Addendum

The following issues stem from various questions and comments directed towards me, which I have not had time to integrate into my compendium.

Weightlifting stunts growth?

Weightlifting has proven to be safe for people of all ages and will not stunt your growth– I started when I was 13ish. The one caveat is that you have to follow perfect form. If, for example, you are bent over in half and learning forward while squatting (very poor form), there is a chance you could fuse growth plates together, among other problems. If you are uncertain about your form, ask a trainer at your gym for assistance.

Exercising releases testosterone and growth hormone?

In my compendium, I made reference to heavy core compound movements (e.g., squat, deadlift, etc..) and Olympic-style movements increasing testosterone and gH (growth hormone) production. While these movements do cause this to occur, the effect is minimal and only lasts for a minute period of time. I mention this because some people are under the impression that your levels increase 8 to 10 fold after doing these movements and that the effect lasts for hours on end – this simply is not the case.

So why did I mention this point in my compendium – simple – who does not want to try and harness every ounce of testosterone production, no matter how miniscule the quantity.

If you want serious testosterone release, sleep. This is when the largest quantities are produced (and hence why your testosterone levels are the highest in the morning after you wake up). If you want gH release, do some endurance training.

Machines versus free weights?

In terms of injury prevention and growth, both machines and free weights offer similar facets. However, the real difference between the two comes from the fact that free weight exercises serve to teach the body how to cope with heavy load bearing exercises, in addition to CNS (central nervous system) force proprioceptions. The underlying concept is rather simple – imagine riding a bike. Once you learn, you never forget. This is the concept behind CNS force proprioceptions – once your body learns to handle the weight, it never forgets.

Obviously, this applies to machines as well as free weights – if it did not, you would never be able to increase your weight on exercises such as cable rows and lat pulldowns! The main difference, however, comes from the fact that the concept is more strongly enforced with free weights. Your body knows the difference between a free

weight, a smith machine, and a cable machine exercise, and gives preference to free weight exercises before machines.

Another aspect one has to keep in mind is neuro-physiological differences. This equates to the fact that movements that look alike do not necessarily recruit muscle fibers in a similar manner. As an example, examine a lat pulldown and a regular pullup. The difference between these two lifts is open versus close chained – in one of them you are bringing the weight to you, in the other you are moving your body toward the 'weight' (or in this case, bar).

At this point, it turns into a very complicated discussion, well beyond the scope of this addendum. What you should take away from this discussion is that when given a choice between a free weight exercise and a cable/smith machine (e.g., a bent over barbell row versus a cable row or smith deadlift), try to select the free weight. Machines do have their places; however, try to stick with free weight (as well as bodyweight) exercises for the majority of your routine.

Are pushups useless?

As mentioned above, the body knows the difference between a free weight and a smith machine, and acts accordingly. This same concept applies to bodyweight and free weight exercises – your body will 'prefer' and respond better to bodyweight exercises than free weights (e.g., dips – a great bodyweight exercise that usually blows away other movements such as pressing a bar).

The one caveat to this, however, is that you need progressive resistance – with dips, once you can do a certain number of reps, you grab a dip belt and add weight. Unfortunately, adding weight to pushups is a very tricky task because, after one or two weight plates, it becomes very dangerous. For this reason, pushups usually fall behind bench pressing very quickly. If, however, you are able to find a way to **safely** add weight to the pushup, then you have an exercise that can easily outdistance bench pressing in the long run.

Making an exercise harder makes it better?

For some reason, people seem to feel that making an exercise harder will produce better gains. For example, some like to perform the bench press with their feet up on the bench, or even wiggling in the air, instead of driving them into the ground. Since it is harder, does that mean the pecs (and other muscle groups) are getting more work? – NO!

All that person has done is eliminate their base of power. There is no benefit to this, in terms of growth or strength progression. Here is another way to view the issue – every time you perform a barbell curl, I will kick you in the testicles. Now that the movement has been made much(!) harder, is it any better than before?

What about TUT?

TUT is the abbreviated form of Time Under Tension. In simple terms, this relates to the amount of time spent on the positive and negative portion of a lift. For bodybuilding purposes (and strength training), there is no benefit to using a slow positive – an explosive positive is always desired (in terms of bench pressing, the positive part of the motion is when you drive the bar off your chest…….in squatting, it is when you explode upwards).

In terms of the negative portion of the lift, there is some play-room. If you are a beginner, I recommend that you use a normal speed negative – that is, the speed that happens naturally without you thinking about it. As a beginner, it is important to drive the concept of proper form in and not worry about fancy training techniques. As you become more experienced, you can start to play around with the negative speed, slowing it down to a (rough) 4-6 second count. Anything past 6 seconds only makes the movement harder and does not provide any additional benefit. In terms of strength training, slowing down the negative does not really provide much of a benefit; however, since most of the cellular damage occurs to muscles during the negative portion of the lift, incorporating a slow negative can help kick-start new growth.

If you have never experimented with TUT before, expect a significant drop in weight used – the first time I played around with it, I found that I was using ~60% of my estimated 1RM, for approximately 5-7reps.

What type of routine do you prefer?

In the last decade I have been all over the map in terms of training styles, and after much experimentation, I found that the best routines usually come from training 3x/week. There is nothing wrong with training more. I found, at least for me, 3x/week to be perfect.

As you get older and have more experience under your belt, rest and recovery become extremely important issues – although you may want to train more often, your body just cannot and needs time to recover.

Never forget that rest and recovery are two of the most important concepts in lifting (although they tend to be under-rated by most).

I am still having trouble with proper squatting form?

If you can sit on a toilet and, you can squat properly. The motion is the same as when you go to the bathroom, the only difference is that now you have a heavy weight across your back, which causes physiological issues, which, in turn, cause form degradation.

One of the best ways to learn how to squat properly is to use box squatting (if you are unfamiliar with this concept, do an internet search for 'box squatting') – in a nut shell,

you have a box that is slightly below parallel and you sit back onto it……this teaches you how to squat back and down, instead of down and forward as most do (which is very hard on your knees).

Box squatting is relatively safe with good form – the people who usually suffer injuries from it are those who come crashing down onto the box (i.e., using too much weight and an uncontrolled descent).

Very few people know how to squat properly, so if you have never done box squatting before, start very light (e.g., sub-100pds). The reason – properly formed squatting places a lot of stress on your hips, hams, and glutes….most of the time these muscles have not been trained adequately for proper formed squatting, so when you start you have to take a huge weight hit to train them.

Pullovers are so…..confusing?

Pullovers are a confusing movement because so many muscle groups are involved – serratus, pecs, triceps, lats, among others. I have found that they are best suited towards lats – they are not crucial to building a good back, but they can be used when you are looking for a change of exercises because you are bored with your current routine.

Barbell pullovers are relatively safe; however, you should avoid dumbbell pullovers as they can cause shoulder impingement.

Bench dips are just as good as parallel bar dips, right?

Parallel bar dips are superior in every way to bench dips, especially when it comes to adding weight – there are only so many plates you can stack on your lap with bench dips before you start creating a safety risk. With parallel bar dips, you simply use a dip belt.

However, the most important reasons, in my opinion, to avoid bench dips is because the motion causes shoulder impingement. This will be a chronic and cumulative problem – most people will not notice the damage, nor the gradual build-up of damage, until it becomes too late and they require surgery.

Shoulder impingement scares me……what movements should I avoid?

The following motions are exercises that you should **not** do if you want to preserve your shoulder health:

Bench press with super wide grip (slightly past shoulder width is fine, but not too wide). A wide grip will work the pecs more, but it is not worth the additional cost of injury.

Bench press with elbows sticking out. Keeping elbows pointed in does take stress of the pecs and places it on the tricep, but it is worth it to keep your shoulders healthy
Arnold press – shifting heavy weight through those multiple planes just is not safe.

Upright rows – does not allow sufficient space for the greater tubercle to clear the acromium. This can be avoided if you stop the motion at (or below) nipple level.

Laterals, if your pinky is above your thumb at the end of the motion (the 'pouring water' motion most people make reference to when performing this movement)

Bench dips

Dumbbell pullovers. Barbell pullovers and machine based pullovers such as the Nautilus design are usually okay for most.

Reverse-grip pressing motions?

Reverse-grip pressing motions are generally reserved for advanced lifters because of the amount of effort it requires to control the bar. If you ever experiment with these motions, always make certain that you are doing them in the power rack (in case the bar slips from your grip, and believe me, it will the first few times), and make certain your wrists are not bending backwards (unless you like wrist injuries).

The point of reverse-grip is to place more stress on the triceps and shoulders. Due to the angle (horizontal) that pec fibers run, reverse-grip places **far** less stress on the pecs than a normal grip does.

Unusual exercises?

There are a lot of different exercises out there. In my compendium I tried to cover the proverbial "meat" of lifting. However, if you want to research some not-so-common lifts that are fairly effective, feel free to do an internet search on any of the following topics:

Zercher squats – Excellent for quads, but it does take some time to get used to the bar sitting in the groove of your elbow.

Lat shrugs – One of the few lat movements that actually has no arm involvement. As a result, it is a very unusual movement to learn, because, naturally, you want to use your arms to aid you.

Bent over bb rows done in a power rack – Doing them in the power rack prevents you from using leg drive to start the movement. Set the safety pins at the bottom of your ROM (range of motion).

Rack pulls – Partials deadlifts done starting from about knee level. This removes any leg movement and places almost all of the stress on your back. The advantage of these to deadlifts is that you can move more weight if the top portion of the deadlift is your strongest point (as it is with most; however, if you are strong off the ground and suffer towards the top, then you may actually find yourself using less weight initially).

Scott pressing – A traditional dumbbell shoulder press, except you hold the dumbbells at the ends instead of in the middle. As a result, when you press, the dumbbells will be at an angle, which will target the shoulders harder (although you will find yourself using less weight than on your regular shoulder press).

Rack lockouts – Usually the first 4-5'' of the benching range of motion. You set the safety pins in the power rack 4-5'' below lockout, and then press the bar from the pins to lockout. Very effective for working the top portion of your bench press (if you are weak at that point), and for adding tricep mass.

Floor pressing – Bench press (either bb or db) done lying on the floor. The restricted motion places less stress on the chest, and more on the triceps. Be certain to do floor pressing in the power rack so if you have to dump the bar, you can (as opposed to being trapped on the floor with it, not able to move).

Seated half pressing – Another tricep movement – put a bench in the power rack and set the safety pins to a hair above the top of your head. Take a shoulder width grip, keep a straight back, and start pressing the barbell. This is very good for the lateral tricep head. One could almost think of this as a partial seated military press.