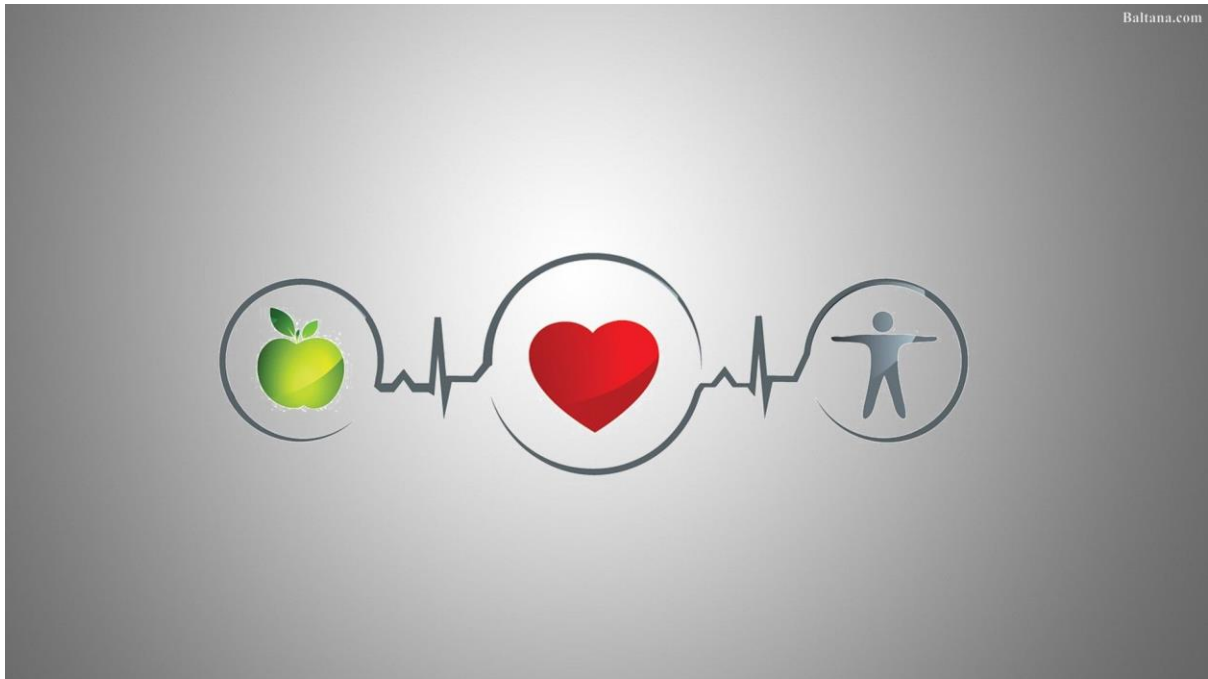


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Summary

During our first meeting in October of 2021, our consultation consisted of briefly going over your specific goals. It was also mentioned about your current health condition and what to expect out of the 6-week training programme. You mentioned that your goals were to simply start exercising again, to lose weight and to add muscle. These targets were established due to your recent medical operations undergone to help resolve the health conditions that you endured over the last two years. To which these conditions resulted in the inability to train and exercise which in your opinion caused weight gain. Described by yourself, the sudden weight gain was out of your character, was a direct result of the recent inactivity and had caused some upset that you wanted to resolve. Due to the nature of your conditions, it had been a long time until you fit enough to start exercising again. With all that in mind, the training plan was designed to help in achieving your fitness targets.

Once those goals were agreed between us, we were then beginning the pre-testing. The pre-testing revealed basic health data like age, weight, and height, and a full body composition. The results from the body composition gave a clear insight to you on what your current levels were for Body fat %, Fat mass (Kg) Fat free mass (Kg), Muscle mass (Kg), BMI, Metabolic age, and an animated diagram which displayed the distribution of fat and muscle around your body.

You were then required to take part in a few tests which would measure current fitness levels. The fitness tests used were those to define Speed, Power, Agility, Strength, and Proprioception. The results from the health and fitness pre-testing were collected as an insight to current fitness and would be conducted again 6 weeks from this date and all results would be compared.

With all the relevant data collected, our training programme could begin immediately. As you are aware, the training was structured so that a varied number of exercises and exercise techniques could be used. These included body weight exercises, the use of resistance machines, free weights, and some cardiovascular exercise machines. The programme took place every week on a 1:1 basis.

Lifestyle & Ambition of Exercise

As a 67-year-old male and a retired school headmaster, you described yourself as someone who has always remained fit and healthy, maintaining an active lifestyle. You mentioned that you have always taken part in physical activity and maintained a conscious attitude toward health and well-being. It was only up until the last few years when you encountered various health complications. Some of which resulting in surgery which severely affected activity level which in your opinion resulted in weight gain. These health complications affected your lifestyle dearly as you were no longer able to remain active in the form of walking, cycling, and attending the gym. You mentioned that this had an affect on your mental health due to the lack of physical activity that was in place that encouraged wellbeing.

During your recovery period, the covid-19 pandemic was at the same time which made returning to physical activity more difficult. Although, in plight of the pandemic and health complications this did not deter you from wanting to make a positive change as soon as it was possible.

From the beginning of the 8-week training programme, it was made clear from yourself that you were willing to put in hard work to regain a healthier and fitter lifestyle. Due to the nature of the circumstance, our first session working together was to be one of the first occasions you had taken part in vigorous activity since your recovery. Because of this, we agreed upon certain exercises being used that wouldn't affect any scar tissue that occurred due to recent surgeries. We also agreed that level of intensity that we worked at would see a gradual increase. The goals that we agreed upon were specifically chosen to help you get back to where you wanted to be, in regard to health and wellbeing. These were:

1. To lose body fat - predominantly in the abdomen. As this area was most affected by your recent health ordeal. Due to surgery having taken place in this area of the body it was important that we weren't too vigorous around this region as it could complicate the healing process.
2. To regain and or increase body muscle mass.
3. To create a realistic routine of physical activity which could be maintained outside of the programme.

Training Structure

As you can recall, our 1:1 sessions were for 1 hour once a week for 6-weeks. We explored a range of different exercises that focused on bodyweight, the use of resistance machines and free weights, we also used some cardiovascular equipment for a cool down at the end of the workout. This type of training was used to help with achieving the fitness goals in an effective and overall safe way. We agreed that it was also important that for you to achieve your goals you were to increase activity levels outside of sessions and to try and maintain a healthy diet in your own time. As training for one hour a week may not be enough to create a health and fitness change if all other activities throughout the week go against the ambitions of the training plan.

Training Justification

The training was chosen because previous studies have been successful in showing the effectiveness and importance of regular physical fitness activity for your population group. These studies have shown that an increase in physical activity and regular weight training especially, has shown improvements in longevity, preventing age associated common injuries and an improvement in overall wellbeing.

These past results have been proven on a similar timescale to ours, and all have the intention of promoting continued training at the end of the programme. This of course would be conducted on the client's own accord.

The effectiveness of this training is simply down to how it combats the effects of ageing. As we age, unless our fitness levels are meticulously maintained and we are lucky enough to avoid any life altering injuries and or conditions, then natural changes occur within us all. One of the most relevant factors is a loss in muscle mass which causes an increase in body fat. This age-related natural occurrence known as sarcopenia is the affect of our bodies becoming resistant to natural growth signals which results in a slower metabolism and muscle loss. However, with the introduction of regular physical activity and weight training, we are able to maintain muscle mass and therefore slow this process down.

Reflection on Test Results

Introduction to Test results

All of your results for the testing on week 1 and at the end of the training programme on week 6 are laid out below. It is important to note that the results may not be completely accurate as there are always factors that can influence data on the day of the test. However, the results do indicate some benefits from training and are a reflection on how you have progressed physically. There are also signs of regression in the results, but these may be an affect of the tests not being relevant to our training, and or lifestyle habits in your free time.

Body Composition

Category	Pre	Post	% Change
Body Comp	27%	27%	0%
Muscle Mass	57.1kg	57.8kg	1%
Weight	82.3kg	83.3kg	1%

Firstly, as seen in your body composition results, there was no change for body fat percentage as it remained at 27%.

Furthermore, to the weight change and muscle mass differences of the data, there was a change of 1% for both. Although, a no change in body fat may have not been in line with your goals, this is not necessarily a negative outcome and there may be reasons to explain the lack of change. The first reason could be the accuracy of how the testing was completed. The machine used for body composition analysis requires a strict protocol of being fasted, which we did not adhere to, therefore measurements may not be correct. Secondly, although your body fat remained the same, there has been an increase in weight and muscle mass, this may indicate that you have increased your total muscle mass over the training period. Which providing the measurements are correct, this would then stay in line with one of your fitness goals. The way in which we trained would justify these results, as there was no dietary element or endurance-based training included, the focus was therefore one that targeted as many muscle groups as possible in our one-hour weekly timeframe. Thereby focusing all muscular changes in the direction of adding muscle.

Grip Strength

Category	Pre	Post	% Change
Dominant Hand	42.2	47.5	12.5%
Non-Dominant Hand	39.9	49.5	24%

The differences in grip strength saw improvements of 24% and 12% for non-dominant and dominant hand. It must be added that there is always room for error when ever conducting fitness tests, so results may not be completely accurate, but an improvement of any kind would be appropriate due to the type of training. For example, walking with dumbbell weights in both hands (Farmers walks) were used every week in your programme and at week 1 the weight was 14kg in each hand the distance required was 10m. By week 5 the weight had progressed to 18kg, and the length improved to 14 metres. Furthermore, The TRX cable machines would have also contributed to grip strength gains, as not only were they used weekly, but the frequency and intensity increased each session which required a higher demand of strength to complete each set.

Power

Category	Pre	Post	% Change
Weight Lift	12.33 Seconds	9.95 Seconds	19%

The weight lift element of the test required you to lift a weighted bag a certain height as fast as you could for 5 times. Your results went from 12.33 seconds on week 1 to 9.95 seconds on week 6 which is an improvement of 19%. Each week we stuck to a routine of resistance-based exercises which mainly focused on upper body strength and each week either the frequency or intensity and sometimes both, were increased. The 19% improvement for this test is good evidence of how your strength has improved through the structure of the training programme.

Speed Walk

Category	Pre	Post	% Change
20m Up and Go Walk	12.56 Seconds	9.01 Seconds	28%

The “Up and go 20m walk” starting from a seated position, had an improvement of 28%. This result further demonstrates your physical fitness improvements. The time improvement of 3 and a half seconds in 5 weeks clearly shows improvements in length strength and walking speed. These results reflect the effectiveness of our training, specifically the weighted walks and the timed step ups which saw progressions to an increase in the height of the step and an introduction of weights in either hand.

Agility

Category	Pre	Post	% Change
Agility	6.64	8.04	21%

The agility element of the testing saw a slight decrease in performance of 21%. The week 1 time of 6.64 seconds gradually increased to 8.06 seconds on week 6. This change may be explained, by us simply not training agility and putting our focus on weight based exercises.

Proprioception

Category	Pre	Post	% Change
Eyes Open Dominant Leg	60 Seconds	30.15	49.75 %
Eyes Closed Dominant Leg	2 Seconds	3 Seconds	50 %
Eyes Open Non-Dominant Leg	60 Seconds	60 seconds	0%
Eyes Closed Non-Dominant Leg	2.5 Seconds	4.2 Seconds	68%

The balance section of testing saw slight increase and some decrease in performance. It is important to note that previous studies have shown that an effective way to improve proprioception is to simply practice. During our consultation, it was highlighted what was a priority goal and improving balance was not mentioned. Therefore our training did not reflect something that we had little need to improve, thereby our results are not surprising. prioritised.

Personal Overview

My overview of your weekly performance was that you were committed to every exercise, determined to always be better and wanted to achieve good results. From a trainer’s perspective, you are an ideal client as you were fully aware that to achieve good results, hard work had to be put in over a prolonged period.

Future Recommendations

To maintain fitness levels then a realistic routine must be applied. Attending the gym twice a week, regular walking everyday and being mindful of calorie quality and quantity are 3 achievable targets to adhere too. To further progress fitness and wellbeing then perhaps the introduction of a weekly cycle, as you mentioned this is something you would enjoy. If cycling may not be possible due to whether or other circumstance, then an extra weekly session at the gym would also suffice. Although we never touched on diet, it may be useful to note some effective dietary strategies. There is lots of good evidence suggesting the effectiveness of a fasting regime. A popular and achievable strategy to fasting is known as the 16:8 diet. Whereby you consume all daily calories within an 8-hour window and then not consume anymore calories for at least 16 hours. A useful add-on to this diet, if appropriate and complication free, is to include a walk or light exercise before breaking your fast. Doing this fasted exercise encourages a fat burning affect which may contribute to weight loss and a lower body fat percentage.

All things considering, whenever attempting a new fitness regime and or diet, it is always advised to approach with caution, be mindful of your body and not rush into anything, and if needed, to consult your local GP if you think it may cause issues.