A Periodized, 52-Week Training Program for a Women's Ice Hockey Team

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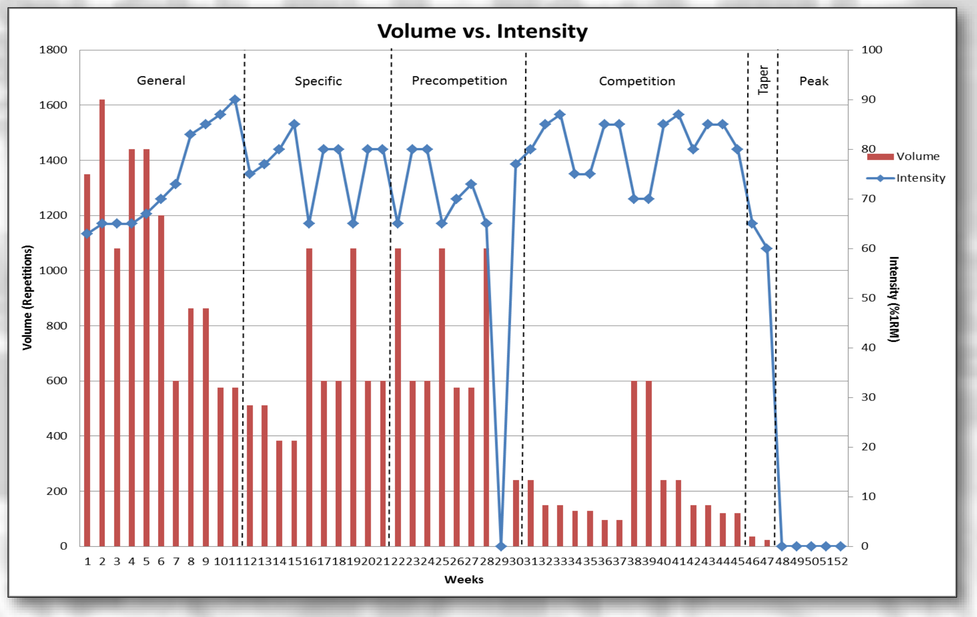
Introduction

- The job of a strength and conditioning professional is to improve athletic performance.
- A periodized training program can enhance athletic performance while minimizing the risk of injuries.
- Designing training programs to maximize performance for ice hockey players can be difficult because ice hockey is one of the most physically demanding sports.
- In ice hockey, all of the components of fitness are important: muscle endurance, strength, and power, and high oxidative and glycolytic capacities.

Purpose

- To examine the muscular and cardiovascular demands of a Division III women's ice hockey team and design a 52-week, periodized training program to facilitate advantageous physiological adaptations.



Training Emphasis

- Anatomical Adaptations: Increase lean body mass, strengthen the tendons and ligaments, increase short term work capacity, and develop a neuromuscular foundation.[1]
- Max Strength: Increase motor unit synchronization, reduce neural inhibition, lower motor unit recruitment thresholds, and increase motor unit rate coding.[1]
- Conversion to Power: Strengthen the eccentric, isometric, and concentric movements in order to create a strong link between the phases of dynamic movements and optimize performance.[2]
- Maintenance: Maintain strength and power levels obtained during the preparation phase, while minimizing fatigue and focusing on peaking for MIAC playoffs.

References

1. Bompa, T.O., & Haff, G.G. (2009). *Periodization* (5th ed.). Leeds: Human Kinetics.
2. Dietz, C., & Peterson, B. (2012). *Triphasic Training*. Dietz Sports Enterprise: Hudson, WI.

WEEK #	1	2	3	4	5	6	7	8	9	10	11	12	13	14	15	16	17	18	19	20	21	22	23	24	25	26	27	28	29	30	31	32	33	34	35	36	37	38	39	40	41	42	43	44	45	46	47	48	49	50	51	52
WEEK OF	1	8	15	22	29	6	13	20	27	3	10	17	24	1	8	15	22	29	5	12	19	26	2	9	16	23	30	7	14	21	28	4	11	18	25	2	9	16	23	30	6	13	20	27	3	10	17	24	3	10	17	24
MONTH	April					May				June				July					August				September					October			November					December					January					February				Mar		
PHASES OF ANNUAL PLAN	Transition			Preparation																											Competition																					Transiti
Subphase	General											Specific											Pre-Competition																								Taper		Peak				
Challenges							X																					X							X		X	X	X													
SEASON OUTLOOK			Easter Break				Finals (16)	Summer Break														School Starts	Pre-Season					Long Weekend	Season Starts		St. Norbert		St. Olaf	St. Mary's	Stevenson (Thanksgiving)	Augsburg	Finals	Start of Break (20th)	Christmas	Concordia (Wis)	UW-Superior	Concordia (Moorhead)	St. Kate's	Gustavus	Hamline	Bethel	St. Thomas	MIAC Quarters & Semis	MIAC Championship	NCAA First Round	NCAA Semis & Champ	Non-Specific
STRENGTH TRAINING-- Primary Phase	Anatomical Adatptations							Max Strength									Conversion to Power												Maintenance																		Taper		Peak		Transition		
SECONDARY EMPHASIS	GPP (General-Physical Preparedness)			Hypertrophy				Basic Strength				Power Endurance				Download	Eccentric		Download	Isometric		Download	Concentric		Download	Power		Download	Testing/Maintenance	In-Season 1: Strength-Endurance		In-Season 2: Strength I		In-Season 3: Power Endurance		In-Season 4: Power		Maintenance (GPP)	In-Season 5: Strength II		In-Season 6: Power-Endurance		In-Season 7: Power		Taper		Peak		Active Rest		
WEEK #	1	2	3	4	5	6	7	8	9	10	11	12	13	14	15	16	17	18	19	20	21	22	23	24	25	26	27	28	29	30	31	32	33	34	35	36	37	38	39	40	41	42	43	44	45	46	47	48	49	50	51	52
Frequency	3	3	2	4	4	4	2	4	4	4	4	4	4	4	4	2	3	3	2	3	3	2	3	3	2	3	3	2	2	2	2	2	2	2	2	2	2	2	2	2	2	2	2	2	2	1	1	0	0			
# of Exercises	15	15	15	10	10	10	10	9	9	9	9	8	8	8	8	15	10	10	15	10	10	15	10	10	15	16	16	15		5	5	5	5	4	4	4	4	10	10	6	6	5	5	5	5	4	3					
Sets	2	3	3	3	3	3	3	4	4	4	4	4	4	4	4	3	4	4	3	4	4	3	4	4	3	4	4	3		3	3	3	3	4	4	4	4	3	3	4	4	5	5	4	4	3	4					
Reps	15	12	12	12	12	10	10	6	6	4	4	4	4	3	3	12	5	5	12	5	5	12	5	5	12	3	3	12		8	8	5	5	4	4	3	3	10	10	5	5	3	3	3	3	3	2					
% 1RM	63	65	65	65	67	70	73	83	85	87	90	75	77	80	85	65	80	80	65	80	80	65	80	80	65	70	73	65		77	80	85	87	75	75	85	85	70	70	85	87	80	85	85	80	65	60					
Volume	1350	1620	1080	1440	1440	1200	600	864	864	576	576	512	512	384	384	1080	600	600	1080	600	600	1080	600	600	1080	576	576	1080	0	240	240	150	150	128	128	96	96	600	600	240	240	150	150	120	120	36	24	0	0			
ESD	1	2	3	4	5	6	7	8	9	10	11	12	13	14	15	16	17	18	19	20	21	22	23	24	25	26	27	28	29	30	31	32	33	34	35	36	37	38	39	40	41	42	43	44	45	46	47	48	49	50	51	52
Frequency	2	3	2--3	3	3	3	3	3	3	3	3	3	3	3	3	2	3	3	2	3	3	2	2	2	2	2	2	1	Hockey Practice																						Recreational / non-specific		
Primary Emphasis	6	6	6	5	5	5	5	1	1	1	1	2	2	2	2	3	1	1	3	1	1	3	1	1	3	1	1	6																								
Secondary Emphasis					6	6	6	6	6	6	6	5	5	5	5	6	2	2	6	2	2	6	2	2	6	2	2	6																								
ENERGY SYSTEM DEVELOPMENT	Aerobic							Speed				Anaerobic Endurance				Speed/Anaerobic Endurance													Speed/ Anaerobic Endurance with Hockey Practice																		Hockey Practice				Non-Specific		
TECHNICAL	low							Mod-High																					High																						None		