



# Stress-Rest Principle

Exercise one day.  
Rest the next day.

Your body needs to rebuild glycogen levels in your muscles and repair small muscle tears that come with exercise.

Don't rest too long between workouts or you will go back to square one and lose the physical benefits of the previous workouts.

***Optimal rest is 24-48 hours*** between exercised muscle groups.



## Progressive Resistance Overload Principle

Gradually increase the load as your body adapts to the new stress.

Your muscles need this to continually stimulate new growth & development, but too much overload (stress on the tissue) can cause damage, such as muscle strains & ligament sprains.

If properly trained, muscles will be fatigued & weak after a workout. During the appropriate rest period, the muscle will rebuild glycogen levels along with the small muscle tears resulting in increased muscle mass and slightly greater strength levels.



# Principle of Specificity

Your body will make specific adaptations in response to the demands placed on it.

When a specific muscle is exercised in a certain way, it will adapt to the stress being placed on it. You will see the effect of the training on that specific muscle. Very little training effect will be seen on the rest of the body.

***SAID Principle***

Specific Adaptation to *Imposed Demand*



# F.I.T.T. Principle

The four (4) major variables to keep in mind when setting up a training program are:

***F**requency* - # of sessions/week

***I**ntensity* - level of exertion

***T**ime* - length of workout

***T**ype* - type of exercise/activity



# Principle of Symmetry

Train for an overall balanced development of the body.

You will achieve greater results and be able to remove waste products from your muscles faster, resulting in an improved recovery time.

Muscles support joints. If the muscles are more developed on one side, the chances of injuring the joint are greatly increased.

Muscles work in pairs to balance our bodies in motion. If there is a strength imbalance, the chance of injuring one of the muscles greatly increases.



# Contraction Control Principle

Perform all movements in a steady, controlled fashion from start to finish.

*Both raising and lowering the load* should take *2-4 seconds* to make sure that the work is being done by the muscle contraction.

No jerking movements. They will put a damaging stress on your connective tissues.

Performing fast repetitions exceeds your muscle's ability to contract & you will start to throw the weight rather than lift it, decreasing the benefits & increasing your risk of injury.



# Ceiling Principle

The more fit you become, the smaller your improvements will be as you approach your potential/genetic limit.

You may *plateau* during training. This can be due to limited adaptability, lack of sleep, outside stress, poor diet and/or not having a training partner. A change in routine, temporary lay off or decrease in intensity may give your body the rest it needs to provide renewed motivation.

A constant routine with no change in intensity will soon lead to staleness/boredom and increases will soon become non-existent.



# Maintenance Principle

Once you have achieved the desired results from your training, you have to keep the same intensity & duration in order to maintain those achieved results.





# Principle of Reversibility

You will completely lose  
the benefits of training in  
 $\frac{1}{3}$  of the time it took  
to gain those benefits.

This starts to take effect two (2) weeks after  
you have stop training and continues until  
the benefits are totally lost.

If you were to stop training, the benefits  
gained in three (3) months of training would  
be lost in approximately one (1) month.



# Overtraining

More is not better.

Overtraining occurs when you don't allow enough rest and recovery time between workouts.

<i>Emotional Signs</i>	<i>Physical Signs</i>
<ol style="list-style-type: none"><li>1. Increase in nervousness or depression</li><li>2. Inability to relax</li><li>3. Desire to skip sessions or quit training</li><li>4. Drop in academic or job performance</li></ol>	<ol style="list-style-type: none"><li>1. Extreme muscle stiffness and soreness the next day</li><li>2. Gradual increase in muscle soreness between training sessions</li><li>3. Unwanted decrease in body weight</li><li>4. Unable to complete training when there is no reason for problems</li><li>5. Sudden gradual increase in resting heart rate</li><li>6. Lowered resistance to colds and flues</li><li>7. Loss of appetite</li><li>8. Swelling of the lymph nodes</li><li>9. Unexplained drop in athletic performance</li></ol>

The best treatment for overtraining is prevention.

# Principles of Training

Name: \_\_\_\_\_

Date: \_\_\_\_\_

<i>Principle</i>	<i>Main Idea</i>	<i>Other Thoughts</i>
Stress-Rest Principle		
Progressive Resistance Overload Principle		
Principle of Specificity		
F.I.T.T. Principle		
Principle of Symmetry		

Contraction Control Principle		
Ceiling Principle		
Maintenance Principle		
Principle of Reversibility		

***Watch Out For:***

Overtraining		
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