NOTES ON THE
BENCH
PRESS

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**BENCH PRESS**

1. **Fix Your Bar Path for a Bigger Bench**


**Key points:**

Drive the bar back toward your face as you press the bar off your chest instead of initiating the press by driving the bar straight up. This makes the lift MUCH more efficient.

Most people can bench press more weight pretty quickly simply by correcting their bar path, and at the elite levels, adopting a more efficient bar path is the primary way lifters keep improving their numbers.

That’s about it. The rest of the article is mainly graphs and pictures to illustrate this point in case it doesn’t click for you right away.

Let’s take a trip back in time to 1984.

1984 was a great year, Thomas McLaughlin published “**Bench Press More Now: Breakthroughs in Biomechanics and Training Methods**” (It was based on his PhD dissertation and was BEFORE bench vests, in other words RAW bench press).

To this day, McLaughlin’s book is probably the best resource for the bench press in existence. It’s not without its faults or omissions (it doesn’t even touch on leg drive, for example), and it’s probably a hair too technical for some readers, but I haven’t come across another resource that approaches its combined level of technical analysis and applicability.

It’s a shame that more lifters don’t know of the work that came out of McLaughlin’s lab at Auburn. From the late ‘70s through the ‘80s, they published a lot of very good, very applicable studies on powerlifting. McLaughlin and several of his research partners were nationally ranked powerlifters, and they gathered a lot of their data from the best source imaginable if you want to understand elite powerlifting performance: high-level powerlifting meets. In several of their studies, they wouldn’t include a lifter’s data unless the lifter was ranked in the top 10 in his weight class. In one particularly amusing example from a squat study, their “low skill” group included lifters who squatted 620 at 242 and 550 at 193 (their “high skill” group included only national champions).

At its core, the book is based on several studies that compared the bench press technique of world-class benchers to the bench press technique of “novice” benchers (their novices still benched 224 at 170, on average, and would be considered “well-trained” by the standards of a lot of studies) with maximal loads. Any old-looking picture in this article comes from McLaughlin’s books, which you can read spread across 16 parts on everyone’s favourite old-time strength blog (part 1 is here).

It has a lot of interesting insights, but there’s just one that I want to focus on in this article: bar path.

He found that both the novice benchers and the elite benchers lowered the bar using a similar pattern: roughly a straight line, arcing out slightly. However, their bar paths during the press itself differed drastically. The novice lifters pressed almost straight up initially, with the bar then moving up and back more toward the top half of the lift. The elite lifters followed the opposite pattern – they initially pressed the bar up and back at the start of the lift, and finished the lift by pressing the bar almost straight up toward the top half of the lift.
**Bench Press Bar Path**

The picture on the left shows the bar path of a novice benching 245lbs. In the middle is Mike Bridges benching 463lbs. On the right is Kaz benching 605lbs.

When he looked at elite lifters who’d improved their performance over time (since he collected data at all the major meets over a 4-year period), and compared them to elite lifters whose performance had stalled, he saw the same trend. Elite lifters who hadn’t improved their bench numbers used roughly the same bar path every year, while elite lifters whose bench numbers continued to rise pushed the bar back toward their face to start the press more and more as their lifts improved.

**Why is this?**

The simplest explanation: This technique decreases total flexion demands at the shoulder with any given grip width.

To complete a bench press, you have to perform three basic movements: shoulder flexion (like a front delt raise), shoulder horizontal flexion (like a pec fly), and elbow extension (with the triceps).

This article isn’t going to address elbow extension demands (how hard a lift is for your triceps) because this article seeks to isolate the effects of bar path, which doesn’t affect elbow extension demands too terribly much; elbow extension demands are primarily a function of grip width and whether your elbows stay under the bar or not.

So we’re left with two functions that are impacted by bar path: shoulder flexion, and shoulder horizontal flexion.

Luckily, we can simplify things even further, because differentiating between the two doesn’t matter all that much for our purposes here. The main muscles carrying out both roles are your pecs and your front delts. Both of them can flex the shoulder, and both of them can horizontally flex the shoulder. The front delts are a bit better at flexion, and the pecs are a bit better at horizontal flexion, but they both contribute, regardless of the mix of flexion and horizontal flexion demands. So, rather than separate out flexion and horizontal flexion demands, I’ll just lump both of them together and refer to the sum of flexion and horizontal flexion demands as “total flexion demands.”

So, what determines total flexion demands?

As with anything else: joint moments. Load x moment arm.

If you shorten the moment arm, total flexion demands decrease, so you can lift a greater load, or you can lift a given load with more ease. So, what determines the length of the moment arm?

Imagine a plane passing through your shoulder joint that’s parallel to the floor. Since the barbell’s force is pressing straight down into your hand, draw a line straight down from your hand to the plane. Then draw a straight line between that intersection point and your shoulder. That’s your moment arm.

**Bench-press**

Don’t worry! That sounds convoluted, but it’s actually pretty simple. There are two things that change the length of that moment arm:
a) Grip width

The distance from the bar to your shoulder in the frontal plane (if you’re looking at it from the side, then this would be the horizontal distance between the bar and your shoulder).

A wider grip increases the length of this moment arm, as does increased distance from the bar to your shoulder in the frontal plane. Grip width determines the horizontal flexion aspect of total flexion demands, and frontal-plane distance from the bar to the shoulder determines the flexion aspect of total flexion demands.

So, assuming any given grip width and any given load, the only thing that really impacts total shoulder flexion demands is the position of the bar in relation to the shoulder. Total flexion demands at the shoulder decrease the closer the bar is to being directly over the shoulder, and total flexion demands at the shoulder increase the further the bar is from the shoulder in the frontal plane.

b) Bar positioning moment arm

Grip width doesn’t change (dark blue), but as the bar gets further in front of the shoulder (light blue), the moment arm (black) gets longer and longer, meaning the lift gets harder and harder.

I think we all realize this when we’re holding the bar at lockout. It’s a lot easier to hold the bar directly over your shoulders than it is to hold the bar over your sternum or your upper stomach, for example. The exact same principle applies at every other point in the lift.

Of course, if you wanted to take this principle to its logical extreme, you’d assume that the guillotine press must inherently be the most efficient way to bench press. Keep the bar directly over your shoulders the whole time, and you’re golden, right?

Touching the bar lower on your chest obviously shortens the range of motion, assuming you get a decent arch. Not only does this decrease the effort required to complete each rep with a given load, it also keeps you from having to go through extreme ranges of motion that will inherently be weaker. Regardless of external moments, maximal internal moments – the moments your muscles produce at each joint to move your limbs and extend the bar – drop off rapidly as range of motion increases past a certain point.

Touching low can be overdone too, of course. If you touch too low, total flexion demands continue increasing, negating any advantage you may have gotten by limiting range of motion. As with most things, there’s a happy middle. Anywhere from just below the nipples to about an inch below the xiphoid process of your sternum works best for most people.

Assuming you touch the bar (reasonably) low on your chest/high on your stomach, the next challenge is to actually press the weight back up.

This is where McLaughlin’s research comes into play.

The novice lifters initiated the press by shoving the bar essentially straight up off their chest, with the bar path angled back only slightly. Since the bar didn’t move back toward their shoulders very much, total flexion demands at the shoulders were still very high (relative to the load they were lifting) when the bar reached the sticking point of the lift a few inches off the chest.
The elite lifters, on the other hand, initiated the press by shoving the bar up off their chests and back toward their shoulders. Since the bar did move back toward their shoulders, total flexion demands at the shoulders decreased as the bar approached the sticking point.

**Bar path 2**

Average bar paths for novice lifters (dashed line) vs. elite lifters (solid line). Especially pay attention to the short segment between points 4 and 6 on each line.

Compare the sticking points (the point where the lifters were applying the smallest amount of force to the bar) of the novice lifters to those of the elite lifters:

Sticking point novice elite.

One thing worth noting about this picture: The “heavy experts” dot is a bit further from the shoulder than it “should” be if this was scaled for body size. The novices and the light experts were roughly the same height and had torsos roughly the same length, but the heavy experts were taller and had longer torsos, so 5 inches in front of their shoulders would be closer to ~4 inches in front of the shoulders of the other two groups, so for an even more accurate representation, that dot should be moved back toward the head a bit.

Regardless, both groups of experts had much less horizontal distance between the bar and their shoulders than did the novice group. This helps minimize the total shoulder flexion demands, increasing how much force they could apply to the bar.

So, how large of a payoff can you expect from that technique change? A pretty big one.

McLaughlin found that the elite benchers could bench about 10-12% less than the maximum force observed in the movement, and about 4-5% more than the minimum force observed in the movement. The novices, on the other hand, could bench about 35% less than the maximum force observed in the movement, and about 7-8% more than the minimum force observed in the movement.

Most people can bench press more weight pretty quickly simply by correcting their bar path.

Max and Min Bench Press force Novice vs. Elite

*Remember, you don’t miss a lift because you are too weak through the full range of motion. You miss a lift because you were too weak through the very weakest part of the lift.* For all three groups, their bench maxes were slightly above their minimum force output, which is what you’d expect. It doesn’t matter if you have “extra” maximum force at some stronger point in the lift – your minimum force at the weakest point in the lift is what will stop you from completing a rep.

In both groups of elite lifters, their minimum force output was only about 13-14% lower than their maximum force output, indicating a very smooth and efficient lift, whereas for the novice lifters, their minimum force output was about 32-33% lower than their maximum force output, indicating a very inefficient lift.

That inefficiency primarily came from their bar path. Their force production dropped off so rapidly because when they reached the position of minimum force – the sticking point – they were in a horrible position to exert force on the bar because the total flexion demands at the shoulder were unnecessarily high. If we took a myopic view of this information, we’d assume that simply changing the bar path would instantly increase their bench press from 224 to about 270 (about 10-12% less than their maximum force output, bringing them in line with the elite lifters) instantly.
Obviously that never happens in the real world...at least not instantaneously.

As previously mentioned, one thing that McLaughlin noted in his research was that the elite lifters’ maximum force output didn’t change much from year to year, but some continued adding weight to their bench press, while some plateaued.

**The ones who kept benching more and more in spite of minimal changes in maximum force output were the ones who altered their technique over time, pushing the bar back toward their shoulders further and sooner.** The people who didn’t keep adding weight to their bench press were the ones who didn’t make this technique adjustment.

Here’s the type of change this adjustment can make:

**Mike Bridges Bench Improvement**

Mike Bridges added 60lbs to his bench in a year (386 to 446) by altering his bar path to dramatically increase the minimum force he could exert on the bar. Force = mass x acceleration, and the minimum acceleration (labelled “7” on both graphs, coinciding with minimum force) increased dramatically between 1978 and 1979, allowing him to bench more even as maximum acceleration decreased (maximum force still increased a bit though, because there was more weight on the bar). This is the hallmark of more efficient technique: minimum force during the movement approaching maximum force.

However, it’s worth reiterating that it took Bridges an entire year to transform his technique and take his elite-level bench to world-record levels. There are two main reasons altering your bar path won’t increase your bench by nearly that much instantly:

a) **It’ll take some practice** for the new bar path to feel natural, and for you to build skill and automaticity with a slightly altered motor pattern.

b) **Your current technique may be hiding weaknesses** – specifically muscles that are currently weak through a particular range of motion.

However, neither of those things take too long to address, at least on the time scale of an entire training career. These are both areas where you can see meaningful progress in a matter of weeks or months, not a matter of years (unlike the glacial pace of hypertrophy at the elite levels).

Motor learning is a (relatively) fast process, and developing strength through this slightly different range of motion shouldn’t take too long, because the changes in joint angles and muscular demands aren’t particularly big.

**This bar path makes the midrange of the lift a lot easier on the anterior deltoids, but slightly harder on the pecs.** Splitting the total flexion demands apart again, shoulder flexion demands are way lower (which is why it’s easier on the anterior deltoids) and horizontal flexion demands are unchanged. However, when you reposition the bar over the shoulders, the anterior deltoids can’t help out quite as much anymore, so the movement gets a little more challenging for your pecs.

Simply correcting your bar path and benching with this technique should naturally strengthen the pecs more.

Here’s how it looks in practice:

**Bench press bar path**

Top: good. Bottom: bad.
One final question I’m sure someone will ask: Isn’t the easiest path between two points a straight line?

**In this case, no.** Remember, gravity is pulling the bar straight down. Total work done on the bar is simply defined by the vertical distance you have to move it, not total distance. If you’re touching the bar to the same place on your chest/stomach, you’re using the same grip width, and your arms aren’t magically getting longer or shorter, total work done on the bar is identical regardless of bar path.

This is a question about how to do that work the most efficiently.

**Bar Path Work**

Total work done on the bar is the same regardless of bar path, but driving back and then up is simply the most efficient way to go about producing that work.

So, to wrap things up, here’s what you should do:

a) Take video of your bench press from the side.
b) Use an app like Iron Path to see your bar path.
c) If your bar path resembles the elite lifters in McLaughlin’s studies, great!
d) Otherwise, work on purposefully driving the bar back toward your shoulders as you press it off your chest. Consistently take video to observe the changes. It may feel a little weird at first, but you’ll get the hang of it in no time.

Keep grinding away at it, and you should start hitting PRs within a couple of months (likely sooner).
2. **Arch Bench Press**

http://www.chrislift.com/archbench.htm

**Power Lifter Bench Press**

Some powerlifters use a very large arch with their toes pulled back under them and bench as low as possible to decrease the distance travelled.

Most people’s concept of bench pressing is to just let the bar come to the chest stop and/or bounce it and just press it up. I assume this style is okay if you have no plans of ever improving a whole lot or ever competing. Bench pressing is divided into four main areas of technique:

- The set-up (which is you the person)
- The lift-off
- The descent of bar
- The ascent of the bar

All areas are important to achieve the maximum amount weight lifted not only in the contest but also in training for the contest.

As in squatting, tight is the key word, and working on the shortest distance the bar travels is what we are looking and striving for.

a) The set-up:

This is a very critical component of the bench press. Most lifters who fail in a big bench or raise the bar or level for injury do so because of a poor set-up. As you lay down on the bench we already assume you are stretched and as limber as you can be. Your feet should be in a position on the floor where they can get sufficient footing and traction. I realize that most meet promoters, it is sad to say, fail more in this aspect of bench press platform preparation than any other area. Slick floors, dirt on good floors make feet slip, and slick floors that allow the bench itself to slide when pushing with the feet can negatively affect your set-up. Work with the judges and meet promoters before the meet to correct this situation. You have experimented and found the best foot position to allow you to push hard with the feet/legs and not have your rear end come off the bench. For shorter people this is almost anywhere. The taller you are the more your feet must be way out in front, way out to the side or way back underneath you—your choice. Wear a shoe with a heel of some type. This type of shoe gives you an angle to push against and increases your leverage to push.

As you lay down on the bench push yourself into an arch. The bigger the arch, the higher the chest, the less distance the bar travels—i.e. bigger numbers. You can work on flexibility exercises to increase your arch. This arch is a biggee and very important—work on it. I push with my hands against the uprights, as they are right there by my shoulders. My feet are under me, and my heels tilted out as far as they can. That feet set-up will lock you into position better. **You should have those shoulders and neck pushing down into the padding of the bench. Your thighs and hams should be wrapped around the bench, and your chin should be tucked into the chest.**

The way you grip the bar is optional in all federations except the IPF and its affiliates, where you must use the thumb around. If you desire other methods do so in other federations. A few (very few) use the reverse grip, but a vast majority uses the power grip or thumbless grip. This grip is much preferred...
if allowed. It takes most all the stress off of the shoulders, elbows and wrists. Thus, the grip alleviates a large percentage of lifters of tendonitis or similar problems. You should, however, use whatever your federation’s rules dictate or allow.

The width of your hands on the bar is crucial. We want the best leverage without compromising our strong points or build. The wider the better is usually true. With the advent of bench press shirts, narrower grips are becoming more common as the shirt helps more with the bottom part of the bench than the top. I really feel, however, that too narrow of a grip is a bad choice for most lifters. It leaves out the chance of injury to weakened muscle groups—i.e. the chest—and leaves out the largest muscle groups that could be involved in the bench press. More is better in this case. If they would continue with the wide grip, until injury or age dictate a closer one, I think they would be much more successful. This grip brings more of the three muscle groups responsible for benching into play than any other grip. Chest, shoulders and triceps should be put to the test, and the maximum gain from each used to get the maximum results.

Squeeze the bar, and pull the elbows in as much as possible. Squeeze the shoulder blades together (or rotate the shoulders down), whichever way you understand it better. The result is the same—it shortens the distance the bar travels to the chest. We are on our way to emulating a decline as much as possible (since we all know one can decline more than you can bench).

b) The lift-off:

Next, the spotter/loader lifts off to you, gingerly and gently, letting go at over the top ab or so. This position should be about the highest part, i.e. shortest distance for the bar to travel. Take a deep breath as the bar is lifted out. I mean a big, deep breath—get that chest in the air AND KEEP THAT BREATH IN AND COMPLETE THE LIFT WITH THAT BREATH! So when you let the bar down, it is the shortest distance for the bar to travel. Did I mention this is the shortest distance for the bar to travel? On some it may be a bit further down the ab (for those of you with only one ab, heh heh heh) /abs.

As the bar is being handed out, emphasize even further the pushing together of the shoulder blades. You should still be squeezing the bar. Push hard against the floor with your feet as you take the bar from the spotter/loader.

c) The descent:

Dr. Tom McLaughlin, PhD, in his book, *Bench Press More Now: Breakthrough in Biomechanics and Training Methods*, he showed that beginners and advanced bench pressers had different rates of descent on the norm. Beginning lifters usually let the bar down to fast, out of control hitting a different spot on the chest each time. Also, they usually have difficulty in max weights of stopping the weight for a pause and having success in pushing it back up. The more advanced lifter had twice the time period in the descent and thus the even heavier weight was in control, more easily stopped and paused. Thus, the ascent was more easily achieved.

As the bar is slowly let down, remember to pull the arms, flexing the lats. Do so as to get the triceps to come on to the lat area. This action will act as a shelf on which to sit. As you start the upward movement the lats will be flexed and act as a launching pad. It should take about 2.5 to 3 seconds till it reaches the chest. It will sit on the highest part of the chest/abs, stopping for a split second pause, then exploding up as you push with everything (as in the squat). Your feet should be driving against the floor, with shoulders and back against the bench, and with your arms against the bar. The bar should go straight up, the shortest distance. (Note the difference of opinion here) Sometimes in the
proper position, it will seem as if you are actually pushing toward the feet. The bar is actually going straight up, not back toward the head, as we taught and were taught for 50 years. Think decline.

You need to make sure in the descent and the ascent the wrists are in a straight position. Do not let them curl or bend back. This action will let the bar go in that direction. It also is hard on the wrists. A good set of wrist wraps will help some in this for support.

The eyes throughout the whole bench should be focused out toward where the bar would start and end, in line of sight. Racking it should be an afterthought. Let the spotters take it from you.

**Remember form, style and technique is everything.**
3. **HOW TO INCREASE YOUR BENCH PRESS**

https://bretcontreras.com/how-to-increase-your-bench-press

By *Bret Contreras* January 23, 2014

"*How much ya bench?*

If you’ve spent any more than a month in the gym, chances are you’ve been asked or have at least heard the phrase “*how much ya bench?*” The bench press is a strength staple and is considered one of the ultimate measures of gym prowess. But despite its popularity, proper technique, and more importantly, how to increase numbers on the bench, seem to be somewhat mystified to the average gym rat. Most guys will get up to around 225 lbs by just going in and benching regularly, and those that get anywhere near 315 lbs are considered freaks at most commercial gyms. But it doesn’t have to be this way! You too can build a big bench if you follow some basic tenets.

In the powerlifting world, we see guys benching 2-3 times their bodyweight or more very regularly. And in the NFL Combine, we see guys out of college repping out 225 lbs for 20-30+ reps. What do these guys do differently? Sure there’s the issue of superior genetics and possible steroid usage, but I think there’s more to it. Good bench pressers tend to know proper set up and technique, which is where most lifters go wrong right off the bat. Don’t get me wrong, I’m not saying that all college football players are stellar benchers in terms of technique; far from it. However, the average gym-goer’s bench press form is absolutely horrific, so just having decent technique automatically confers a big advantage. Furthermore, good benchers tend to be more aware of specialized set and rep schemes, protocols, and programs. Way too many lifters enter the gym with a blind eye and have no real method to their madness; they simply lift as much as they can every time they go into the gym or perform the same load, set, and rep scheme week in and week out.

In this post, I’ll go over everything from proper setup and form to different methodologies for increasing either maximum strength (1RM) or rep records (think NFL Combine), along with who should be using them.

**FORM**

a) **Grip Width**

Grip width is going to be somewhat dependent on personal preference, but for our purposes let’s say somewhat narrower than what you may be used to. The traditional bodybuilding grip width where the arms are flared out to almost 90-degrees will definitely stress the pecs more, but this style won’t be optimal for building strength or sustaining shoulder longevity. Going too narrow can also bring your numbers down by taking the pecs out of the equation, however, the close grip bench press is a great support exercise for the standard bench.
From left to right: too narrow, too wide, just right

What you’re looking for is for the upper arms to be at around a 45-degree angle to the body when at the bottom of the movement, and for the wrists to be directly over the elbows at the bottom of the rep.

Good Pressing Position

b) Shoulder Blades

Scapular position is a commonly overlooked part of the bench press and one of the most challenging aspects for lifters learning the bench to maintain. You want to retract and depress the shoulder blades down into the bench. Think about rowing your shoulder blades back, screwing them into the bench, and keeping them there the entire time. You can do this by picking yourself up using the bar then getting them back and planting down on the bench, or by just working the blades back under you before un-racking the bar. Make sure not to protract the scapulae or shrug the shoulders up during
the movement, most people tend to do this at the top. Also, don’t allow the scaps to anteriorly tilt (shoulders round forward) – keep the chest up and the scaps stuck to the ribcage.

From left to right: good lockout position, poor lockout position with shoulders protracted, and poor lockout position with shoulder shrugged

Keep the shoulder blades back and down and screwed into place, and keep your weight on the upper back throughout the motion. It should be mentioned that some powerlifting organizations are okay with the head coming off the bench, whereas others don’t allow it.

c) Foot Position

During the bench press, the chest is obviously the primary muscle at work (especially with the raw bench press), but the bench press is really a full body lift when it comes down to it. The feet should be planted down firmly and in full contact with the ground. And during the rep you should push your heels into the ground and create tension throughout the entire body, which brings up the next point.
Maintain solid and symmetrical foot position

d) Body Tension

As mentioned, the body should be tense during the entire rep. In fact, many powerlifters believe that the set-up is more uncomfortable than the lift itself. Once the shoulders are planted down, the feet are in solid contact with the floor, and the buttocks is down on the bench, you’re ready for your first rep. After un-racking the bar, take a deep breath, hold the air tight in your core, grip the bar firmly and push your feet into the ground to create body tension, otherwise known as staying tight. You do not want the legs to be squirmy during the movement. Tense the glutes and hold a strong spinal arch.

e) Bar Path

So how does the bar actually travel in space? Well, the most common mistake lifters make is that they come directly down to their chest which will force the elbows into that unwanted flair mentioned earlier. At the bottom of the lift, the bar should be positioned just below the nipple line. On the way up, the bar should travel in a slight arc and end directly above the nipple line at the top. Think of rowing the body to the bar at the bottom of the movement – this will help you hold the arch and lower the bar properly. Pause for a moment on the chest – this makes the movement more challenging but it will build a stronger bench in the long-run. When reversing the movement, think leg drive and think of pushing the body into the bench, away from the bar. This will help you raise the bar properly.

From left to right: proper lowering position and improper “bodybuilding-style” lowering position

GOALS

Your training regimen will be dependent on your individual goals. For example, if limit (maximal) strength is what you’re most interested in improving, then you’re going to have to lift heavy. However, if you’re looking to increase your repetition strength, you’ll need to utilize higher reps with lighter loads.

Maximum Strength (1RM) – Building maximum strength refers to increasing the total poundage someone can lift. There are several ways to go about this but just going into the gym and maxing out every week certainly is not one of them. If you max out every week, you’ll definitely build up some strength, especially if you’re newer to lifting, but after a while you’ll plateau and stagnate. That’s where specialized set and rep schemes come into play. Here are some favorites:
• **Straight Sets** – With straight sets, you’re going to use the same weight and perform the same number of reps, for the prescribed number of sets. I’ve found 3 to 5 sets of 1 to 5 reps to be most effective when using this method. You want to lift heavy enough that you approach failure, but there should usually be a rep or two left in the tank. The most commonly utilized straight sets are 3 sets of 5 reps or 5 sets of 5 reps, but keep in mind that 5 sets of 5 can be quite taxing if you bench press multiple times per week.

• **Ascending Sets** – This method is commonly employed for hypertrophy, but when used with lower rep schemes it can be very effective for increasing strength. I like to use this on weeks where I am trying out a new weight. Since you’re going up in weight on each set, you won’t be as fatigued on the last set when compared to straight sets, which will allow you to go for a personal record (PR) on your last set. This method is similar to straight sets in that the sets and reps stay the same (ex: 3 sets of 5 reps), but the load increases each set.

• **Pause Reps** – Pause reps look like normal reps but are held in the bottom position for 1 to 3 seconds (preferably 3). This pause takes much of the stretch shortening cycle (SSC) out of the equation and forces you to lift the weight without the elasticity of the muscle and stretch reflex helping out. This indeed makes the lift much harder, and while you’ll be handling less weight than you would with touch-and-go reps, it will ultimately build much more strength and allow you to hone your technique.

• **Speed Work** – One of the most common methods of training for increasing maximal strength employed by high level powerlifters is to perform speed work. This is ironic since this form of training does not follow the rule of specificity. Powerlifting is by nature very slow, since maximal force production will occur when mass is very high and acceleration is very low. However, you’re going to use lighter loads and hoist the bar with as much acceleration as possible, staying far away from failure. An example of speed work would be to take 60% of your 1RM and perform 8 sets of 3 repetitions as explosively as possible with around one minute in between sets.

• **Specialty Work** – Specialty work refers to various techniques such as accommodating resistance, which involves using bands, chains, weight releasers, or a sling shot, as well as partials which involves performing top end movements such as board presses, floor presses, and rack presses.

From left to right: band bench, weight-releaser bench, chain bench
Many of these techniques require additional equipment and are beyond the scope of this article, except for the floor press, which may be used to shorten the range of motion, allowing lifters to handle more weight than they can on a standard bench press. The floor press also builds good lockout strength. A floor press is just a bench press performed lying on the floor.

Other Factors to Consider – While the bench press is primarily considered a chest exercise, strengthening some of the secondary muscles involved is crucial to improving bench press performance. The training of these secondary muscles is called support work. Optimal support work will be slightly different for each lifter depending on their strengths and weaknesses. The range of motion where the bar acceleration slows or stops for a particular lifter is known as the sticking point. Strengthening this range of motion can be beneficial. Alternatively, strengthening bottom position strength and lockout strength will benefit the bench press as well. In addition, strengthening the other muscles involved with the bench press will help improve strength, with the primary accessory muscles being the triceps, front delts, and upper back musculature.

How much support work you need will differ depending on strength levels and experience, but for the majority of lifters, two to three exercises performed for 8-12 reps is sufficient. A common mistake for beginners is to go overboard with support work, which impairs recovery ability. You want to stimulate, not annihilate.

- **Triceps Strength** – At the middle range and top of the bench press is where the majority of lifters will struggle; strengthening the triceps will help with this portion known as the lockout. Some triceps training staples for the bench press include rolling dumbbell skull crushers, EZ bar skull crushers, and rope or band press downs.
Front Delt Strength – The front delts are responsible for shoulder flexion, and getting them stronger will help the lifter get the bar off the chest at the bottom of the bench press. The best front delt exercises in my experience are front raises and close grip dumbbell bench
press (also a great triceps exercise).
4. **My View on Bench Press Training for RAW Bench Press**

The descent is extremely important. On your way down the lats must be flared so that, with the triceps and upper back you have created a solid “launching pad” from where you can start your lift-off.

When the bar is on the chest you will receive the signal “PRESS!”

Now the work must start.

The prime movers, to lift the bar from the chest (call it the first third of the movement) will be the pecs.

The load will then be carried over to the front deltoids for the second third of the movement. Here the pec-delt tie-in comes to play.
Once the second third is almost completed, the triceps take over.

As we all know, a chain is as strong as its weakest link. Louie Simmons says: “Train your weakest link and your strongest link will get stronger.”
How can we do this?

- **First Third exercises.**
  
  Almost flat Dumbbell bench presses superset with supported T-bar rowing to build the launching pad.

- **Second Third exercises.**
  
  Floor presses. Do not bounce your triceps on the floor to get the weight up. Press from a stationary position on the floor.
  
  Incline barbell bench press.

- **Final Third exercises.**
  
  Anything triceps. It is very hard to over train triceps and how may triceps injuries are you aware of?

In conclusion, a final and VERY valuable piece of advice that I got from Larry Pacifico in 1982: When your handler is about to hand you the bar, fill your chest/lungs with a huge breath, hold it and complete your lift with this breath. There is this well-known phrase of encouragement: “Big chest” and “Stay tight”. However, 95% of the lifters take the big breath before they receive the bar, but then with this heavy weight above their chests, EXHALE, thereby losing all tightness in the chest. I don’t care how strong or fit you are, you will NEVER expand your chest to its previous dimension with the bar in your hands. Remember, the idea of expanding your chest as big as possible, is to reduce the travelling distance from the start of the lift to touching the chest and commencing with the upward trajectory. By exhaling and trying to re-inflate you are actually INCREASING the travelling distance.

You can learn this “one breath” technique by training up to five (later even eight) reps with one breath. Subconsciously, you are also trying to do the rep(s) faster before running out of breath and then you are approaching the magic Fred Hatfield principle of “compensatory acceleration” — moving the bar faster toward completion.

Remark. Although the squat is not in my purview of discussion, this big breath technique can also be done in the squat. When you exhale after taking the bar from the hooks of the Mono Lift, you lose ALL tightness in your chest and you will not get it back when you try to inhale with the squat weight on your shoulders. Remember, for you the lifter, the weight on your shoulder is always HEAVY and you need POWER to move it, hence the name of the sport, POWERLIFTING.

**How will this work in practise?**

I think most lifters train bench press twice a week – once heavy and once medium or speed work.

I suggest that you carry on with your “normal” heavy bench press session, “Day A”, once a week followed by some heavy triceps work to conclude.

On you other “Day B”, Week 1, you do the dumbbell bench press SS with T-bar rowing and in Week 2, “Day B”, you do floor presses, normally in pyramid fashion.