

# *Foundational Strength*

Building The Athlete From The Ground Up  
Vern Gambetta

## Goals

Bullet proof the athlete - Eliminate movement deficiencies

“Farmboy Strength” - Compensate for inactive lifestyle

Develop ability to handle bodyweight through full ranges of motion with speed and control

Build structural strength to eliminate any later limitations

Prepare for heavier and more intense loads to follow

Develop tendon strength and dynamic joint stability

Enhance linkage and connections

## Strength Training (Frans Bosch)

Coordination training with appropriate resistance to handle bodyweight, project an implement, more or resist movement of another body, resist gravity and optimize ground reaction forces.

## Movement Constants

Body

Gravity

Ground

## Full Spectrum Strength Training

Multiple Planes

Multiple Joints

Full Range of Motion

Proprioceptively Demanding

Mindful

## Doherty Strength Power Index

$S_{10} S_9 S_8 S_7 S_6 S_5 S_4 S_3 S_2 S_1$

$S$  = Strength

$V_1 V_2 V_3 V_4 V_5 V_6 V_7 V_8 V_9 V_{10}$

$V$  = Velocity

## Principles

Train movements not muscles

Pull

Push

Squat

Rotate

Brace

Body weight before external resistance

Strength before strength endurance and power before power endurance

## Basic Concepts of Foundational Strength

“Let the volume do the work”

Training accumulates

Session to Session

Month to Month

Week to Week

Year to Year

Volume is achieved through more sets, not necessarily through more reps

## Foundation Strength Training Rules

Get the Reps – No failure!

Handle the load - Load is determined as % of Bodyweight

Up to 30 % of BW for males & 25% of BW for females. After those thresholds are reached progress to normal loading and speed guidelines

Handle the rest (Active Rest)

Handle the tempo (Intra set and inter set)

Lower Body - 1 reps/sec up to a resistance threshold

Upper Body 1 – 2 reps/ sec up to a resistance threshold

Full range of motion @ prescribed speed with control

Progress to multiple planes of motion

Sagittal

Frontal

Transverse

Vary the limb involvement

Bilateral      Unilateral      Reciprocal

Vary the muscle action after first time through program

Isometric      Concentric      Eccentric

Achieve mastery before progressing to next step

Compatible Components (How it fits with other training components)

Starts and Acceleration

Basic Technique & Skill Development

Plyo's - In-place & Short Response

Extensive Tempo Endurance

Mobility

The Workout

Get it right the first time

Expect Success - Teach routine – Good Habits

“Total Involvement” - Rest is “active”

Everything MUST be in pursuit of the goal of that workout and the program overall

Focus on “Need to do” exercises, eliminate the nice to do

Program Planning & Design

A sound well-developed plan allows you to know where you are at all times

Six week block or two six weeks blocks depending on:

Training age      Level of development

**2012 Gambetta Sports Training Systems, Inc.**

**[www.gambetta.com](http://www.gambetta.com)**

Gender

Sport

Recycle “Foundation Strength” during the training year as needed

Progression from year to year throughout a career

No need to start at step one each subsequent training year

#### Assessment

Testing = Training and Training = Testing

Landmark Workouts

Leg Circuit Test

Dumbbell Complex Challenge

#### Sample Program

##### **Introductory Phase** (January 2 to January 13)

Theme: Get it right the first time!

Establish Routine

Teach Technique & Program Structure

Establish Concept of Tempo in Training

##### **Foundation I Phase** (January 17 to February 3)

Theme: Get Strong - Handle Your Bodyweight

Stress Routine and Organization

Teach Technique

Emphasize Tempo

Build Foundational Strength Base

Get the Reps!

Develop Work Capacity – Ability to handle a workload

##### **Foundation II Phase** (February 6 to March 9)

Theme: Get Stronger - Handle Your Bodyweight Plus

Routine and Organization

Refine Technique

Tempo

Raise Intensity & Volume of Foundational Strength

Get the Reps!

**2012 Gambetta Sports Training Systems, Inc.**

[www.gambetta.com](http://www.gambetta.com)

Continue to develop ability to handle a workload

Foundation II Week One - Monday (February 6, 2012)

Exercise	Sets	Reps	Comments
Single Leg Squat	3	6	<i>Jump Rope – 30 Jumps Between</i>
DB Jump Shrug	3	6	<i>Jump Squat – 10 Jumps Between</i>
DB Complex	4	6	
DB Row (One Arm)	5	6	
BW Squat + Overhead	5	20	<i>2 x 6 Overhead with stick</i>
Lunge	5	20	<i>10 Reps Each Leg</i>
Step-up (Low Box)	5	20	<i>10 Reps Each Leg</i>

Tuesday (February 7, 2012)

Exercise	Sets	Reps	Comments
Push-up	5	12	<i>3 sets regular, 2 Sets Plyo</i>
DB Bench	4	6	
Incline Pull-up	5	10	<i>3 Regular, 3 Reverse Grip</i>
Pullover	3	6	
Ram Builder	3	3	

Wednesday (February 8, 2012)

Exercise	Sets	Reps	Comments
Single Leg Squat	3	6	<i>Jump Rope – 30 Jumps Between</i>
DB Complex	4	6	
Trap Bar Dead Lift + Shrug	3	6	
Step-up (High Box)	3	10	<i>10 Reps Each Leg</i>

Thursday (February 9, 2012)

Exercise	Sets	Reps	Comments
Push-up	5	12	<i>3 sets regular, 2 Sets Plyo</i>
DB Bench	4	6	
Incline Pull-up	5	10	<i>3 Regular, 3 Reverse Grip</i>
Pullover	3	6	
Ram builder	3	3	

Friday (February 10, 2012)

Exercise	Sets	Reps	Comments
Single Leg Squat	3	6	<i>Jump Rope – 30 Jumps Between</i>
DB Jump Shrug	3	6	<i>Jump Squat – 10 Jumps Between</i>
DB Complex	4	6	
BW Squat + Overhead	5	20	<i>2 x 6 Overhead with stick</i>

Lunge	5	20	10 Reps Each Leg
Step-up (Low Box)	5	20	10 Reps Each Leg

Foundation II Week Two - Monday (February 13, 2012)

Exercise	Sets	Reps	Comments
Single Leg Squat	3	6	Jump Rope – 30 Jumps Between
DB Jump Shrug	3	6	Jump Squat – 10 Jumps Between
DB Complex	5	6	
DB Row (One Arm)	5	6	
BW Squat + Overhead	5	20	2 x 6 Overhead with stick
Lunge	5	20	10 Reps Each Leg
Step-up (Low Box)	5	20	10 Reps Each Leg

Tuesday (February 14, 2012)

Exercise	Sets	Reps	Comments
Push-up	5	12	3 sets regular, 2 Sets Plyo
DB Bench	5	6	
Incline Pull-up	5	10	3 Regular, 3 Reverse Grip
Pullover	3	6	
Ram Builder	4	3	

Wednesday (February 15, 2012)

Exercise	Sets	Reps	Comments
Single Leg Squat	3	6	Jump Rope – 30 Jumps Between
DB Complex	5	6	
Trap Bar Dead Lift + Shrug	3	6	
Step-up (High Box)	3	10	10 Reps Each Leg

Thursday (February 16, 2012)

Exercise	Sets	Reps	Comments
Push-up	5	12	3 sets regular, 2 Sets Plyo
DB Bench	5	6	
Incline Pull-up	5	10	3 Regular, 3 Reverse Grip
Pullover	3	6	
Ram Builder	4	3	

Friday (February 17, 2012)

Exercise	Sets	Reps	Comments
Single Leg Squat	3	6	Jump Rope – 30 Jumps Between
DB Jump Shrug	3	6	Jump Squat – 10 Jumps Between
DB Complex	5	6	
BW Squat + Overhead	5	20	2 x 6 Overhead with stick

Lunge	5	20	<i>10 Reps Each Leg</i>
Step-up (Low Box)	5	20	<i>10 Reps Each Leg</i>

Foundation II – Week Three (February 21, 2012)

Exercise	Sets	Reps	Comments
Push-up	5	12	3 sets regular, 2 Sets Plyo
DB Bench	5	6	
Incline Pull-up	5	10	3 Regular, 3 Reverse Grip
Pullover	3	6	
Ram Builder	5	3	

Wednesday (February 22, 2012)

Exercise	Sets	Reps	Comments
Single Leg Squat	3	6	Jump Rope – 30 Jumps Between
DB Complex	5	6	
Trap Bar Dead Lift + Shrug	3	6	
Step-up (High Box)	3	10	10 Reps Each Leg

Thursday (February 23, 2012)

Exercise	Sets	Reps	Comments
Push-up	5	12	3 sets regular, 2 Sets Plyo
DB Bench	5	6	
Incline Pull-up	5	10	3 Regular, 3 Reverse Grip
Pullover	3	6	
Ram Builder	5	3	

Friday (February 24, 2012)

Exercise	Sets	Reps	Comments
Single Leg Squat	3	6	Jump Rope – 30 Jumps Between
DB Jump Shrug	3	6	Jump Squat – 10 Jumps Between
DB Complex	5	6	
BW Squat + Overhead	5	20	2 x 6 Overhead with stick
Lunge	5	20	10 Reps Each Leg
Step-up (Low Box)	5	20	10 Reps Each Leg



Foundation II - Week Four (February 27, 2012)

Exercise	Sets	Reps	Comments
Single Leg Squat	3	6	<i>Jump Rope – 30 Jumps Between</i>
DB Jump Shrug	3	6	<i>Jump Squat – 10 Jumps Between</i>
DB Complex	5	6	
DB Row (One Arm)	5	6	
Overhead Squat	3	6	<i>With stick</i>
Half Leg Circuit x 5			

Tuesday (February 28, 2012)

Exercise	Sets	Reps	Comments
Push-up	5	12	<i>3 sets regular, 2 Sets Plyo</i>
DB Bench	5	6	
Incline Pull-up	5	10	<i>3 Regular, 3 Reverse Grip</i>
Pullover	3	6	
Ram Builder	4	3	

Wednesday (February 29, 2012)

Exercise	Sets	Reps	Comments
Single Leg Squat	3	6	<i>Jump Rope – 30 Jumps Between</i>
DB Complex	5	6	
Trap Bar Dead Lift + Shrug	3	6	
Step-up (High Box)	3	10	<i>10 Reps Each Leg</i>

Thursday (March 1, 2012)

Exercise	Sets	Reps	Comments
Push-up	5	12	<i>3 sets regular, 2 Sets Plyo</i>
DB Bench	5	6	
Incline Pull-up	5	10	<i>3 Regular, 3 Reverse Grip</i>
Pullover	3	6	
Ram Builder	4	3	

Friday (March 2, 2012)

Exercise	Sets	Reps	Comments
Single Leg Squat	3	6	<i>Jump Rope – 30 Jumps Between</i>
DB Jump Shrug	3	6	<i>Jump Squat – 10 Jumps Between</i>
DB Complex	5	6	
Overhead Squat	3	6	
Half Leg Circuit x 5			

Foundation II – Week Five (March 5, 2012)

Exercise	Sets	Reps	Comments
Single Leg Squat	3	6	<i>Jump Rope – 30 Jumps Between</i>
DB Jump Shrug	3	6	<i>Jump Squat – 10 Jumps Between</i>
DB Complex	5	6	
DB Row (One Arm)	5	6	
Overhead Squat	3	6	<i>With stick</i>
Full leg Circuit x 5			

Tuesday (March 6, 2012)

Exercise	Sets	Reps	Comments
Push-up	5	12	<i>3 sets regular, 2 Sets Plyo</i>
DB Bench	5	6	
Incline Pull-up	5	10	<i>3 Regular, 3 Reverse Grip</i>
Pullover	3	6	
Ram Builder	4	3	

Wednesday (March 7, 2012)

Exercise	Sets	Reps	Comments
Single Leg Squat	3	6	<i>Jump Rope – 30 Jumps Between</i>
DB Complex	5	6	
Trap Bar Dead Lift + Shrug	3	6	
Step-up (High Box)	3	10	<i>10 Reps Each Leg</i>

Thursday (March 8, 2012)

Exercise	Sets	Reps	Comments
Push-up	5	12	<i>3 sets regular, 2 Sets Plyo</i>
DB Bench	5	6	
Incline Pull-up	5	10	<i>3 Regular, 3 Reverse Grip</i>
Pullover	3	6	
Ram Builder	4	3	

Friday (March 9, 2012)

Exercise	Sets	Reps	Comments
Single Leg Squat	3	6	<i>Jump Rope – 30 Jumps Between</i>
DB Jump Shrug	3	6	<i>Jump Squat – 10 Jumps Between</i>
DB Complex	5	6	
Overhead Squat	3	6	<i>With stick</i>
Full Leg Circuit x 5			

## References/Suggested Readings

Bosch, Frans., and Klomp, Ronald. **Running – Biomechanics and Exercise Physiology Applied in Practice**. London. Elsevier Churchill Livingstone. 2005

Cardinale, Marco. Newton, Robert. And Nosaka, Kazunri. **Strength and Conditioning – Biological Principles and Practical Application**. Wiley-Blackwell. 2011

Cometti, Gilles. **el entrenamiento de la velocidad**. Barcelona, Spain. Editorial Paidotribo. 2002

Cometti, Gilles. **La Preparacion Fisica En El Baloncesto**. Barcelona, Spain. Editorial Paidotribo. 2002

Curwin, Sandra. & Stanish, William D. M.D. and Mandel, Scott. **Tendinitis: it's Etiology and Treatment**, New York, New York: Oxford University Press, 2000.

Gambetta, Vernon A. **The Gambetta Method – A Common Sense Guide To Functional Training for Athletic Performance**. Sarasota, FL: Gambetta Sports Training. 2002

Gambetta, Vernon A. **Athletic Development – The Art & Science of Functional Sports Conditioning**. Champaign, IL: Human Kinetics Publishing Company. 2007

Issurin, Valdimir. **Principles and Basics of Advanced Athletic Training**. Ultimate Athlete Concepts. Michigan, USA. 2008

John, Dan and Tsatsouline, Pavel. **Easy Strength – How to Get a lot stronger than your competition and dominate in your sport**. St. Paul, MN. Dragon Door Publications, 2011

Komi, P. V., Editor, (Second Edition) **Strength and Power In Sport**, London: Blackwell Scientific Publications. 2003

Lederman, Eyal. **Neuromuscular Rehabilitation in Manual and Physical Therapies – Principles to Practice**, Edinburgh: Churchill Livingstone – Elsevier. 2010

Murer, Kurt and Bucher, Walter. **1000 exercices d'athletisme**. Paris France. Vigot. 1985

Olbrecht, Jan. **The Science of Winning – Planning, Periodizing and Optimizing Swim Training**. Swim Shop, Luton, England. 2000

Radcliffe, James C. **Functional Training For Athletes At Levels – Workouts For Agility, Speed And Power**. Oakland, California. Ulysses Press. 2007

Schulich, Manfred. (1986) **Circuit Training**. Berlin: Sportverlag

Starzynski, Tadeusz. And Sozanski, Henryk. (1999) **Explosive Power and Jumping Ability for all Sports**. Island Pond, VT: Stadion Publishing Company.

## Gambetta Sports Training Systems

PO Box 50143, Sarasota, Florida 34232

Phone: 941- 378- 1778

Email: [gstscoach@gmail.com](mailto:gstscoach@gmail.com)

Web Page: [www.gambetta.com](http://www.gambetta.com)

Blog: [functionalpathtraining.typepad.com](http://functionalpathtraining.typepad.com) Twitter: @coachgambetta

2012 Gambetta Sports Training Systems, Inc.

[www.gambetta.com](http://www.gambetta.com)