



## Fit For Sisters

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Columnist

### How to gain muscle and build strength

Many topics in fitness and nutrition are made confusing. Fads come and go. We jump from one workout program to the next. These waves of ideas, protocols, and hair-splitting details spawn an insecurity in people about their exercise regimen. Debating whether or not what they did in the past still has relevance, they jump from one protocol to another.

Weight-training with the goal of muscular strength or muscle gain has been over-complicated in recent years. There are high-repetition/low-weight models, high-weight/low-repetition programs, protocols which use tempo (speed at which the

weight is lifted), rest periods (time between sets), circuits (multiple exercises in a row) and many more details.

It is no wonder that this all creates bewilderment for the common exerciser.

Weight-training, boiled down to principles, couldn't be simpler. Consider the biological principle coined by German anatomist Julius Wolff, stating that the tissue of a healthy animal or human will adapt to the environmental pressure it is placed under. If a person is regularly exposing their musculature to the rigors of heavy lifting. It will respond by adapting the muscle recruitment and fiber size for additional strength.

A recent piece of research published in the *Journal of Applied Physiology* expands on this simple principle. The researchers asked the question whether or not it was more effective to lift a heavy weight fewer times, or a lighter weight many more times. The constant in the experiment was the effort in which the participants trained at. They lifted until they reached muscle failure, which they could not longer produce a lift at the given weight. It is important to mention the subjects all were experienced, and the length of their training was

12 weeks.

What did the results prove? There was very little difference in the degree of muscle gain or strength increases between the groups. A slight advantage to the heavy lifters in bench press increase was the only outlying result. The researchers also looked at blood panels for hormone differences; again no significance was observed.

What can be concluded from the data? First, it appears as if things aren't as complicated or intricate as we fitness professionals want to make people believe. The application of a proper variety of exercises, with the proper technique, will produce results regardless of the minute weight/rep details. When lifting to failure, more of the muscle fibers are activated. This stress and stimulation on the muscle produces strength and muscle gain. A testament to Wolff's law.

That does NOT mean someone with bad form and technique should be training at maximal levels.

A proper weight program will include training all the muscle groups in the body. It might even focus on areas that are weak, building them to match the strengths of other groups to produce

a balanced, stable body. Proper form must also be priority, because negligence of form will greatly increase injury risk as the resistance of the exercise is increased.

The study used trained lifters.

One should start with the basic movements, or perhaps machines to get started. A machine will provide a structured movement, and will not allow the body to get away from this. It's a good thing for working on strength, but doesn't allow stabilizers and core function like free weights. A person who is less experienced should gravitate around a lighter-weight-more-repetition program. The same can be said for seniors and children. A seasoned lifter might decide that lower repetitions and higher weight is the better approach.

No matter the prescription of exercises, the goal is always striving for the benefit one set out for. The study demonstrates that the most important thing one can do is push to the limit of their strength. The body will adapt to the stress placed upon it.

Underneath the surface, weightlifting involves a lot of science. This however, doesn't mean it has to be confusing or complex.

## SPRD hosts 'Kids' Appreciation Day'

The Sisters Park & Recreation District (SPRD) will be holding its first-ever Kids' Appreciation Day, on Saturday July 30, from 10 a.m. to 1 p.m. at Village Green Park in Sisters.

Val Selig, SPRD's head preschool teacher, said, "We thought this would be a great way of getting Sisters families with young children together so that kids and parents could meet each other and our staff. We are going to have a bunch of fun activities and food."

Activities planned include a bounce house, face painting, hula, air-powered rockets, and a sack race. The event will also include a barbecue, popcorn and snow cones.

The activities are all free and for kids 5 and under. The barbecue is open to everyone for \$2, (kids 5 and under eat free). Free popcorn and snow cones will be available to all. Anyone with questions is encouraged to contact the SPRD office at 541-549-2091.

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