STRENGTH & CONDITIONING

OVERVIEW

- What is Strength Training
- Types of Strength Training
- Strength Training Recommendations

MUSCLE CONTRACTIONS

- Dynamic: Produces movement of a skeletal body part such as and upper or lower limb of the trunk
 - Concentric: Occurs when a muscle shorten and joint movement occurs as tension develops.
 - **Eccentric**: Occurs when external resistance exceeds muscle force and the muscle lengthen while developing tension.
- Static: Muscle activation without and observable change in muscle fiber length.
 - **Isometric:** Occurs when a muscle generate a force and attempts to shorten but cannot overcome the external resistance.

WHAT IS MUSCULAR STRENGTH

 Muscular Strength is the maximum force or tension output generated by a muscle or related groups.

How do we become stronger?

DOES STRENGTH TRANSLATE TO SPORT PERFORMANCE?

- Is it important?
- For what sports?
- Is the biggest, fastest athlete always the best?

MAYBE? MAYBE NOT?

TYPES OF STRENGTH TRAINING

- Maximum Strength
- Bodybuilding
- Power Training
- Concurrent Training

STRENGTH TRAINING RECOMMENDATIONS

		Load (%1RM)	Goal Repetitions
1	Strength*	=> 85%	<= 6
2	Power: Single-effort Multiple Effort	80-90% 75-85%	1-2 3-5
3	Hypertrophy	67-85%	6-12
4	Muscular Endurance*	=<67%	=>12

PERIODISATION

TEMASEK POLYTECHNIC ARCHERY CLUB Temasek PERIODISATION PLAN 2020 Women's Team Goal Team Vision Men's Team Goal Overall Team's Goal To build a high performing team in terms of sporting performance, academic results and team culture POL-ITE 2020 Gold Medal POL-ITE 2020 Podium Finish Highest combined scores Nov-20 Weeks 15 10 17 24 14 21 28 12 19 26 16 23 14 21 28 8 15 15 22 29 11 18 25 9 16 23 30 22 13 20 18 25 29 22 (Start Mon AY20/21 AY20/21 AY20/21 AY20/21 Acad Calendar Break Vacation Break Exams Break Term 3 Term 2 (i) Term 2 (ii) Term 4 N'tl Events LENDAR EVEN School / Club Event Days Competition Coach Schedule Biomechanic Psychology PERIO DISAT Training Phase PREPARATION PHASE COMPETITION Sub Phase GENERAL PREP SPECIFIC PREP TAPER BREAK PEAK Adaptations HYPERTROPHY 1 ENDURANCE 1 HYPERTROPHY 2 ENDURANCE 2 TXN Mesocycle 2 3 4 5 6 7 8 9 10 11 12 13 14 15 16 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

QUESTIONS?