

Adaptive Kickboxing Program

Specially designed for People
with Parkinson's Disease
("PwPs")

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Document developed on assignment from WAKO

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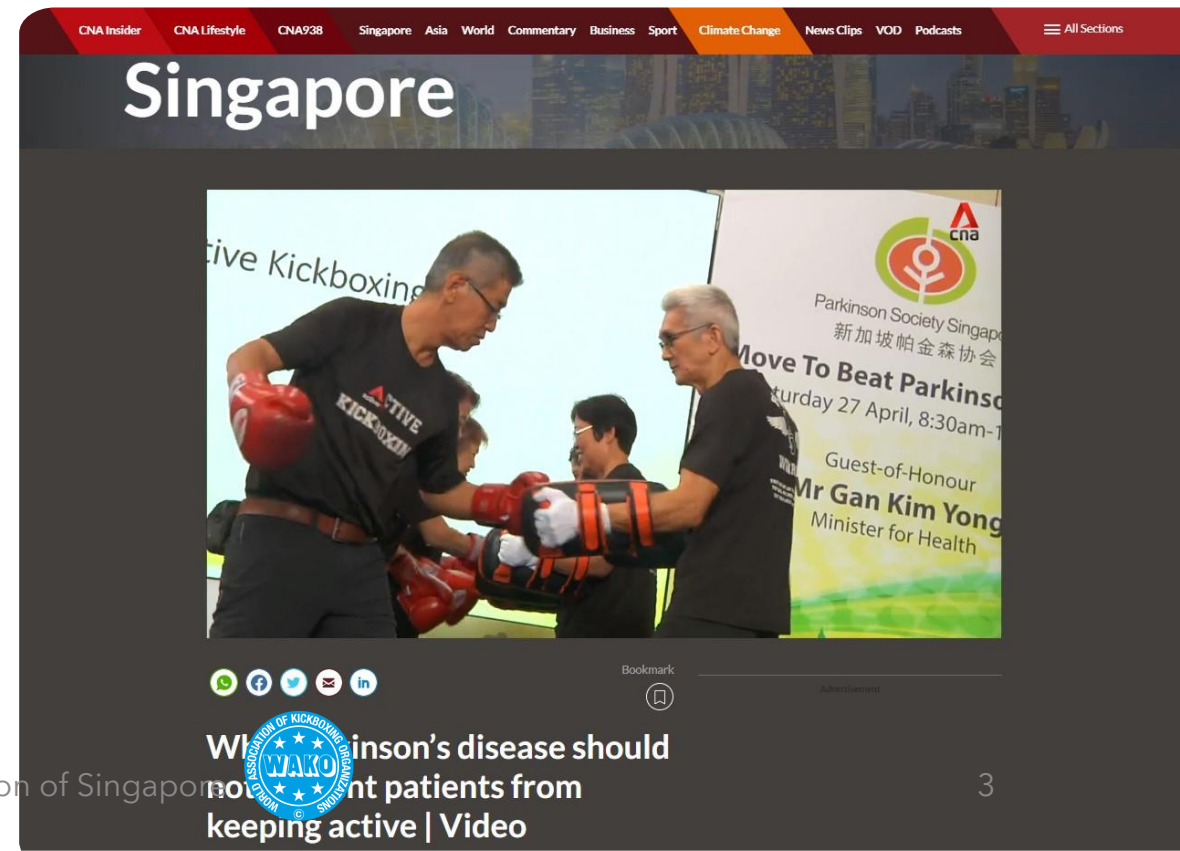


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Project Description

- The **Adaptive Kickboxing Program** (“AKP”) was conceptualised by Active Red, a pioneer affiliate member club of Kickboxing Federation of Singapore.
- The program is specially designed for People with Parkinson’s Disease (PwPs), empowering them with Kickboxing to improve their overall fitness, emotional well-being and quality of life.



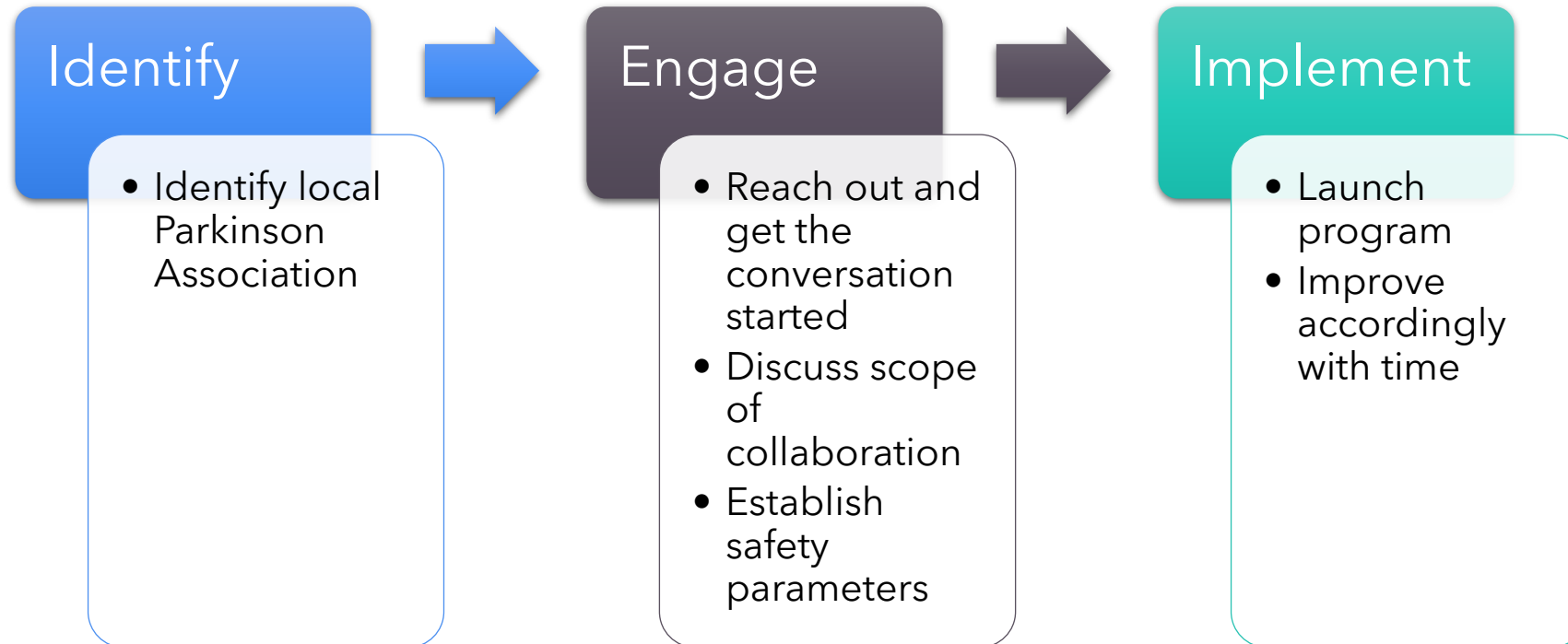
Case Study: Success in Singapore

- Kickboxing Federation of Singapore implemented the Adaptive Kickboxing Program (“AKP”) in 2016.
- It has since successfully reached over **100 People with Parkinson’s** (“PwPs”).
- The program has since expanded to 3 classes weekly, training 30 PwPs on a regular basis.
- The adaptive kickboxers have seen tremendous physical improvement in their fitness, stability but most importantly, friendships lasting a lifetime.

More details on local media coverage found in Appendix 1 (attached at the end of the deck)



How To Approach Parkinson Organization



How To Prepare Coaches, Training Methods & Exercise Programming

Coaches

- Certified / Licensed Coach
- First Aid, CPR and AED Trained
- Have at least 1 year experience training special population (stroke patients, handicapped athletes, etc.)

Training Methods

- Bodyweight training
- Flexibility training
- Balance training
- Basic Kickboxing techniques
- Weight training (6 months after)

Exercise Programming

- To start, 6 months of basic fitness Kickboxing training
- In addition, add bodyweight training (e.g. bodyweight squats, jumping jacks, etc.)
- Incorporate balance exercises (e.g. single leg stand, bosu ball, etc.)
- After 6 months, you may progress to the next level (e.g. from Beginner to Intermediate)








What Knowledge is Important?

(for this category of patients)

S/N	General Symptom	Risk Level	What is it about?	How to manage?
1	Stiff muscles / Rigidity (stiffness)	Low	<ul style="list-style-type: none"> Parkinson's causes stiffening of the muscles and joints. 	<ul style="list-style-type: none"> Important to know how to loosen stiffness
2	Hand or Leg Tremors	Low	<ul style="list-style-type: none"> Hands or feet shaking uncontrollably 	<ul style="list-style-type: none"> Usually with medication Generally not life-threatening
3	Bradykinesia (Slowness of movement)	Medium	<ul style="list-style-type: none"> Patient moving slowly (hands, leg, or entire body) 	<ul style="list-style-type: none"> Patient exhibiting this symptom may be unable to keep up with the general class pace
4	Impaired balance and co-ordination	High	<ul style="list-style-type: none"> Patient may be unsteady while standing Patient may lose balance or fall (which may be fatal) 	<ul style="list-style-type: none"> Important to know how to prevent injury and administer first aid to deal with injuries
5	Freezing	High	<ul style="list-style-type: none"> Patient may freeze suddenly, unable to move 	<ul style="list-style-type: none"> Important to know how to manage a patient who has "frozen" and aid their recovery (e.g. immediately place chair behind them and slowly bring them to sit)



Recommended Exercises – To get started

S/N	Exercise	Image Reference	For which body part?	How is it helpful?
1	Jumping jacks		Overall	Low-impact exercise to build cardiac fitness and boost heart health.
2	High knees		Overall	Low-impact exercise to build cardiac fitness, improve balance and co-ordination.
3	Lateral raise (shoulder raise)		Shoulders (part of upper body)	Strengthen muscles linked to upper body strength and endurance.
4	Seated dips		Arms (triceps, part of upper body)	Strengthen muscles linked to upper body strength and endurance.
5	Squats		Lower body	Strengthen core, leg muscles and improve balance.
6	Standing Side leg lift		Gluteus Maximus (part of butt, lower body)	Strengthen muscles associated with single-leg balance and stability.
7	Standing calf raise		Calf (part of lower body)	Strengthen calf muscles, which are important for stability and feet proprioception (ability to sense weight and sensation with feet, which may be absent in People with Parkinson's Disease)

Stages of Parkinson's Disease

	Early PD		Mid-stage PD	Advanced PD	
Stage of Parkinson's Disease	1	2	3	4	5
Severity of Symptoms	MILD Symptoms of PD are mild and only seen on one side of the body (unilateral involvement)	MILD Symptoms of PD on both sides of the body (bilateral involvement) or at the midline	MODERATE Symptoms of PD are characterized by loss of balance and slowness of movement	SEVERE Symptoms of PD are severely disabling	SEVERE Symptoms of PD are severe and are characterized by an inability to rise
SYMPTOMS	Tremor of one hand Rigidity Clumsy Leg One side of the face may be affected, impacting the expression	Loss of facial expression on both sides Decreased blinking Speech abnormalities Rigidity of the muscles in the trunk	Balance is compromised Inability to make the rapid, automatic and involuntary adjustments All other symptoms of PD are present	Patients may be able to walk and stand unassisted, but they are noticeably incapacitated Patient is unable to live an independent life and needs assistance	Patients fall when standing or turning May freeze or stumble when walking Hallucinations or delusions.



ParkinsonsDisease.net / Stages of Parkinson's Disease

Source: <https://parkinsonsdisease.net/basics/stages/>



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Conclusion

- We can help the special population (especially PwPs) lead healthier and happier lives through our beautiful sport.
- This means creating unique opportunities for them and creating access to our sport.
- Let us strive together as one WAKO family and create a positive impact for our community, starting with the People with Parkinson's Disease

#OneWAKO #OneChampion



END



Appendix 1

Below are the Media Coverage we have received for the program.

1. Parkinson Society Singapore (“PSS”) Website:

<http://parkinson.org.sg/Gallery-2019-MovetoBeatParkinson2019.php>

2. Ministry Of Health (“MOH”) News:

<https://www.moh.gov.sg/news-highlights/details/speech-by-mr-gan-kim-yong-minister-for-health-at-move-to-beat-parkinson-2019>

3. Channel NewsAsia (time code 1:50 to 1:56):

https://www.channelnewsasia.com/news/singapore/why-parkinson-s-disease-should-not-prevent-patients-from-keeping-11484372?fbclid=IwAR3Q1jPbLo3EBBXPBesMIgd8bK3kjF3_nrpTo1DLAym9kOXE52siFj0RNJ8