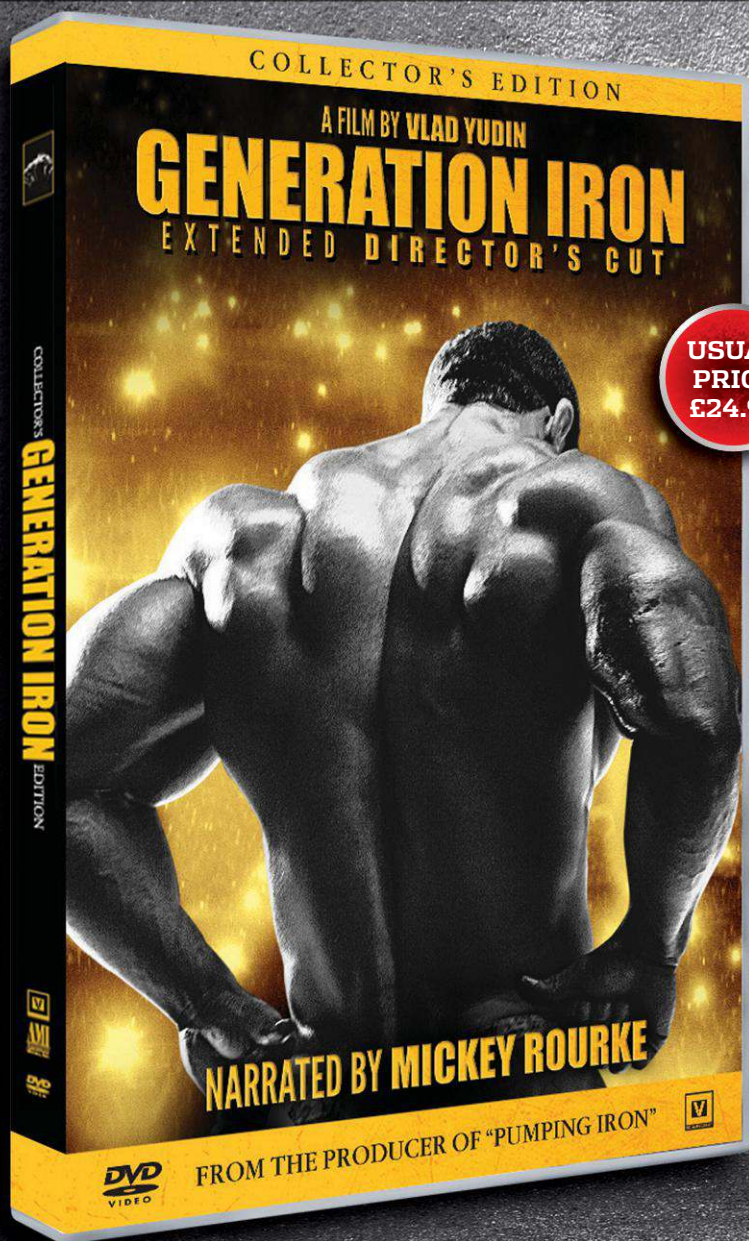
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Left: 118 kg mass monster Cem Nazim. Right: Katie Chimes wowed in bodyfitness and a shredded Stanislav Gelatka won the up to 90 kg bodybuilding class.



SWEET AS SUGAR

BRITS BATTLE FOR PLACES AT THE ARNOLD CLASSIC EUROPE.

■ Sugar's Classic, the annual contest promoted by UKBFF vice-president Dennis 'Sugar' Christopher, has become one of the most popular events of the year. With invitations to compete at the Arnold Classic Europe up for grabs, it's easy to see why

more than 200 athletes attempted to qualify at Leicester's De Montfort Hall.

Over 90-kg bodybuilding champion Cem Nazim was one of the stars of the day. He's been around for a few years but had never previously brought such size

and balance to the stage. Weighing 118 kg, he was the clear winner and will be one to watch in the battle to win this year's British super-heavyweight title. "I am expecting to bring a much bigger and better package this year," said Nazim, who is working with US prep coach Chris Aceto. "I plan to do four shows back-to-back if I can manage it: the Arnold Classic Europe, the EVLS Prague pro showdown, the British Championships and the Diamond Cup."

Stanislav Gelatka was another impressive champion. His lean and muscle-packed physique



defeated a large 23-man lineup in the under-90 kg class.

Rus Ali's amazing taper overcame British champion Andrew Fisher in a high quality classic class and it turned out to be a day to treasure for the Nosa brothers: Abies went on stage to receive his IFBB pro card and Etin won the tall men's physique class.

In the female categories, Katie Chimes won the open and masters classes in bodyfitness on her UKBFF debut. Amy King took women's physique and Agnes Lukaszek and Elly Hudson shone in the two huge bikini classes.



Girl Power: Agnes Lukaszek wins the tall bikini fitness class, flanked by runner-up Phoebe Hagan (left) and Luciana Del Giudice in third. Left: Women's physique champ Amy King and men's physique winner Etin Nosa.

WINNERS

BODYBUILDING OVER 90 KG

Cem Nazim

BODYBUILDING UP TO 90 KG

Stanislav Gelatka

BODYBUILDING UP TO 80 KG

Vince De Marzio

JUNIOR BODYBUILDING

Conna Fairbairn

MASTERS BODYBUILDING OVER 40

Alexandros Masihzadeh

CLASSIC BODYBUILDING

Rus Ali

MUSCULAR MEN'S PHYSIQUE

Ricardo Paul

MEN'S PHYSIQUE UP TO 178 CM

El Noval

MEN'S PHYSIQUE OVER 178 CM

Etin Nosa

JUNIOR MEN'S PHYSIQUE

Callum Riley

MASTERS MEN'S PHYSIQUE

Ricky Beckford

WOMEN'S PHYSIQUE

Amy King

BODYFITNESS

Katie Chimes

MASTERS BODYFITNESS

Katie Chimes

BIKINI FITNESS UP TO 163 CM

Elly Hudson

BIKINI FITNESS OVER 163 CM

Agnes Lukaszek

JUNIOR BIKINI FITNESS

Phoebe Hagan

MASTERS BIKINI FITNESS

Alex Brooks

FANTASTIC FIVE

MEET THE ROOKIE BRITISH PROS LOOKING TO MAKE THEIR MARK IN 2017.



ROMANE LANCEFORD

CATEGORY Men's physique
AMATEUR HIGHLIGHT Two-time British champion and Diamond Cup champion
PRO PROSPECTS Lanceford had to tone down his muscularity at amateur level to avoid being penalised but at pro level, where the guys tend to be bigger, he looks well equipped to succeed. Few men have a better combination of solid muscularity, a dramatic taper and better looks.

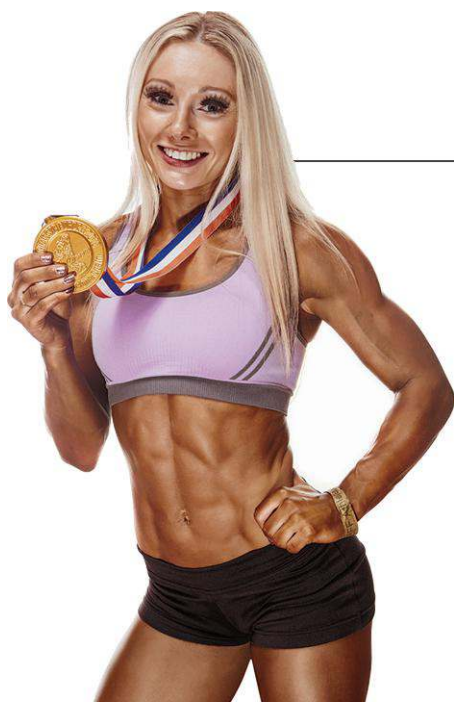
ABIES NOSA

CATEGORY Men's physique
AMATEUR HIGHLIGHT Arnold Classic Europe champion and three-time British champion
PRO PROSPECTS The Nigerian-born British champion has fabulous aesthetics and a relaxed posing style that will suit the pro stage. British men's physique has never been stronger, with Ryan Terry and Ryan John-Baptiste excelling at last year's Olympia so he doesn't have to look far for inspiration.



EMMA PAVELEY

CATEGORY Fitness
AMATEUR HIGHLIGHT Winning the Arnold Classic Europe, British Championships and Diamond Cup in the space of a month in 2016.
PRO PROSPECTS Nobody deserved their pro card more than pocket rocket Paveley, who had an amazing year. The gymnast has stunning shape, fabulous routines and increasingly confident stage presence but will have to add some major muscle to be competitive. Pro fitness women are seriously big and hard.



LUKE SANDOE

CATEGORY Bodybuilding
AMATEUR HIGHLIGHT 2016 overall and super-heavyweight British champion
PRO PROSPECTS Sandoe isn't going to blow many guys at pro level away with his size but if the trend towards more aesthetic physiques with full muscle bellies and tight waists continues, he could have a successful rookie season. He was handed a dream debut when he was given an invitation to the recent Arnold Classic in America.

ALLA MEIJER

CATEGORY Bikini
AMATEUR HIGHLIGHT 2016 overall British bikini fitness champion
PRO PROSPECTS A mother approaching her mid 30s is not an obvious tip for the top in pro bikini but Meijer is no ordinary woman. She has beauty, poise and the most important asset of all for this category—sensational glutes. She's impossible to ignore in a line-up and has remarkable tenacity—don't rule her out.





JAMES WATTS

■ Few men can say they've won a British title—and hardly any can say they've won two. James Watts can. He was middleweight champion in 2014, then returned to win the light-heavyweights in 2016. Watts wasn't the biggest man in the line-up last year, but he did have the most aesthetic physique, and could pull off a mean vacuum pose.

PREVIOUS WINNERS

JANUARY Luke Sandoe
FEBRUARY Azeez Salu

THE STARE

■ You see the expression on Phil Heath's face? If you could take determination, focus, and confidence and bundle it up into one ferocious visage, this is what you'd get. Heath has had this stare down long before he won his sixth straight Sandow last September. He had it before he won his first one in 2011. Indeed, it goes beyond his bodybuilding days, back to when he was an undersize basketball shooting guard at the University of Denver. Winning didn't come easy then. It doesn't now. But the Gift works hard to make it look like it does. And that's why he's called the Gift. At this point, you've no doubt read Greg Merritt's insightful how-to guide on applying Mr. Olympia's winning strategies to your own endeavours, be they in the gym or outside it. Use them. Live by them. Here's one last reminder to keep you on track.



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