The 4-Hour Body

BONUS WORKOUTS
Building the Perfect Posterior
Six Minute Abs
Occam’s Protocol I
Occam’s Protocol II

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BUILDING THE PERFECT POSTERIOR
(OR LOSING 100+ POUNDS)

This chapter will teach both men and women how to build a superhuman posterior chain, which includes all the muscles from the base of your skull to your Achilles tendons.

In the process, it will also teach women how to build the perfect ass and lose dramatic amounts of fat.

For maximum strength and sex appeal in minimal time, the posterior chain is where you should focus.

The Bet

“We have a bet going.”

Tracy Reifkind walked into work that evening expecting a normal shift. But six of her female coworkers had reached critical mass and created a betting pool. Each had put in $100, and the $600 would go to whoever lost the highest percentage bodyfat in 12 weeks. Tracy was lucky number seven, upping the ante to $700.

I am my own experiment. I am my own work of art.
—Madonna

Backs are to lifters what biceps are to bodybuilders.
—Randall J. Strossen PhD, editor of MILO magazine
It was good timing.

Tracy had been a chubby kid when kids weren’t chubby. She’d continued to gain throughout life and ended up weighing 245 pounds at age 41. She had resigned herself to a dismal fate: she would never be able to enjoy certain basics, like wearing a tank top. That was just the hand she’d been dealt.

But her weight was creating health problems. She’d become a gourmet cook with the dream of visiting Italy, and that trip—almost within reach—was now jeopardized by her obesity. She was experiencing gastrointestinal problems that made it impossible to travel.

“Everything wrong with me had to do with the fact that I was fat. Every day, I felt like I was dodging a bullet. I didn’t want to go to the doctor because I didn’t want to find out I was prediabetic or that I had heart disease. I just liked eating and wasn’t ready to stop. I, of course, knew what I had to do. But that bet, that event, gave me the reason and the timing.”

Tracy responded well to challenges. She was somehow confident that she would win. The real question was: how?

The answer came, most unexpectedly, from strong men.

Michelle Obama’s Arms

Tracy was dumbstruck as she looked at the fitting room mirror in San Jose. She pulled up the new pair of jeans and turned around. Then she turned around again. No matter how many times she spun, the image didn’t compute.

“What? That’s me?!” She saw arms she’d never seen before. She also had her tank top.

Tracy Reifkind had lost more than 100 pounds (45 pounds of fat in the first 12 weeks) and won her bet. But the numbers alone don’t do her physique justice: this mom of two from a two-income family looked 10 years younger at 129.6 pounds.

The secret wasn’t marathon aerobics sessions, nor was it severe caloric restriction. It was the Russian kettlebell swing, twice a week for an average of 15–20 minutes. Her peak session length was 35 minutes.

She was introduced to kettlebells by her husband,
Mark Reifkind, a former national team coach in powerlifting who also competed against Kurt Thomas in Olympic gymnastics.

“Every woman wants Michelle Obama’s arms. The truth is that you can have them, and a new body, in four weeks. The two-handed swing is the jewel. If you could only do one movement for the rest of your life, do the kettlebell swing.”

I agree with Tracy 100%, though the path that led me to the swing was quite different.

In 1999, I made thrice-weekly pilgrimages from Princeton to Philadelphia where I trained at a gym called Maxercise. For the 45-minute workout that justified the trip, I was commuting more than two hours. Steve Maxwell, the owner of Maxercise, was a six-time Pan-American gold medalist in Brazilian jiu-jitsu (two world championships came later) and held a master’s degree in exercise science. His clients ranged from the FBI and Secret Service to the Phillies and the Dodgers. His singular focus was on measurable results. If something didn’t work, it didn’t last long with Maxwell.

I first met kettlebells on a frigid winter evening in Maxercise’s second-floor torture chamber. They were generally reserved for fighters and aspiring strong men. Most of the high-velocity kettlebell movements like “the snatch,”¹ considered standard for training programs, didn’t combine well with my injured shoulders. I abandoned kettlebells after two sessions.

It wasn’t until six years later that I realized how simple kettlebells could be. One move: the swing.

¹. Even better, kettlebells are weighed in Russian “poods.”
From Jiu-Jitsu to New Zealand: The Kettlebell Swing

Long before I met Tracy, I met “The Kiwi” in Buenos Aires, Argentina. In early 2006, he happened to be taking a private Spanish lesson in the same café where I was finishing the manuscript for The 4-Hour Workweek, and we quickly became close friends. He had competed in elite-level rugby in New Zealand but was equally proud, I soon learned, of applying his BSE in exercise physiology to perfecting the female posterior.

He told me the story over a bottle of Catena Malbec. His obsession started when he saw a professional samba dancer in Brazil balance tequila shots on top of each butt cheek in a dance club. Lamenting the lack of similar scenes in his own country, he set off on a mission to isolate the best exercises for creating buttocks worthy of tequila shots.

By 2000, he had refined his approach to a science. In four weeks, he took his then-girlfriend, an ethnic Chinese with a surfboardlike profile, to being voted one of the top 10 sexiest girls out of 39,000 students at the University of Auckland. Total time: four weeks. Other female students constantly asked her how she’d lifted her glutes so high up her hamstrings.

If The Kiwi could have answered for her, he would have said, “Add reps and weights to the swings.”

In 2005, my interest in kettlebells reinvigorated, I returned to the United States from Argentina and purchased one 53-pound kettlebell. I did nothing more than one set of 75 swings one hour after a light, protein-rich breakfast, twice a week on Mondays and Fridays. In the beginning, I couldn’t complete 75 consecutive repetitions, so I did multiple sets with 60 seconds between until I totaled 75.

Total swing time for the entire week was 10–20 minutes. I wasn’t trying to balance tequila shots on my butt cheeks. I wanted abs. In six weeks, I was at my lowest bodyfat percentage since 1999.

My weekly training schedule was so light as to be laughable by conventional standards. I also took 10–20-minute ice baths (two bags of ice bought at a gas station) on Mondays, Wednesdays, and Fridays.
DAY 1 (MONDAY)

- High-rep kettlebell (53 pounds) swings to at least 75 reps (ultimately, I got to 150+ reps in a single set)
- Slow myotatic crunch (next chapter) with max weight x 10–15 slow reps

DAY 2 (WEDNESDAY)

I alternated these two exercises for a total of 3 sets x 5 reps for each. I took two minutes between all sets and therefore had at least four minutes between the same exercise (e.g., dumbbell [DB] press, wait two minutes, row, wait two minutes, DB press, etc.):

- Iso-lateral dumbbell incline bench press
- “Yates” bent rows with EZ bar (palms-up grip and bent at the waist about 20–30 degrees)

Then:

- Reverse “drag” curls using a thick bar twice the diameter of a standard Olympic bar (I put plates on metal piping I bought from Home Depot, secured with $5 pinch clamps): 2 sets of 6 reps, three minutes’ rest between sets

DAY 3 (FRIDAY)

- High-rep kettlebell (53 pounds) swings to 75-rep minimum
- Slow myotatic crunch (next chapter) with max weight x 12–15 reps
- Every other week: single-arm kettlebell swings to 25 minimum reps each side

I should add that I was negligent, often adding one to three additional rest days between sessions. It didn’t matter. The training volume needed for head-turning changes was lower than even I thought possible.

Though I added in a few extras for other reasons, the king of exercises—the two-arm kettlebell swing—is all you need for dramatic changes. Here are a few guidelines (more later):

- Stand with your feet 6–12 inches outside of shoulder width on either side, each foot pointed outward about 30 degrees. If toes
pointed straight ahead were 12:00 on a clock face, your left foot would point at 10:00 or 11:00, and your right would point at 1:00 or 2:00.

• Keep your shoulders pulled back (retracted) and down to avoid rounding your back.
• The lowering movement (backswing) is a sitting-back-on-a-chair movement, not a squatting-down movement.
• Do not let your shoulders go in front of your knees at any point.
• Imagine pinching a penny between your butt cheeks when you pop your hips forward. This should be a forceful pop, and it should be impossible to contract your ass more. If your dog’s head gets in the way, it should be lights out for Fido.

The Minimal Effective Dose—
How to Lose 3% Bodyfat in One Hour a Month

Fleur B. didn’t have as much weight to lose as Tracy. Fleur was, like many people, simply unable to lose those last few pounds of extra fat, no matter how hard she tried. She’d hit the wall.

Running a few miles three times per week had no effect: “For the amount of exercise I do, the results should be much better.” She was, however, against crash dieting and wanted to keep the curves she loved.

How to cross the last mile of fat-loss? Fleur was a major breadoholic by culture (European) and a workaholic by training (journalist). I purposefully set the expectation that it would be difficult and that she would need to commit to exercising militant self-control for the first two weeks until her cravings disappeared. This way, she would be doubly encouraged when it didn’t prove hard after the first 72 hours. Setting the expectation that things will be easy results in disappointment and quitting at the smallest hiccup. If you prepare yourself for massive challenges and no such challenges
crop up, it will be a pleasant surprise. This encourages you to be even more aggressive with changes.

Remember: body recomposition depends more on behavioral modification (reread “From Photos to Fear” if needed) than on memorizing the right list of instructions.

I proposed a four-week test focusing on the swing and minuscule dietary changes, which Fleur agreed to:

1. She switched her breakfast to a high-protein meal (at least 30% protein) à la the Slow-Carb Diet. Her favorite: spinach, black beans, and egg whites (one-third of a carton of Eggology liquid egg whites) with cayenne pepper flakes.

2. Three times a week (Monday, Wednesday, Friday), she performed a simple sequence of three exercises prior to breakfast, all of which are illustrated in the next few pages:

   **One set:** 20 two-legged glute activation raises from the floor

   **One set:** 15 flying dogs, one set each side

   **One set:** 50 kettlebell swings (For you: start with a weight that allows you to do 20 perfect repetitions but no more than 30. In other words, start with a weight, no less than 20 pounds, that you can “grow into.”)

   That’s it. Total prescribed exercise: about 5 minutes per session × 3 sessions = 15 minutes per week. One hour over the course of a month.

   Fleur’s before-and-after measurements were separated by five weeks because she was traveling. Even if we increase the estimated exercise time to 75 minutes total, the results are impressive.

   **BEFORE AND AFTER**

   Total weight: 139 lbs. → 136 lbs.
   Bodyfat %: 21.1% (29.33 lbs.) → 18% (24.48 lbs.—**almost 1 pound of fat lost per week**)
   Thigh fat thickness: 10.4 mm → 10.2 mm
   Tricep fat thickness: 9.7 mm → 7.7 mm
   **Waist fat thickness:** 7.0 mm → 4.1 mm
Once you achieve the proper height (the last picture), each rep is alternating between the last two photos.
LEARNING THE SWING

The easiest way to learn the swing is based on a method developed by Zar Horton:

1. Touch-and-Go Deadlifts from Point A
   (Three Sets of Five Reps)
   Stand with the kettlebell directly between the middle of your feet. Bend down and do dead-
   lifts (head up, eyes straight ahead), first slowly, then in a “touch-and-go” fashion, picking up
   the kettlebell explosively as soon as it touches the ground. It is critical that you touch the same
   spot on the ground every time. This spot between your insteps is point A.
   I strongly suggest doing this facing a wall with your toes about six inches from the wall. This will force you to keep your head up and use the proper deadlift motion: hinging at the hip and sitting back, instead of squatting down. Keep any bending at the ankle minimal or nonexistent.

2. Touch-and-Go Deadlifts from Point B
   (Three Sets of Five Reps)
   Repeat the above touch-and-go deadlift, but use point B: place the kettlebell on the floor between your feet but this time further back, with the front of the kettlebell aligned just behind your heels. You must return the kettlebell to exactly this spot every time:
   Now when you come up and explosively pop your hips forward (think “violent hips”), the angled rise of the kettlebell will give it a pendulum-like swing.

3. Swings from Point C (start with sets of 10)
   Now place the kettlebell back at point A and follow the pictures of Marie on the previous page. Pick the kettlebell up off the floor, start a small swing by first “sitting back” with the hips and then popping forward, and make the movement larger while maintaining your balance.
   The entire time, focus on getting the kettlebell back to point C, which is in the air behind the hamstrings (back of legs) and tucked right up under the buttocks, as seen in picture 5.
   That’s it: you are doing the two-handed kettlebell swing.
Fleur’s resulting numbers demonstrate the difference between scale weight—a blunt instrument that tells you little—and bodyfat percentage or tape measure. Do not neglect to include at least one of the latter two in your measurement tool kit.

The 75 minutes of exercise had a number of important effects on Fleur’s physique that went beyond fat-loss and ass building.

Most important, it fixed her kyphosis (from the Greek kyphos, meaning “hump”), a postural problem common to millions of computer users. From desk work and muscular imbalance, she had a shoulders-forward, concave-chest slouch before beginning the program. Five weeks later, she
stood and walked with shoulders back, which created the perception of both a smaller rib cage and larger breasts. Good posture is hot.

Here is Fleur’s first e-mail to me, edited for length:

Hey,

I’m doing well . . . much better than I could have imagined . . .

There are [a] few things I’ve noticed about the diet that I think you’ll be very interested to learn.

Firstly, I can’t imagine why you say it’s not supposed to be fun? I’m loving it! . . . There’s tons of ways you can make the same foods taste totally different each meal just by adding a different herb or spice.

I’m eating so much better. My diet was not great before, mostly because I just wasn’t making the time, and I was too lazy.

Eating the way you suggest has changed my hunger even; I never get that strange cramp-hunger feeling that sugar and “bad” carbs create. It’s maybe also because I’m eating more, and more regularly. Just eating breakfast early in the morning instead of coffee and toast or a pastry at 11 am has made a huge difference.

I’m thinking about fueling my body, not restricting it.

I ate really well all last week and then assigned Sunday as my “free day.” I ate pancakes and an omelet at the IHOP (very healthy). Then I felt like crap. All the cheese made me want to throw up. [Tim: Cheese was one of Fleur’s domino foods before the program.]

But I literally had to force myself to eat some chocolate later on in the day, just because I’d told myself I could. I then realized that I hadn’t even thought once about chocolate all week, hadn’t once craved for it. Then I bought a croissant (just because I could), took one bite and threw it away. Sunday night I had a beer and couldn’t finish that either (very unlike me). I found myself desperate to go to sleep so I could wake up Monday morning and go back to feeling healthy again.

Is this normal?! . . .

One thing I did really want on Sunday though was fruit. That’s ok right? As much of any type that I want? [Answer: On binge day and on binge day only, yes. Nothing is forbidden.]

In general, so far, I’m not missing or craving anything I’m not supposed to have . . . I have noticed I have more energy, and it’s real energy, not just an hour hit from a double cappuccino and a snack-bar that then turns into
a slump. I’m not really drinking coffee much either, just lots of water and green tea.

I know it’s only been a week, but I feel fantastic. Thank you!

New behaviors aren’t that hard once you start them.

Critical (M)Ass: The Kiwi’s Complete A/B Workout

For those who want a more extended ass program, here is The Kiwi’s complete sequence.

He advocates three to four circuits of these exercises, in the order provided. I believe the MED is two circuits and will deliver 80–90% of the benefits for most women and men. Men can use these sequences to develop stronger hip drive, which translates to better performance in almost all sports and power lifts.

If you try this but start to miss workouts or postpone them, revert to the basic swings twice per week, as I do, which will still guarantee faster progress than most exercise programs.

To mimic The Kiwi, perform A on Monday and B on Friday, and glute activation raises (seen earlier) are performed before each.

**Workout A**

All exercises, except for kettlebell swings, are performed for 10 repetitions using a 13-Repetition Max (RM) weight.

1. Heavy dumbbell front squat to press (ass to heels)—squeeze glutes at bottom for one second before rising
2. One-arm, one-leg DB row
3. Walking lunges with sprinter knee raise
4. Wide-grip push-ups
5. Two-arm kettlebell swings × 20–25

Repeat sequence 2–4 times.

2. This means you are doing 10 reps with a weight that would allow you to complete 13 but not 14 reps. Approximate is fine, but you shouldn’t have more than 3 or so reps left in the tank when you finish the set.
3. Men can use any hand position. Wide-grip is recommended for women who want to avoid tricep (back of the upper arm) growth. If you can’t do ten push-ups on the floor, they can be performed with the hands on a low bench, or—if still impossible—against a table or wall.
Workout B

1. One-leg Romanian Deadlift (RDL) (10–12 reps each side)
2. Chin-up (four-second negative lowering portion only) × 10 or until you cannot control descent
3. One-leg hamstring curls on a Swiss ball—6–12 reps each leg
4. Plank for abs (and gluteus medius on sides) → Progression: start with 30 seconds front, 30 seconds each side, working up to 90 seconds maximum
5. Reverse hyper × 15–25

Repeat sequence 2–4 times.

See the www.fourhourbody.com/exercises for photos of all The Kiwi’s exercises. Written descriptions alone will confuse more than help.

TOOLS AND TRICKS

Kettlebells (www.fourhourbody.com/kettlebells) Most men should start with a 20-kg (44 lb) or 24-kg (53 lb) kettlebell and most women should start with a 16-kg (35 lb) or 20-kg (44 lb) kettlebell. I suggest using a T-handle (see page 172) to determine your 20-rep swing weight before spending too much.

4. Effectively the same as the 2SDL described in “Pre-Hab.”
5. Expect severe soreness the day after the first two workouts.
6. One of them is my favorite indirect abdominal/core exercise (one-arm, one-leg row), and two are excellent for travel for both genders (one-leg hamstring curls and reverse hyper on Swiss ball).
Tracy’s Diet: The Luxury of No Choice

Tracy never hit a fat-loss plateau. She credits her success to two things: cheat meals and kettlebells. The cheat meals allowed her to remain strict more than 95% of the time, and the kettlebells allowed her to accelerate progress when diet-driven fat-loss slowed.

She scheduled one cheat meal per week, most often on Friday night, which was also date night with the husband. Her diet is otherwise the epitome of simplicity: eat the same meals each day, at least five days per week. She refers to her meal plans as “the luxury of no choice”:

“Especially if you have 50–100 pounds or more to lose, you have enough stress. You won’t be able to stop thinking about how overweight you are, but you can stop thinking about what to eat.”

Her advice and observations should sound familiar:

**Two pounds per week isn’t the limit.** “If you have 80–100 pounds to lose and aren’t losing five pounds per week for at least the first few weeks, you are doing something wrong.”

**Avoid domino foods:** “If I liked to eat a cookie here, a piece of candy there, I could fit sweets into my daily menu from a caloric standpoint, but my sweet tooth has no ‘shut-off sensor.’ Once I get started, I have a hard time stopping. I can consume 1,200–1,800 calories of dense sweets in no time flat. If I start to eat sweets, I know I will not be happy until I get my fill. And ‘my fill’ is way more full than the average person. It is not a serving of cookies or cake, it’s an entire bag of cookies, or half a cake . . . and that’s no joke. This I know. So I don’t try and fool myself into thinking I can eat just one cookie or just two pieces of candy. If I could eat two pieces of bread, as another example, I’d be fine, but I have to have four, so I don’t eat it at all.”

**Organic food—good but not necessary:** “I lost 100 pounds never eating a single organic vegetable. Do it if you can, but if you can’t—for budgetary reasons or otherwise—don’t create more stress because you can’t go to the farmers’ market or a high-class grocery store. Eat the right foods and you’ll be fine.”

**Vegetables and protein:** “The only reason I’ll never be fat again is because I start each meal with a base of vegetables that taste good. Then I add my protein. I don’t discriminate against protein, though my favorites are lamb, pork, chicken, and beef. I’ll eat an entire cow before I eat powdered protein. Blech.”
Kettlebells are not inexpensive.

If you can’t afford them, or to determine your ideal swing weight (what you can currently do for 20 good repetitions) before ordering kettlebells, there is a fantastically inexpensive option: the “T-handle.” Rumored to be one of the core tools of dominant Hungarian hammer throwers, this simple device is also known as the Hungarian Core Blaster (HCB).

I have 20 kettlebells of various sizes but still prize my T-handle, as it can be disassembled for travel and packed flat at a weight of less than five pounds. In addition to swings, it can be used for deadlifts, two-arm bent rows, curls, reverse curls, and more. For $10, five minutes of shopping, and less than five minutes of assembly, you have an entire gym. Here’s what it looks like:

Just head to any hardware store or Home Depot and head to the plumbing aisle:

• One ¾" diameter × 12" long pipe nipple for the vertical shaft. A “pipe nipple” is, somewhat paradoxically, a short pipe threaded on both ends with male pipe thread.7
• Two ¾" diameter × 4" long pipe nipples for the handles. Electrical or duct tape can later be used to cover the outside threads, but I just wear leather gloves when training with the T-handle.
• One ¾" diameter pipe “T” fitting to connect the above items.
• One ¾" floor flange to keep the plates from falling off as you swing.

An optional but suggested addition:

• One spring clamp (I use an Irwin Quick-Grip 1") to keep plates from drifting up at the top of the swing. Do not swing the weights above sternum height.

Last but not least, replace the T-handle every six months. Tossing a bunch of plates on your cat or through a wall won’t win you IQ points when both are preventable for the cost of a T-shirt. Special thanks to Dave Draper for introducing me to this beautifully simple device.

7. If you are shorter than 5'5", a 10" or even 8" pipe nipple can be used to avoid dangerous brushing of the ground.
THE MATH OF BEAUTY: 0.7 AND BEYOND

What do Marilyn Monroe, Sophia Loren, and Elle Macpherson have in common? The number 0.7 and the letters WHR.

If you measured the waist and hip circumference of these three women, you’d find that their waists are 7/10 the size of their hips. This makes their waist-to-hip ratio (WHR) 0.7, and this ratio in females appears to be hardwired into the male brain as a sign of fertility and therefore attractiveness. The wider your waist is, the higher this ratio goes toward the apple-shaped 1.0, which correlates in scientific studies with decreased estrogen levels, increased disease risk, increased birth complications, and lower fertility rates.

Professor Devendra Singh at the University of Texas–Austin has studied the pear-shaped 0.7 body and found it popping up in 2,500-year-old stone Venus sculptures across Europe and Asia, in all Miss America winners from 1923 to 1987 (0.69 to 0.72), in Playboy centerfolds from 1955 to 1965 and 1976 to 1990 (0.68 to 0.71), and across different cultures—from Indonesians and Indian laborers to African Americans and Caucasians.

The good news? If you were born with wide hips, no worries.

Working toward a more slender waist has been shown to have a greater effect on attractiveness than reducing hip size. If your WHR is high, dropping it even a little bit will increase your power (health and hotness) to attract a male partner.

For men, your magic numbers are 0.8–0.9 for WHR and 0.6 for the waist-to-shoulder ratio (WSR). Broad shoulders can be built.

Perhaps the simplest tool for fine-tuning WHR in both sexes? No surprise: the kettlebell swing.
“7-Minute Abs. And we guarantee just as good a workout as the 8-minute folk. . . . If you’re not happy with the first 7 minutes, we’re gonna send you the extra minute free!”

“That’s good. Unless, of course, somebody comes up with 6-Minute Abs. Then you’re in trouble, huh?”

“No! No, no . . . not 6! I said 7. Nobody’s comin’ up with 6. Who works out in 6 minutes?! You won’t even get your heart goin’, not even a mouse on a wheel. . . . It’s like you’re dreamin’ about Gorgonzola cheese when it’s clearly Brie time, baby.”

—There’s Something About Mary

SIX-MINUTEABS

Two Exercises That Actually Work

HOTEL BEDROOM, NAPA, CALIFORNIA, MAY 2009

“You look like a cat about to vomit.”

My girlfriend had come out of the shower to find me perched on the bed on all fours, stomach heaving.

Taking a huge inhale, I looked up and gave an awkward smile: “Thirty more seconds. . . .”

She tilted her head like a Labrador retriever, observing the oddness for a few seconds, then walked back in the bathroom to dry her hair and brush her teeth. She needed to get ready for my friend’s wedding, and my groaning on all fours was far from the strangest thing she’d seen from me.

I continued my routine with a degree of glee. For the first time in my life, I had reliable six-pack abs.

Cat vomiting rocked.

Single White Male Seeking Abdominals: Exploring the Path Less Traveled

I’ve never had visible abs.

Even when my bodyfat was low enough to

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show veins everywhere else, my frontal six-pack—the rectus abdominus—showed almost no separation. Damnation.

Low bodyfat was necessary but not enough.

I performed conventional ab exercises for more than a decade with no discernible benefit, somehow convinced it was just a matter of time. Albert Einstein would call this insanity: doing the same thing over and over again and expecting different results.

Things changed only when I began testing basic assumptions in 2009. It took a week to arrive at a reductionist program of two exercises. I performed these exercises just twice a week on Mondays and Fridays after kettlebell swings. In a matter of three weeks, I had my six-pack.

There is just one more prerequisite for visible abs: follow a diet that allows sustained low bodyfat of 12% or less. I suggest the Slow-Carb Diet, as it has the highest compliance rate I’ve ever observed, but other viable options include a ketogenic diet (especially the Cyclical Ketogenic Diet) and intermittent fasting (IF). The latter will be covered in later chapters.

Movement #1: The Myotatic Crunch

I began my analysis by looking for common attributes in exercises that hadn’t worked. The shared feature of all the dominant exercises, in particular the floor crunch, is that they used no more than half of the full range of motion (ROM) of the abdominals. If you were to imagine yourself sitting in a chair, the prescribed exercises all took you toward your knees (crunch, floor sit-up) or brought your knees toward your chest with a straight back (roman chair, reverse crunch). I decided to ignore that fetal range of motion altogether for eight weeks and focus on the stretched position achieved with full back extension.

The result was the myotatic crunch, so named because it leverages the fully stretched position and the resultant reflex (myotatic reflex or stretch reflex) for a stronger contraction than I had been able to achieve otherwise.

It didn’t take eight weeks to see a difference. It took three.

Since this exercise is also effective for recruiting the transverse abdominis (explained next), if you have to choose one exercise, choose this one.
a BOSU ball is not available, use a small Swiss ball (45–55 centimeters in diameter) or a pile of firm cushions.

Using a BOSU or Swiss ball, ensure your ass is close to the floor, usually no more than 6” off the ground. Then follow these steps:

1. Start with arms stretched overhead as high as possible (I overlap my extended hands as if in a diving position). Keep your arms behind or next to your ears for the entire exercise.
2. Lower under control for 4 seconds until your fingers touch the floor, the entire time attempting to extend your hands further away from the ball.

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**THE MYOTATIC CRUNCH**

1. 
2. 
3.
3. Pause at the bottom for 2 seconds, aiming for maximum elongation (picture 3).
4. Rise under control and pause in the upper, fully contracted position for 2 seconds. The arms should not pass perpendicular with the ground.
5. Repeat for a total of 10 repetitions. Once you can complete 10 repetitions, add weight to your hands. I tend to use books of different sizes. If female, I don't suggest exceeding 10 pounds in added weight (see “Hourglass” sidebar on page 179).

Movement #2: The Cat Vomit Exercise

This exercise is dedicated to my ex-girlfriend. I want only the best for you, Angelina Jolie.

Unless you purchase a corset at the same time, doing crunches will not pull your abdomen in. The muscle fibers of the six-pack (rectus abdominis) run vertically. The muscle you want to target instead is called the transverse abdominis (TVA), the deepest of the six main abdominal muscles, which is composed of fibers that run horizontally like a belt. The TVA is nicknamed the “corset muscle,” and if your abs have ever ached from laughing or coughing, you’ve felt it working.
Unfortunately, laughing repeatedly in the gym will get you a straitjacket or a plate to the head, so here is the alternative:

1. Get on all fours and keep your gaze focused either directly under your head or slightly in front of you. Don’t arch your back or strain your neck.
2. Forcefully exhale from your mouth until all air is fully expelled. Your abs should be contracted from this forceful exhale. Full exhalation is necessary to contract the transverse abdominals, and you’ll use gravity to provide resistance.
3. Hold your breath and pull your belly button upward toward your spine as hard as you can for a target of 8–12 seconds.
4. Inhale fully through the nose after the 8–12 second hold.
5. Take one breath cycle of rest (exhale slowly out the mouth, inhale slowly through the nose), then repeat the above for a total of 10 repetitions.

There you have it: the myotatic crunch and the cat vomit exercise. Heave, groan, and be merry.
Square obliques are unattractive on women, and using common progressive resistance exercises can create them. Fortunately, the myotatic crunch and cat vomit exercises, as described, are not such exercises.

Loss of the feminine hourglass shape is sad and leaves some women looking bloated under clothing, even when they have low bodyfat. Not good.

If you want additional abdominal exercises as a woman, stick with timed planks instead, which also strengthen the gluteus medius on the hip. Just as The Kiwi in the last chapter prescribed, start with 30 seconds on the front, then 30 seconds on each side, working up to 90 seconds maximum per set. One set per angle per workout is all that’s needed.

Last but not least, to avoid the small potbelly look so common among women, even fitness competitors, fix your pelvic tilt with hip flexor stretches. The following can be performed once a day for 30 seconds on each side. Before kettlebells is perfect, as it will also help with hip extension.
MEASURING AB ACTIVATION WITH EMG: COMPARING THE USUAL SUSPECTS

Even if you ignore the two exercises in this chapter, don’t rely on the plain-vanilla crunch. It’s utterly ineffective.

Here’s how it stacks up against other exercises when rectus abdominis activation is measured with electrodes and an EMG (electromyography machine). Google each exercise if curious. The traditional crunch is given a value of 100%.

<table>
<thead>
<tr>
<th>Exercise</th>
<th>Activation Rate</th>
</tr>
</thead>
<tbody>
<tr>
<td>Bicycle crunch</td>
<td>248%</td>
</tr>
<tr>
<td>Captain’s chair</td>
<td>212%</td>
</tr>
<tr>
<td>Exercise ball</td>
<td>139%</td>
</tr>
<tr>
<td>Vertical leg crunch</td>
<td>129%</td>
</tr>
<tr>
<td>Torso track</td>
<td>127%</td>
</tr>
<tr>
<td>Long arm crunch</td>
<td>119%</td>
</tr>
<tr>
<td>Reverse crunch</td>
<td>109%</td>
</tr>
<tr>
<td>Crunch with heel push</td>
<td>107%</td>
</tr>
<tr>
<td>Ab roller</td>
<td>105%</td>
</tr>
<tr>
<td>Hover</td>
<td>100%</td>
</tr>
<tr>
<td>Traditional crunch</td>
<td>100%</td>
</tr>
<tr>
<td>Exercise tubing pull</td>
<td>92%</td>
</tr>
<tr>
<td>Ab rocker</td>
<td>21%</td>
</tr>
</tbody>
</table>

TIPS AND TRICKS

**BOSU Balance Trainer** ([www.fourhourbody.com/bosu](http://www.fourhourbody.com/bosu)) The BOSU looks like half of a Swiss ball with a flat plastic base attached to the underside. I use it for myotatic crunches and the torture twists featured in “Effortless Superhuman.”

**GoFit Stability Ball** ([www.fourhourbody.com/stability](http://www.fourhourbody.com/stability)) If preferred to the BOSU, this 55-cm “stability” ball (usually referred to as a “Swiss” ball) can be used. It’s less than half the cost of a BOSU, but I found such balls hard to store in the home and less versatile.

**Crazy Hitchhiker from There’s Something About Mary** ([www.fourhourbody.com/hitchhiker](http://www.fourhourbody.com/hitchhiker)) The classic scene that inspired the title of this chapter. “It’s Brie time, baby!”
was sitting on my surfboard 20 feet to the side of Neil Strauss, bestselling author of *The Game*.

The afternoon sun was shimmering off the rolling sets of blue water, and he was catching wave after wave. Me, not so much. In between bouts of falling into whitewash like an injured seal, I mentioned that my next book was a hacker’s guide to the human body. Might he be interested in gaining 10 or more pounds of muscle in four weeks?

He stopped catching waves and turned to look at me:

“Count me in. I’m so in.” Neil weighed 124 pounds.

The work started four months later. I was now watching Neil take 45 minutes to eat a small seafood entree at the Hawaiian-themed Paradise Cove restaurant. His fork would pause a few inches in front of his mouth as thoughts occurred to him, and there it would remain for minutes at a time. It drove me nuts.

This glacial pace was apparently a vast im-

---

It is vain to do with more what can be done with less.

—William of Occam (c. 1288–1348), “Occam’s Razor”
provement. To prove this, he had e-mailed me an excerpt of an interview he did with Julian Casablancas of the rock band The Strokes:

**Julian:** You’re a very slow eater. You have had a ham sandwich in your hand for like 45 minutes.

**Neil:** That’s true. I know.

**Julian:** You just have a little bite. I don’t know if you’re just chewing it, or does the food dissolve in your mouth?

Given no choice, I resorted to feeding Neil spoonfuls of brown rice in between sentences. Neighboring tables looked on in confusion. The enormous colorful umbrellas sticking out of our coconut-shell “Cocoladas” made the scene even more questionable. It was very bromantic.

Neil had been punished as a kid for taking “Neil bites” and keeping his parents waiting at the dinner table. Not eager to be sent to his room, he developed the habit of stuffing all of the food in his mouth, which often backfired with projectile vomiting across the table.

Gross.

Pausing to sip his Cocolada, Neil said he felt sick. I told him to keep eating. He looked down at his plate and repeated:

“Dude, I really feel sick.”

So I once again repeated:

“No, you just don’t want to eat. Take bigger bites. You’ll adapt.” Then, just to be safe, I inched out of vomit range.

Despite the bickering couple routine, I had complete faith: we were, after all, only 48 hours into the protocol.

Then things began to work as planned. Five days later, I received the following text message from Neil:

Gotta tell you: you’re turning me into a ravenous food-devouring machine.
And, mentally and physically, between the healthy food, exercise, and Malibu air and surf, I feel frigging great.

The text was prompted by a turning point. He had demolished an entire plate of steak in half the time as his girlfriend’s entire family, proceeded to eat what remained of her food, and then continued to vacuum up the steak leftovers. Tapeworm? No, his digestive enzymes and other internal
flora had just adapted to the increased food intake, and now he was primed for processing.

Ten days into the protocol, Neil’s sex drive was so high that it was almost a problem. His girlfriend had to push him away as if he were a single-minded 19-year-old. High sex drive is, of course, a quality problem, and it’s a by-product of vastly increased protein synthesis.

In just over four weeks, Neil, who’d never been able to gain weight, gained 10 pounds of muscle and grew from 125 to 135 pounds, a near 10% increase in total body mass.

The Bike-Shed Effect

The goal of this chapter is to reduce everything to the absolute minimum. Before we get started, we need to discuss the “bike-shed” effect, originally described by C. Northcote Parkinson.

To illustrate this phenomenon, let’s compare a conversation about building a nuclear power plant with building a bike shed. Most people rightly assume that they know nothing about something as complex as a nuclear power plant and so won’t voice an opinion. Most people wrongly assume, however, that they know something about building a bike shed and will argue until the cows come home about every detail down to paint color.

Everyone you meet (every male, at least) will have a strong opinion about how you should train and eat. For the next two to four weeks, cultivate selective ignorance and refuse to have bike-shed discussions with others. Friends, foes, colleagues, and well-intentioned folks of all stripes will offer distracting and counterproductive additions and alternatives.

Nod, thank them kindly, and step away to do what you’ve planned. Nothing more and nothing different.

Complicate to Profit, Minimize to Grow

To earn a fortune in the diet and exercise industries, there is a dictum: complicate to profit. To grow, however, you need to simplify.

The objective of the minimalist routine I’ll describe is:
1. Not to make you a professional athlete.
2. Not to make you as strong as possible, though strength will increase and the gains will surpass most protocols. Strength is the sole focus of “Effortless Superhuman.”

Here is our singular objective: to apply the MED necessary to trigger muscular growth mechanisms, and then channel food preferentially into muscle tissue during overfeeding. There is one condition: we must do both as safely as possible.

The safety issue is particularly important to understand when considering exercises. Don’t get me wrong; all movements are safe when performed properly.

This includes backflips on one leg, break-dancing headspins, and the much-vaunted snatch. The problem with such movements, and dozens of others, is that a minor mistake can cause serious, often permanent, injuries. These injuries are underreported because: (1) those affected don’t want to be ostracized from communities that view the moves as gospel, and (2) cognitive dissonance prevents them from condemning a move they’ve advocated for a long time. So what is used to explain the injury? “I/he/she just didn’t do it right.” There is underreporting of diet failures (raw food as one example) for similar reasons. In fairness, can you learn to do snatches safely? Sure. But if there are safer substitutes that provide 80% or more of the benefits, I will suggest those substitutes instead.

In more than 15 years of resistance training, I have never been injured following the protocols I will describe here. I suggest adopting one rule of Dr. Ken Leistner, an NFL strength consultant I had the painful pleasure of training with in 1996: the goal of strength training is to reduce injury potential first, and to increase performance second.

16. Yes, in case you missed it earlier, this is a weight lifting maneuver.
Occam’s Protocol

Recall that coach Matt Brzycki at Princeton nicknamed me “Growth.” He has written more than 400 articles on strength and conditioning and dealt with everyone from SWAT teams to NFL teams. What made me different from trainees who didn’t grow?

I used hyper-abbreviated training to compensate for mediocre recuperative abilities. It was the self-control to do less.

“Occam’s Protocol” is a variation of the consolidation routine used by the late Mike Mentzer, who won the heavyweight class of the Mr. Olympia competition in 1979.

It is possible to get huge with less than 30 minutes of gym time per week. **The following A and B workouts are alternated, whether you choose the machine or free weight option.**

The exercises should be performed for one set each and no more. The objective is to fail, to reach the point where you can no longer move the weight, at seven or more repetitions at a 5/5 cadence (five seconds up and five seconds down). The leg press is to be performed for 10 or more repetitions at the same cadence. The only exceptions to the cadence rule are the abdominal exercises and kettlebell swing, which are described in earlier chapters.

The mechanisms of growth we want to stimulate are both local (muscular, neural) and systemic (hormonal). The longer time under tension (TUT) for the lower body will elicit a greater full-body growth hormone response while also stimulating the formation of new capillaries, which will improve nutrient delivery.

Each workout consists of just two primary lifts.

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**WORKOUT A: THE MACHINE OPTION**

1. Close-grip supinated\(^{17}\) (palms facing you) pull-down × 7 reps (5/5 count)
2. Machine shoulder press × 7 reps (5/5 count)
   (Optional: Abdominal exercises from “Six-Minute Abs”)

\(^{17}\) Med school mnemonic for “supinated”: imagine eating “soup” out of a cupped hand.
It is critical to record seating settings on all machine exercises. If there are four holes showing in the sliding seat adjustment, for example, note this in your notebook or iPhone. Even one to two inches of difference in starting position can change the leverage and create the illusion of strength gain or loss, especially with pressing movements. Record it all and standardize the movement.

**Machine Shoulder Press**
There are a million and one ways to perform exercises.

To keep things simple—and to keep you safe—I will make one recommendation: use the “locked position” to protect your shoulders in all weight-bearing exercises, whether the kettlebell swing, the bench press, the deadlift, or other.

**The Locked Position**

**Asking for trouble.** From Marie’s normal shoulder position, I can easily pull her shoulder forward like a dislocation. Her entire upper body is unstable in both pictures.

**The “locked position.”** Marie has pulled her shoulder blades back and pushed them down toward her hips 1–2 inches. Notice how you can see her shoulder strap in these photos but not in the first set. There is a slight arch in the back, and if you extend your arms in front of you, the elbows should be closer to nipple height than collarbone height. Marie is now stable, and I can even lift her off of the ground with one arm.
WORKOUT B: THE MACHINE OPTION

1. Slight incline/decline bench press × 7 (5/5 count)
2. Leg press × 10 (5/5 count)
   (Optional: Kettlebell or T-bar swings from “Building the Perfect Posterior” × 50)
3. Stationary bike × 3 minutes at 85+ rpm (to minimize subsequent leg soreness)

Slight Incline/Decline Bench Press (Shown Here: Hammer Machine) If you’ll injure your shoulders on any exercise, it will be the flat bench press. For this reason, I suggest a slight (less than 20-degree) incline or decline when possible. For stubborn chest development, Dorian Yates suggests the slight decline. If only flat machines are available, a phone book or thick rolled towel behind the lower back will create a slight decline angle.

To prevent unnecessary shoulder strain, set the pins in the machine (or seat adjustment) so that your knuckles are one fist width above your chest at the bottom of the movement. I also suggest a one-second pause at the bottom of the movement without touching the weight stack, which will aid in chest development and further reduce risk.

Leg Press

For most trainees, I suggest the above routine incorporating machines.
WORKOUT A: FREE WEIGHT OPTION

Free weights can be used if you prefer them, or if you travel often and need standardized equipment that is the same around the world:

1. Yates row with EZ bar (ideal) or barbell × 7 (5/5 count) (see pictures in the sidebar later this chapter)
2. Shoulder-width barbell overhead press × 7 repetitions (5/5 cadence)
   (Optional: Abdominal exercises from “Six-Minute Abs”)

**Barbell Overhead Press** The elbows are kept in front of the shoulders and do not flare outward. The bar travels in front of the face, but the head and upper torso move forward to be under the bar once it passes the head. The split stance prevents excessive arching of the back, but a shoulder-width parallel stance can also be used.

WORKOUT B: FREE WEIGHT OPTION

1. Slight incline bench press with shoulder-width grip × 7 (5/5 count)
   (If no Power Rack is available, use dumbbells, but you’ll often run into problems with adding weight in small increments.)
2. Squat × 10 (5/5 count)
   (Optional: Kettlebell or T-bar swings from “Building the Perfect Posterior” × 50)
3. Stationary bike × 3 minutes (to minimize subsequent leg soreness)

**Squat (Shown on the Next Page with Smith Machine)** The feet, slightly wider than shoulder width, are placed a foot ahead of your hips.

18. These are rectangular frames with pins that can be set at various heights to catch weights if dropped. I train solo and do almost all of my barbell exercises in a Power Rack.
Initiate the movement by breaking at the hips (imagine pouring water out the front of your pelvis) and sitting backward, descending to where your thighs are parallel with the ground. Look up at approximately 45 degrees throughout the movement and do not pause at the top or the bottom.

Rules to Lift By

1. If you complete the minimal target number of reps for all exercises (excluding abs and kettlebell swing), increase the weight the next workout at least 10 pounds for that exercise. If the additional 10 pounds feels easy after two to three reps, stop, wait five minutes, increase the weight an additional 5 to 10 pounds, then do your single set to failure.

2. Do not just drop the weight when you hit failure. Attempt to move it, millimeter by millimeter, and then hold it at the limit for five seconds. Only after that should you slowly (take five to ten seconds) lower the weight. The biggest mistake novice trainees make is underestimating the severity of complete failure. “Failure” is not dropping the weight after your last moderately strenuous rep. It is pushing like you have a gun to your head. To quote the ever poetic Arthur Jones: “If you’ve never vomited from doing a set of barbell curls, then you’ve never experienced outright hard work.” If you feel like you could do another set of the same exercise a minute later, you didn’t reach failure as we are defining it. Remember that the last repetition, the point of failure, is the rep that matters. The rest of the repetitions are just a warm-up for that moment.

3. Do not pause at the top or bottom of any movements (except the bench press, as noted), and take three minutes of rest between all
exercises. Time three minutes exactly with a wall clock or a stopwatch. Keep rest periods standardized so you don’t mistake rest changes for strength changes.

4. The weight and repetitions used will change as you progress, but all other variables need to be identical from one workout to the next: rep speed, exercise form, and rest intervals. This is a laboratory experiment. To accurately gauge progress and tweak as needed, you must ensure that you control your variables.

That’s it.

The temptation to add exercises will be enormous. Don’t do it. If anything, if you’ve never been able to gain mass, you might choose to do less. That’s what we did with Neil. His program and progress over four weeks looked like this:

**WORKOUT A**
- Pull-down: 8 reps × 80 lbs → 8 reps × 110 lbs
- Machine shoulder press: 8 reps × 30 lbs → 5 reps × 60 lbs

**WORKOUT B**
- Seated dips: 6 reps × 140 lbs → 6 reps × 170 lbs
- Seated leg press: 11 reps × 140 lbs → 12 reps × 190 lbs

Occam’s Protocol is enough to stimulate a massive growth response. Remember our tanning analogy in the beginning of this book? Forget working harder for a minute and realize that biology isn’t about blunt force. Don’t add a damn thing.

### Occam’s Frequency

Michael, I did nothing. I did absolutely nothing, and it was everything that I thought it could be.
—Peter Gibbons, Office Space

The frequency of the A and B Occam workouts is based on a simple premise: you must increase recovery time along with size. You will exercise less frequently as you increase strength and size,
as you can often increase muscle mass well over 100% before reaching a genetic ceiling, but your recovery abilities might only improve 20–30% through enzymatic and immune system upregulation (increased plasma glutamine production, etc.).

Put in simple terms: it takes nongrowing repair systems longer to repair a 20-pound muscle than its 10-pound predecessor. The bigger and stronger you get, the less often you will go to the gym.

Looking at the hypothetical two months below printed from freeprintablecalendar.net, we see that sessions are not scheduled on set days (e.g., Monday and Friday), but are instead spaced apart by set numbers of rest days, which increase over time.

In 1996, while at the Capital University of Business and Economics in Beijing, I grew to 197 pounds and was easily the strongest I’ve ever been. No supplements whatsoever were used, as none could be found. I hit a whole-food ceiling at 6,000 calories per day, as more made me ill, but I was able to resolve all progress plateaus with additional rest days, eventually ending the bulking cycle after four months at 12 days between identical workouts.

**GETTING STARTED**

**Step 1:** Take at least seven days off of all training that causes significant muscular damage. No bodyweight resistance training or weight training allowed.

**Step 2:** Begin Occam’s Protocol with two days between A and B workouts. After two of both the A and B workouts, increase the rest days between workouts to three days. As soon as you have a workout where more than one exercise has stalled (indicated in our hypothetical calendars with the B*), but not before, increase to four days between workouts.

Continue adding rest as needed to resolve plateaus until you hit your target weight or end your bulking cycle.
Important caveat: this spacing assumes you are consuming enough food to support rapid growth. Of the trainees who fail to gain significant muscular weight (significant = at least 2.5 pounds per week) on Occam’s Protocol, 95%+ of them fail due to insufficient caloric/nutrient intake. The remaining 5% have nutrient absorption issues such as leaky gut syndrome, impaired stomach acid production, excessive fat excretion, insufficient bile, etc., or other conditions requiring medical attention before the protocol can do its job.

I’ve encountered only one such clinical case in the 5% group. He was 124 pounds at 6’1”, and even when he attempted to gain weight by eating bag after bag of doughnuts in 24-hour periods, he could not gain a single pound.

Don’t assume you are in this unlikely minority. The most common problem is insufficient food intake.

That leads us to the real challenge of Occam’s Protocol.

Eating.

Occam’s Feeding

In the 1995 gaining experiment, I set an alarm to wake me four hours into sleep so that I could consume five hard-boiled eggs as an additional meal. It helped, to be sure, but it was also uber-inconvenient. Inconvenient eating schedules, no matter how effective, have a high abandonment rate after initial enthusiasm wanes. I prefer low-friction approaches that are less disruptive, even if it takes a few more weeks to reach my goals. Taking two to four more weeks to reach a mass goal is much better than constant irritability or quitting a program altogether.

Some athletes eat 10 times per day to break up caloric load and avoid excessive fat gain. I find this unnecessarily inconvenient, particularly when you are on a regimen of supplements that increases insulin sensitivity and GLUT-4 activity (see “Damage Control”). I eat four main meals per day for both fat-loss and muscular gain.

MY STANDARD NIGHT-OWL SCHEDULE

10:00 A.M.—Wake up, immediately breakfast + ½ shake (details later in this chapter)
2:00 P.M.—Lunch
6:00 P.M.—First dinner
7:30 P.M.—Training, if scheduled (I sip low-fat protein just before and throughout. Neil used Isopure®.)
8:30 P.M. (30 minutes post-training)—Dinner
15 minutes before bed—Second half of morning shake

The meal composition is nearly identical to the Slow-Carb Diet, as are the tenets, though we now add a starch such as brown rice or quinoa to the non-shake meals. There is no need to mimic my hours, of course. Just look at my meal spacing as one option that has worked.

Neil was different. He was prone to skipping breakfast and had little appetite. It was impossible for him to consume large meals from the get-go. The solution was to prescribe a calorie-dense shake for breakfast and increase the number of meals to achieve a proper food volume, even with smaller portions.

NEIL’S FOOD SCHEDULE
9:00 A.M.—Protein shake (see below)
11:00 A.M.—Protein bar (Balance Bar or, preferably, a Training 33 YouBar)
1:00 P.M.—High-protein/-carb lunch (usually chicken breast with potatoes)
3:00 P.M.—Protein bar
5:00 P.M.—High-protein/-carb dinner (usually sushi/sashimi with extra rice)
7:00 P.M.—Protein bar
9:00 P.M.—Protein snack with carbs (chicken or eggs or tuna)
11:00 P.M.—Protein shake

The choice is yours: eat big or eat often. Fat gain will be slightly more with the former, and inconvenience will be much greater with the latter.

Pick one and make it your religion for four weeks. It’s easy to lose a little extra fat later.

A NOTE ON SKIPPING BREAKFAST
If you skip breakfast even once a week, or opt for a nonbreakfast like coffee and toast even once a week, make the blender your first stop after getting out of bed.

The following recipe can also be used as a meal replacement or pre-bed snack:
24 oz (3 cups) 2% or whole organic milk
30 g whey protein isolate (chocolate tends to work best)
1 banana
3 heaping tbsp almond butter with no added sugar, maltodextrin, or syrups
5 ice cubes

Caloric and protein profile with 2% milk (approximate): 970 cal, 75 g protein

The Fixer: GOMAD

Everyone on these heavy squat programs who drank enough of it [milk] gained weight. Yes, everyone we’ve ever heard of.
—Dr. Randall J. Strossen

If the preceding diet and high-protein snacks don’t elicit at least two and a half pounds per week of gain, add in one liter of 2% organic milk between meals, up to four liters per day. Four liters = roughly one gallon. This is the simple and rightly venerated GOMAD (Gallon Of Milk A Day) approach to mass gain, which—along with squats—has produced monsters for more than 75 years, including the incredible Paul Anderson and some of the greatest lifters the world has ever seen.

I suggest adding a single liter per day each week (often in the aforementioned shake) and keeping a close monitor on fat gain, which can accelerate. Fat gain is not inevitable, but it needs to be monitored. Navel circumference measurements are a good estimation if you don’t have access to other body composition devices.

Reader Matt gained six pounds per week for three weeks (18 pounds total) using GOMAD as his only means of increasing calories during his “Geek to Freak” (G2F) trial, and his abdominal skinfold (two inches to the side of the navel) remained four millimeters throughout.

If you’re eating enough at your main meals, you shouldn’t need more than a liter per day to accelerate growth. Lactose-intolerant? Try incorporating one glass of organic whole milk per day into your diet. Don’t be surprised if you can comfortably consume milk after 1–2 weeks.

For many people, GOMAD or LOMAD (Liter Of Milk A Day) will be the only dietary change required to stimulate growth.

If simple does the job, keep it simple.
Occam’s Prescriptions

This protocol works without any supplementation whatsoever.

There are, however, four supplements that I would suggest to those with the budget. The first two minimize fat gain and are covered in “Damage Control” and “The Four Horsemen”: 1. Cissus quadrangularis (2,400 mg, three times per day) 2. Alpha-lipoic acid (300 mg, 30 minutes before each whole-food meal). Here are the other two:

3. L-GLUTAMINE

L-glutamine is an amino acid commonly used as a post-workout supplement for tissue repair. In our case, I suggest it for an alternative use from strength coach Charles Poliquin: intestinal repair.

The food you ingest does no good if it isn’t absorbed. It’s like panning for gold with a chain-link fence. The anatomical equivalent of this porous chain-link fence is an assortment of digestive conditions, including leaky gut syndrome, for which L-glutamine has been shown to be a promising treatment.

Rather than risk suboptimal food absorption, consume 80 grams of L-glutamine during the first five days of Occam’s Protocol.

I recommend 10 grams at a time every two hours on the dot until the daily 80-gram quota is reached. Powder mixed in water is easiest to consume, but capsules are more convenient for travel. After the initial five-day loading period, if you wish to consume 10–30 grams post-workout, it will speed repair and help prevent soreness.

4. CREATINE MONOHYDRATE

Creatine increases both maximal force production and protein synthesis. Doses of 5–20 grams per day have been demonstrated as safe and largely devoid of side effects, though people with preexisting kidney conditions should use creatine under medical supervision. Athletes generally use a “loading phase” of five to seven days at 10–30 grams per day, but this can cause severe intestinal discomfort. You can achieve the same muscular saturation with lower doses for a longer period of time.

Take 3.5 grams upon waking and before bed for the entire 28-day duration. If you use powder, mix in 5–6 grams total, as losing one to two grams in solution is hard to avoid.
My Favorite and Easiest-To-Consume High-Calorie Meal

My single favorite meal for mass is macaroni (preferably durum whole wheat), water-packed canned tuna, and fat-free turkey/bean chili. Use a little whole milk or Irish butter with the macaroni, add only one-third of the orange-flavored cancer powder, and prepare this in bulk.

Mix the macaroni with a can of tuna and as much chili as you like, microwave it for one minute on high, and have it for breakfast in a bowl. I sometimes ate this meal two or three times per day, as prep time was less than three minutes if I made the macaroni in advance. For a higher-protein change of pace, feel free to substitute quinoa for the macaroni.

It might sound funky, but trust me: this mess tastes delicious.

Lessons From Neil

Neil gained significant muscle for the first time in his life using Occam’s Protocol.

Not only did he add 10 pounds to his frame in four weeks, he also improved his strength 50 pounds on some lifts and doubled others. His minimum improvement was 21.4%. He used machines exclusively and used a dip machine in place of the incline bench press, as the former had less traffic:

**WORKOUT A**

- Pull-down: 8 × 80 to 8 × 110 (+37.5%)
- Overhead shoulder press: 8 × 30 to 5 × 60 (+100%)

**WORKOUT B**

- Seated dips: 6 × 140 to 6 × 170 (+21.4%)
- Seated leg press: 11 × 140 to 12 × 190 (+35.7%)

There is no need to reinvent the wheel or face challenges alone. Here are some of Neil’s notes, in his words, on what to expect and what to do:

“An unexpected side effect of the experiment is how, after the first few days and the initial shock of having to stuff my gullet to the point of feeling ill actually passed, I began to feel incredibly happy and content.

“Like everything, there’s a pain period when you step out of your comfort zone. And just when it seems toughest, and you most want to give up...
(because it’s too much time/work/energy, because you don’t understand it, because you don’t trust it), if you push through that moment, immediately afterward you break free and it becomes a habit that you feel you’ve been doing all your life (and know you should have been doing all your life).

“The workouts are the least challenging part of it. Going to the gym so rarely and for so short a time left me wanting more. I think the key is, like you told me in the gym, to know that you only grow in those last reps when your muscles want to give up. To really focus and keep pushing to complete failure is an internal battle, so one has to really have the mental strength to keep going when the body wants to quit, rush, or use bad form in those last reps.

“My main advice would be to: write out a meal/supplement plan and keep it with you at all times. Have a workout buddy in the gym to push you and help spot. Do this at a time when you aren’t traveling and can have a pretty routine schedule. And carry a pack with supplements and protein bars in your car or with you at all times, in case your schedule changes during the day. Interestingly, it was only the first few days when the creatine made me piss like a racehorse; after four days, my body began absorbing it like it should.

“I think my biggest worry was that all the food would just create a tire around my abdomen, but like you said, it all went to the right places and people noticed . . . there was no downside and no reason not to do this.”

TOOLS AND TRICKS

Free Printable Calendar (www.freeprintablecalendar.net) Use this free custom calendar maker to schedule your workouts and rest spacing for each month.

YouBar Custom Protein Bars (www.fourhourbody.com/youbar) Custom design your own protein bars with YouBar, which allows you to choose protein type and dozens of add-ons like cashew butter, chia seeds, goji berries, and much more. Anyone can have their own branded (you choose the label type) protein-on-the-go for a minimum of 12 bars. For my preferred mix, search for the “Training 33” bar.

Parkinson’s Law by Cyril Northcote Parkinson (www.fourhourbody.com/parkinsons) This is the seminal book on Parkinson’s Law, written by Parkinson himself. Everyone you meet will want to tell you how to train and eat. Read this hysterical book to cultivate your selective ignorance of these “bike shed” discussions, which will derail more than help.
Biceps are a male obsession. This usually leads to throwing everything and the kitchen sink at them.

In reality, to build large and vascular biceps, there is no need to do isolated arm work. All you need are two compound exercises (one high-rep and high-speed, and the other low-rep and low-speed) and, if you absolutely must do curls, include one lesser-known version called the “reverse drag curl.”

**The First Compound Exercise: The Two-Handed Kettlebell Swing**
We covered this exercise in detail in “Building the Perfect Posterior.” Reps are 50+.

**The Second Compound Exercise: The “Yates” Bent Row**
Named after six-time Mr. Olympia Dorian Yates, who used it as a staple of his back routine, this exercise is a palms-up bent row performed with a slight 20–30-degree bend at the waist from standing. The bar will generally be at the top of the kneecaps in the bottom hang position. To minimize wrist pain, perform with an EZ bar if possible (here demonstrated with a standard Olympic barbell) and pause for a second at your hip crease, where the bar should make contact.

**The Reverse Drag Curl**
This exercise, ideally performed with a thick bar, develops the brachialis on the side of the upper arm and provides more constant tension than traditional curls.

Traditional curls often place the elbow under the weight at the top of the moment, minimizing resistance:
The drag curl, in contrast, raises the bar straight up rather than in a circular motion, grazing the front of the body and maintaining tension throughout.

The above photos show a standard drag curl with palms up. To reverse it, as suggested, ensure your palms are shoulder width apart and facing down.

Tempo and reps on both the row and the drag curl are the same as in Occam’s Protocol, 5 up and 5 down.

DAVE “JUMBO” PALUMBO—FROM 140 POUNDS TO 317 POUNDS

Dave Palumbo was going to become a doctor.

Then, somewhere between running track in college and his third and final year in med school, he became fascinated by muscular growth. That marked a fork in the path, and he opted to step outside of the laboratory and make himself a real-life experiment.

He weighed less than 140 pounds when he started in 1986. By 1997, he was 310 pounds at less than 10% bodyfat.

In 2008 alone, in addition to training professional athletes and celebrities like WWE star Triple H, he trained more than 150 bodybuilders and physique competitors. Getting to 3.5% bodyfat or doubling your body mass isn’t normal, but that is precisely Dave’s forte: creating freaks of nature.

This brings us to the kitchen in 1997, just before his apex of mass proportions.

Dave was standing completely still, braced with his hands on the sink.

He hadn’t been gaining weight. Despite consuming six to eight Met-Rx meal replacement packets and four to five whole-food meals per day, the scale wasn’t budging. He needed to eat more, but he couldn’t chew and digest more solids without regurgitating. It was impossible. He’d reached his solid food limit, so he had to augment with liquid.

His Jewish grandmother harassed him about consuming raw eggs and the risk of salmon-
nella poisoning, so he compromised: 12 eggs mixed in a blender and then microwaved for one minute. That formed the base. The full recipe was four ingredients:

- 12 warm blended eggs
- 1 cup apple juice
- 1 cup uncooked oatmeal
- 2 scoops whey protein powder

Blending the concoction created a cement-like substance, which he then had to pour down his throat while stationed at the kitchen sink. He’d conditioned himself to inhibit the gag reflex, which was critical, as the sludge moved at a glacial pace down his esophagus to his stomach. Just another day at the office.

Then he waited.

Dave had learned from experience—and thrice-daily cement feedings—that he had to remain perfectly still for 15 minutes, no less, breathing slowly and allowing things to settle. Even shifting on his feet could trigger immediate retching. Stillness was important. There were times, of course, when the world didn’t cooperate.

He had once been late for a training appointment, so he force-fed himself, threw the blender in the sink, and jumped in his car to beat the clock. Keep in mind that, at 5’10” and more than 300 pounds, his legs were only a few inches from his stomach when seated. He had outgrown his car.

In minutes, as he rushed through traffic, his mouth began to produce copious amounts of saliva, preparing his digestive tract for rejection. He did his best to achieve a Zen-like state, repeating “Please don’t puke, please don’t puke, please don’t puke,” like a mantra. He was almost there.

Dave approached a light, and the car in front of him stopped short.

He slammed on the brakes. This made his stomach slam into his thighs and he projectile-vomited onto the windshield, like Linda Blair in *The Exorcist*, for several long seconds. Not an inch of windshield was spared, and nothing remained in his stomach.

Toweling off just enough to see, he raced to his client’s house, jumped out of the car, and ran up to the front door. “What the hell happened to your car?” was all his client could say as Dave walked past him directly to the kitchen.

It was time to have another shake. The calories were not optional.

Gaining more than 180 pounds of muscle is possible, as is squatting with fourteen 45-pound plates on the bar, but neither is common. Doing the uncommon requires uncommon behavior. Rule #1 for Dave: eating would not always be for enjoyment.

If you’re attempting to gain large amounts of muscular weight, it won’t always be enjoyable for you either. This is particularly true for the first week.

Buckle up and get the job done.
CAN THIS FREQUENCY REALLY BE ENOUGH?
Yes. Doug McGuff MD compares burn healing to muscle tissue healing to explain:

Building muscle is actually a much slower process than healing a wound from a burn [which typically takes one to two weeks]. A burn heals from the ectodermal germ line, where the healing rate is relatively faster, because epithelial cells turn over quickly. If you scratch your cornea, for instance, it’s generally going to be healed in 8–12 hours. Muscle tissue, in contrast, heals from the mesodermal germ line, where the healing rate is typically significantly slower. All in all—when you separate all the emotion and positive feedback that people derive from the training experience—solid biological data indicate that the optimal training frequency for the vast majority of the population is no more than once a week.
For a much more in-depth discussion of recovery intervals, especially if you’re science-inclined, I suggest Dr. McGuff’s book *Body by Science*.

**HOW DO I DETERMINE STARTING WEIGHTS?**

The first A and B workouts will be longer than subsequent workouts, as you need to use trial-and-error to determine starting weights.

Do this by performing sets of five repetitions in each exercise with one minute of rest in between. Cadence should be fast but controlled on the raising and two to three seconds on the lowering. Do not perform more than five reps per set. If you can lift more, wait a minute, increase the weight ten pounds or 10% (whichever is less), and attempt again. Repeat this until you complete fewer than five reps.

After you fail to complete five reps, calculate 70% of your last full five-rep set. Take a three-minute rest and perform a 5/5 cadence set-to-failure using this weight. Congratulations, you just performed your first proper set-to-failure for this exercise, and this weight will be your starting point for Occam’s Protocol. For the shoulder press, use 60% of the last successful five-rep set instead of 70%.

Let’s look at a hypothetical first workout A, performed on a Monday. Here is how things might look for a semi-trained 150-pound male doing the pull-down (weights will differ from person to person of course, and that’s why you budget at least an hour for these first workouts):

90 lbs × 5 reps (f/2)\(^\text{19}\)  
100 lbs × 5 reps (f/2)  
110 lbs × 5 reps (f/2)  
120 lbs × 5 reps (f/2)  
130 lbs × 4 reps (f/2) (he failed to complete 5 reps, so 120 lbs was the last full 5-rep set)

\(^{19}\) *(f/2)* indicates "fast but controlled" on the lifting portion and a two-second lowering.
Then we do the math: $120 \times 0.7 = 84$, and we round up or down to the nearest weight we can actually use on a machine or bar, which leads us to 85 pounds.

(3-min rest)
85 lbs × 8.4 to failure (5/5)

The 8.4 just means your failure was reached at $8 + \frac{4}{10}$ of a repetition. Take a five-minute rest, then repeat this process with the shoulder press. Once finished with this first workout A, record the target weights you will use for your next A. Since this A was done on a Monday, your next few workouts will look like this:

(Just finished: Monday—Workout A)
Thursday—Workout B
Sunday—Workout A
Wednesday—Workout B
Sunday—Workout A (notice the planned increase to 3 rest days preceding this workout)

HOW DO I ADD WEIGHT?
If you complete your required minimum of reps, add 10 pounds or 10% of the total weight in the subsequent workout, whichever is greater. In the example above, we crossed our seven-rep threshold with 85 pounds in the pull-down, so we will increase the weight to 95 pounds for the next workout, as a 10% increase would be less at 93.5 pounds.

To maintain this rate of progress for even two months, you will need to eat like it’s your job. Add shakes or milk if whole food is too difficult.

WHAT IF I MISS A WORKOUT DUE TO TRAVEL?
It is better to take an additional one to three days off than to half-ass a workout with different equipment that makes it impossible to determine progress or proper weights when you return. There is nothing to be lost by an additional one to three days of rest.

The other solution is to always use free weights with standard Olympic barbells, as these will be universal and comparable between facilities. Free-weight options are outlined in the preceding chapter.
WHAT IF I DON’T MAKE THE TARGET NUMBER OF REPETITIONS?

This means one of two things: either you didn’t stimulate growth mechanisms (insufficient failure during the last workout), or you haven’t recovered (insufficient rest/food).

If you miss your target by more than one repetition on the first exercise of a given workout, go home, take the next day off, then repeat the workout.

Let’s say you’re scheduled for workout A on a Monday. The first exercise is close-grip pull-downs, and your target number of repetitions is a minimum of seven. If you complete six good repetitions or more, complete the entire workout. If you don’t complete six repetitions for pull-downs, do NOT proceed to the shoulder press.

Instead, pick up your gym bag and go home. Rest Tuesday, ensure proper nutrient intake by eating a ton, and come in Wednesday prepared to crush both exercises and proceed as planned.

If you fail before the requisite number of reps, do not—as many people do—decrease the weight and do another set (called a “drop-down” or “break-down” set). Do nothing but leave. If you haven’t recovered, you haven’t recovered. Continuing can easily stagnate you for two weeks or more.

Cutting a workout short takes tremendous self-control and runs counter to gym culture.

Be smart and opt for a 48-hour reboot instead of a two-week or three-week reboot.

Last but not least, if you abandon a workout because you miss a set, add another recovery day between all workouts moving forward. In effect, you’re just accelerating the planned decrease in frequency. There is very little downside to doing this. Twenty-four hours of additional time cannot hurt you, but underrecovering will screw up the entire process.

HOW MANY CALORIES SHOULD I CONSUME?

If you fail to gain weight after adding milk and shakes, chances are that you have a medical condition. It shouldn’t be necessary to count calories, and I never have.

There is one exception.

If you believe you’re doing everything right and still aren’t adding pounds, confirm that you aren’t vastly overestimating your food intake and hence undereating. Count calories and weigh food for a 24-hour period.
For recording like this, I use the Escali food scale, which allows me to input the code for a food, provided in an included manual, to determine the protein, carbohydrate, and fat breakdown.

Ensure that you are eating 20 calories per pound of lean bodyweight for 10 pounds more than your current lean bodyweight. Note that this is not necessarily your ultimate target weight (assuming you want to gain more than 10 pounds). Adjust this target number on a weekly basis.

Let’s say you are 160 pounds lean bodyweight (determined by body composition testing) and want to have 180 pounds of lean mass. You would check your diet to ensure that you are consuming $170 \times 20 = 3,400$ calories. This is the absolute rock-bottom minimum and also applies to non-workout days.

All that said, remember: you shouldn’t have to count calories. Keep it simple and you will gain. If the number on the scale isn’t getting bigger, eat more.

**BUT WHAT ABOUT CARDIO?**

Think you need to hit the stationary bike or run to maintain or improve aerobic capacity? This isn’t always the case. Doug McGuff MD explains:

> If you are intent on improving your aerobic capacity, it’s important to understand that your aerobic system performs at its highest when recovering from lactic acidosis. After your high-intensity workout, when your metabolism is attempting to reduce the level of pyruvate in the system, it does so through the aerobic subjugation of metabolism…since muscle is the basic mechanical system being served by the aerobic system, as muscle strength improves, the necessary support systems (which includes the aerobic system) must follow suit.

If you’re a sprinter or marathoner, can you prepare with weight training alone? Of course not. But, if you’re a noncompetitive athlete looking to avoid cardiovascular disease, do you need to spend hours spinning your wheels, literally or figuratively? No. The artificial separation of aerobic and anaerobic (without oxygen) metabolism might be useful for selling aerobics, a marketing term popularized by Dr. Kenneth Cooper in 1968, but it’s not a reflection of reality.

Occam’s Protocol develops both anaerobic and aerobic systems.
WHAT IF I’M AN ATHLETE?
Though it depends on the sport, if you are a competitive athlete with frequent sports training, I would suggest a protocol designed for maximal strength gain and minimal weight gain. See “Effortless Superhuman.”

WON’T THIS SPEED OF LIFTING MAKE ME SLOW?
Though this program is not designed for athletes (again, see “Effortless Superhuman” for that), there is no evidence that a 5/5 lifting cadence will make you slow. Let’s take a look at one counterexample in a sport where speed is paramount: Olympic lifting.

In 1973, an Olympic weight lifting team with no prior experience was formed at DeLand High School in Florida. Their main training protocol was slow, mostly eccentric (lowering) lifting. The team went on to amass more than 100 consecutive competitive wins and remained undefeated and untied for seven years.

Letting weight training displace skill training is what makes athletes slower. A focus on muscles shouldn’t replace a focus on sport. For competitors outside of the iron game, lifting is a means to an end. It shouldn’t interfere with other sport-specific training.

WHAT ABOUT WARM-UPS?
Take 60% of your work weight for each exercise in a given workout and perform three reps at a 1/2 cadence (1 second up, 2 seconds down). This is done to spot joint problems that could cause injuries at higher weights, not to “warm up” per se. Prep sets for all exercises should be performed prior to your first real set at 5/5.

In practical terms, the first few repetitions of each work set act as the warm-up. I have never had a trainee injured using this protocol.

HOW SHOULD I WORK OUT WITH A PARTNER?
If you work out with a partner, ensure that your rest intervals remain consistent. Three minutes should not bleed into three and a half because your partner is socializing or slow in changing weights. This is nonnegotiable. I have always lifted alone and use training time as near-meditative “me” time, which the counting of cadence reinforces. Many people benefit tremendously from workout partners, but I don’t appear to be one of them.

The exercises are chosen to be safe when performed alone. Even if you elect to train with partners, do not let partners help you. It will lead to
them lifting the weight while shouting “All you!” This makes it impossible to know how much weight you actually lifted.

Feel free to lift together, but fail alone.

WHAT ABOUT DROP SETS, REST-PAUSE, AND OTHERWISE EXTENDING FAILURE?
This isn’t needed and screws up your ability to control variables. Keep it simple and follow the rules.

Most advanced trainers who use one-set-to-failure methodologies have observed better results from not extending failure. If you cannot move the resistance, it means you have failed. Extending it just consumes resources that could be applied to growth.

ISN’T X BETTER THAN Y? CAN I [INSERT CHANGE TO PROTOCOL]?
If you want to be a competitive powerlifter, you will need another program.

If you want to be outstanding in other lifts, you need another program.

For the purposes of gaining 10+ pounds of fat-free mass in four weeks, however, this program does not require any modification whatsoever.

If you want something else, choose something else. Otherwise, don’t change it.

CAN I JUST WORK OUT EVERY 12 OR 24 DAYS AS GURU X SUGGESTS? I’M STILL GETTING STRONGER.
There are some trainers who advocate training as infrequently as possible to produce strength gains. This can mean one workout per month in some cases.

This isn’t a bad thing, but let us make an important distinction:

Doing the least possible to experience strength gains
vs.
Doing the least necessary to maximize size gain

The latter is the objective of Occam’s Protocol.
Tissue growth is our highest priority, even though there will be significant strength gains. Doubling and tripling of your lifts in one to two months, as Neil and other trainees have experienced, is not uncommon.

To support a high rate of fat-free growth, we need to overfeed and di-
rect those excess calories to muscle. This is accomplished by stimulating protein synthesis and increasing the insulin sensitivity of muscle tissue itself through activation (translocation) of the GLUT-4 glucose transporters. Recall from “Damage Control” that the latter is best done through exercise, as we don’t want to overdose on insulin.

If you work out just once a month, this might represent one whole-body GLUT-4 window per month for effective overfeeding. This is unacceptable for us, and we’ll aim for one workout per week at a minimum.

WHAT TO DO IF YOUR GAINS SLOW WITH ONE SESSION PER WEEK?

Rather than doing one full-body workout every 10–14 days, for example, test a split routine to facilitate strength gains while increasing your GLUT-4 windows to at least two per week.

This is how you get very big, very fast without getting very fat.

I’ve successfully used the following three-workout split, most notably in 1997:

Session 1: Pushing exercises
Session 2: Pulling exercises
Session 3: Leg exercises

If you are unconditioned or deconditioned (atrophied), take one day between workouts (e.g., pushing, one day off, pulling, one day off, legs, one day off, ad nauseam) for the first two weeks, two days between workouts for the next three weeks, then move to three days between workouts.

The exercises I used, all performed at 5/5, were:

Push:
• Incline bench press
• Dips (add weight when possible)
• Shoulder-width grip shoulder press (never behind the neck)

Pull
• Pullover
• Bent row
• Close-grip supinated (palms facing you) pull-downs
• Slow shrugs with dumbbells (pause for two seconds at the top)
Legs

- Leg press with feet shoulder width (do higher reps on this; at least 120 seconds before failure)
- Adduction machine (bringing the legs together as if using the Thighmaster)
- Hamstring curl
- Leg extension
- Seated calf raises

In retrospect, I believe this volume of exercises to be excessive for most trainees. Using the first two exercises listed for each workout will produce at least 80% of the desired gains with less risk of plateauing.
“It’s just water weight.”

This dismissive comment is common in the lifting and diet worlds.

Now, carrying so much subcutaneous water that your head looks like a Cabbage Patch Kid is bad. However, purposefully putting more fluid and substrate in specific parts of muscle tissue can be incredibly useful. There are two different types of muscular growth that you can use to your advantage with a bit of inside knowledge.

The names of both sound complicated—myofibrillar and sarcoplasmic—but the difference is really very simple.

Let’s start with a basic primer on muscle fibers.

Every muscle fiber has two main parts: myofibrils, which are cylinder-shaped filaments that contract to create movement, and the sarcoplasm, which is the fluid surrounding the myofibrils that contains glycogen stores and mitochondria to provide energy (ATP).

Myofibrillar hypertrophy can be thought of as growth for maximal strength. The myofibrils in the muscle fiber increase in number, adding primarily strength and some size to the muscle. This kind of muscle growth is achieved by high tension—doing one to five reps at 80–90% of your one-repetition maximum, for example. The strength output is limited to brief intervals, as you’re developing fast-fatiguing type 2 muscle fibers.

SarcoLasmic hypertrophy can be thought of as growth for maximal size or anaerobic fatigue resistance. The volume of fluid in the sarcoplasm increases instead of the myofibrils, adding primarily size and some strength to the muscle. This kind of muscle growth is achieved through metabolic adaptations—doing 8–12 reps to failure at a submaximal 60–80% of your one-repetition maximum, for example.

But which is better? Is sarcoplasmic hypertrophy useless, nothing more than water?

First things first: the claim that it’s “nothing more than water” doesn’t square with the

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**UNDERSTANDING THE SARCOPLASM: ISN’T IT JUST WATER?**

Myofibrils Sarcoplasm

Muscle Fiber Sarcoplasmic Hypertrophy Myofibrillar Hypertrophy

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20. Also called sarcomeric hypertrophy.
science. Dehydration of even 4% bodyweight can decrease muscular endurance 15–17%. More relevant to tissue growth, researchers such as Dr. Clyde Wilson of UCSF School of Medicine believe that water effectively acts as a transcription factor—much like testosterone or growth hormone—for protein production. There is evidence that growth factors are triggered by cell volume regulating elements (CVRE) that, in effect, tell DNA to replicate when intracellular hydration is optimal. If that weren’t enough, as Dr. Doug McGuff has pointed out, when the water-containing interior of the cell is maximally hydrated, receptors for hormones, “sitting as they do on the surface of the cell membrane, become maximally convexed into the environment where the hormones are circulating, thus allowing for maximal hormonal interaction with the receptor sites.”

Just water. Bah.

Second: the sarcoplasmic volume increase is not just a fluid (water) increase. It also corresponds to more mitochondria, more glycogen, and larger stores of both adenosine triphosphate (ATP, the energy currency of cells) and phosphocreatine (PC, a high-energy reserve). Not to mention increased capillarization from such training, which results in more efficient nutrient delivery through additional blood vessels.

This is why Neil gained an average of 48.63% strength on his exercises (100% on one) in four weeks using what would be considered a sarcoplasmic lifting protocol. These strength increases are impressive by any measure, myofibrillar or otherwise.

Will Occam’s Protocol give you more strength than a protocol specifically designed for maximal strength? No, that’s what the chapter “Effortless Superhuman” is for. But can Occam’s make you much, much stronger and allow you to surpass most people in the gym? Yes.

The conclusion: to decide on the best program for you, you need to know your objective.

As usual, the more specific your goal and the more precise your training, the better your results will be.