

# PLANNING

Addressing and Adapting to  
Current Reality

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## *Columbus Experience*

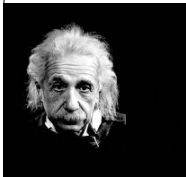


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"We can't solve  
problems by using the  
same kind of thinking  
we used when we  
created them."

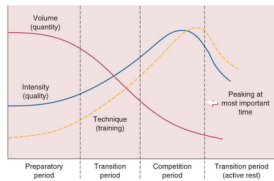
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## Not the Current Reality



Looks good on paper!

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## The Fall of the Wall



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## Systematic Doping



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## Globalization



Helsinki

Medals from 21 Nations  
154 Nations Participating



Daegu

Medals from 33 Nations  
204 Nations Participating

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## Technology



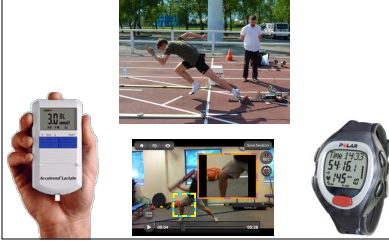
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## Analytics



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## Analytics



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What does this tell us?

Do we need to throw out everything we have done?

**NO!**

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Athletics competition occurs in an information-rich, dynamic environment that requires complex coordination patterns to produce optimum performance



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**Periodization is a concept  
not a model**

Process

Process

Process

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**Planned Performance Training**

Sequence and timing of the application of the training stimulus

Interaction & interdependence of the training components

Timing Not Time - When you do what you do

Being ready on the day

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**- Starting Point -**

What is the end  
product?

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**“What’s coming  
Next? All we know is  
that no one knows.”**

Collins & Hansen, *Good by Choice*

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You don't  
need a  
crystal  
ball !

You need a practical, workable plan  
that is based on timing not time

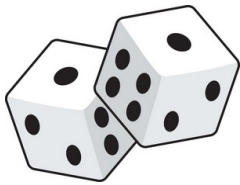
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Optimum performance at the  
appointed time



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"Plans are nothing, planning is  
everything."  
Dwight D. Eisenhower

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"The best laid  
schemes o' mice an'  
men / Gang aft agley"

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## The Performance Garden



With Training - You Plant the Seeds

With Rest/Recovery - You Allow Plants To Grow

With Intelligence & Common Sense - You Allow  
Plants To Bear Fruit

(Bill Sands)

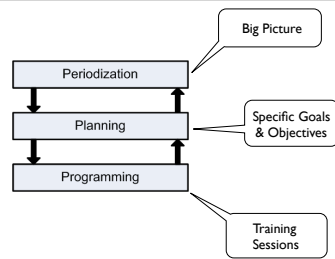
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## Undulating v. Linear

It's all Undulating

Based on systematic application of stressor(s) &  
subsequent time to adaptation to the stress

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Next Year  
Next Month  
Next Week  
Tomorrow  
**Today**

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# Quad

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## Reality

We MUST recognize that competition drives the system

We must know and be able to predict number of competitions to achieve peak performance

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## Window of Adaptation

Developing Athlete



Elite Athlete



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Progression

Fitting pieces together



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## Progression Variables

Change Volume

Change Intensity

Increase Frequency of Workouts or of Specific Workouts

Change the Proportion of Workouts

Make Training More Difficult by Going to Altitude or Heat & Humidity

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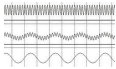
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## Variation

Hard/Easy

Fast/Slow



Simple/Complex

Heavy/Light

Work/Rest

All with a purpose!

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## Accumulation



Day to Day

Week to Week

Month to Month

Year to Year

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## Individualization



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# Individual Response

Fast & Slow Adapters

Responders & Non Responder

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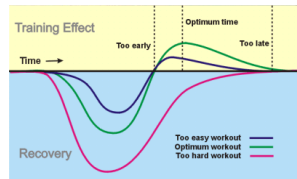
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# Supercompensation




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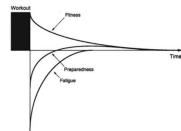
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# Two Factor Model



The fitness effect of training is slow changing & long lasting while fatigue effect of training is of shorter duration but of greater magnitude.

The two factors fitness & fatigue are immediate training effects of every workout. Most immediate effect of any workout is fatigue, but the long term effect is the adaptive changes (Fitness) in the targeted motor qualities over time.

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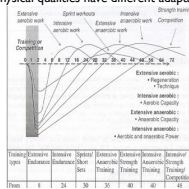
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# Adaptation

Different physical qualities have different adaptation times




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## Adaptation Time

Tasks that require complete recovery  
NEURAL

Tasks that can be trained with  
incomplete recovery  
METABOLIC

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## Training Effects

Acute - Those that occur during the exercise

Immediate - Changes from a single workout

Cumulative - Changes from a series of workouts

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## Training Effects

Delayed - Changes over time

Residual - Retention of changes after cessation of training

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## Adaptation Time

Flexibility - Day to Day

Strength - Week to Week

Speed - Month to Month

Work Capacity - Year to Year

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## Detraining Time Frames

Days 1 to 2 - Beta-endorphine & adrenaline levels drop. Mood affected negatively.

Days 3 to 5 - Muscles lose elasticity. Aerobic capabilities drop 5% by fifth day off.

Days 7 to 9 - Body's ability to use oxygen drops by 10%

Day 10 - Body's metabolic rate begins to drop.

Day 11 to 13 - Max HR & cardiac output decline by 15%. Start to see first appreciable loss in muscle tone.

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## Detraining Time Frames

Days 14 to 16 - Mitochondrial activity (energy production) in cells begins to decrease rapidly. Loss of muscle, strength & metabolic rate occurs.

Days 17 to 19 - Blood becomes less efficient at thermoregulation. Forced to spend excess energy to cool off.

Days 20 to 21 -  $\dot{V}O_2$  max drops as much as 20%

Day 22 to 25 - 10 to 15% loss of muscle mass & lost mass replaced by fat.

Day 27 to 29 - Muscles strength drops by as much as 30%

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Very focused & directed small units of work & modules can have a profound cumulative training effect!



“La Cumbre Effect”

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## Stimulus Threshold

Think & look for optimum, not maximum

Less is often more

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Training Session Unity/Synergy

A B C = One Workout

No workout/session stands alone, everything is connected

Each workout is superimposed on effects of previous workload

Training sessions must mesh, not clash

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### Six Week Block Rationale

**Fast Adaptation - Two Weeks**  
(One 14 day Cycle or two 7 day cycles)

**Stabilization - Four Weeks**  
(Two 14 day Cycles or 4 day cycles )

Olbrecht

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**Accumulation**  
12 to 30 Days

**Transmutation**  
12 to 25 Days

**Realization**  
8 to 14 days

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Seven Day Microcycle Plan (Single Session)

Goals:		
Preparation	Day	
	Time	
	Event	
Maintenance	Day	
	Time	
	Event	
Realization	Day	
	Event	
Notes:		

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**Fourteen Day Microcycle Plan**

Block		Microcycle	
Day	Day	Session	Session
Preparation	One		
	Two		
	Three		
	Four		
	Five		
Acquisition	Six		
	Seven		
	Eight		
	Nine		
	Ten		
Application	Eleven		
	Twelve		
	Thirteen		
	Fourteen		
Notes			

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**Factors to Consider in Developing a Plan**

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**Gender**




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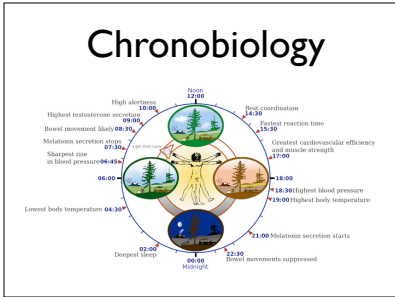
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### Dulling the Knife



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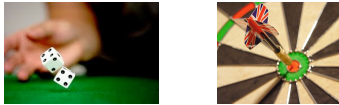
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### Peaking ?



"Peaking starts with the first training session of the year"  
Gary Winckler

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### Tapering



Constant monitoring and shifting scenarios. True art of coaching

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"The best way to predict the future is to invent it."  
Alan Kay

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*Sports Training Systems*

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