

Its Fun: A Practical Algorithm for Counseling on the Exercise Prescriptions: A Method to Mitigate the Symptoms of Depression, Anxiety, and Stress-related Illness

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Abstract

A growing body of research indicates that exercise is an effective intervention for depression, anxiety, and stress. Exercise as medicine provides an additional treatment tool for mental health professionals. With the initiation of the exercise prescription process, clinicians serve as an important link between physical and mental health. By collaborating with a team of health professionals and the patient, clinicians can successfully encourage patients to increase their physical activity, which will lead to positive mental and physical health changes.

Exercise and fun are not always used as synonyms. To start and sustain an exercise routine, the clinician and the patient need to work together to find connections between the two words. The "It's Fun!" algorithm provides the clinician with a guide to hold exercise counseling sessions that are empowering and fun for both clinician and patient. Taking into account all the essential steps in exercise prescription writing and counseling- the interest level of the patient, a patient's past exercise history and timeline, the signs, symptoms, and risk factors for disease, favorite activities, unusual ideas for motivation and exercise, and finally negotiating as well as narrowing down the ways forward - the patient will engage in and enjoy the benefits of regular physical activity.

Keywords: Exercise; Depression; Exercise prescription; Counseling; Stress; Anxiety; It's fun

Introduction

"IT'S FUN" usually isn't the first phrase that comes to a practitioner's mind when facing the responsibility of making a determination of what exercise to recommend to a patient with a mental health related issue or illness. Yet, as an algorithm, the six letters represent a formula that can lead to a successful, healthy outcome. In 2013, a meta-analysis investigating the efficacy of exercise and drug interventions on the mortality rate of certain physical ailments (heart disease, chronic heart failure, stroke and diabetes) found that in many cases, exercise can be just as effective as medicine [1]. Similar findings result from research studies on the efficacy of exercise on the outcomes of mental health ailments including depression, anxiety, and stress [2,3]. This paper will explore the use of exercise prescriptions as an important tool in the practitioner's toolbox that alleviate not only individual suffering, but collectively lower worldwide health care costs.

According to a 2011 report by the World Economic Forum and the Harvard School of Public Health, the global direct and indirect cost of mental illness in 2010 was \$2.5T and is estimated to grow to \$6T by 2030 [4]. Currently, depression accounts for nearly a third of this expenditure. In 2014, 6.6% of all US adults (15.7 million people) reported experiencing a major depressive episode within the past twelve months [5]. Individuals who suffer from depression are more susceptible to other medical problems that affect the physical body such as cardiovascular disease or substance abuse. Further, feelings of

anxiety were reported by 18.1% of the US adult population. Anxiety disorders disproportionately affect certain populations like women and military workers and include debilitating conditions such as post-traumatic stress syndrome (PTSD). In addition, chronic stress, while not considered a mental illness, can lower the immune system, bring about sleeplessness, and cause headaches- all symptoms a patient may report without making the connection that these symptoms are frequently reactions to stress. In recent years, a strong evidence base has been mounting which advocates for the use of exercise as an effective treatment to lower both the economic and personal costs of these mental health issues.

Exercise as Medicine

Exercise works by using several biochemical methods including increasing the presence of endorphins, regulating serotonin and dopamine levels, and affecting prefrontal cortex activity in the brain. It is now common knowledge that exercising regularly can have effects on the physical body such as: reducing blood pressure, reducing resting heart rate, increasing fitness, preventing obesity, reducing blood cholesterol levels, reducing low-density lipoprotein (LDL), increasing high-density lipoprotein (HDL), reducing triglycerides, changing body composition, increasing muscle mass which increases metabolism, reducing pain such as back pain, increasing circulation, increasing the number of capillaries, increasing the number of mitochondria in cells, reducing fibrinogen and increasing fibrinolysis, improving sexual desire and function, releasing nitric oxide as vasodilator, and helping to prevent bone loss; for these reasons alone, there is value in writing an exercise prescription. As early as 1988, research began looking at the apparent link between exercise and depression [6]. The study found

that the more physical activity the study participants reported, the fewer symptoms of depression they reported. The opposite was true as well: the more physical inactivity reported, the more depressive symptoms the subjects reported [6,7]. The effects of this study were duplicated in 2006 when a national study comprised of 5451 men and 1277 women found that subjects in the insufficiently active category reported more depressive symptoms than those in the sufficiently active category [8].

While it could be said that feeling depressed may cause individuals to lack the motivation needed to exercise, review studies have found that using exercise was more effective than receiving no treatment [9]. Patients in the studies that were depressed did exercise and did benefit. One study compared the effect size to that of psychotherapy and pharmacotherapy [10]. Another systematic review and meta-analysis of studies that investigated the effects of physical activity on post-traumatic stress syndrome, found that there was evidence that physical activity may be helpful as an intervention for those suffering from PTSD [3]. Similar results have been found for exercise as treatment for anxiety and stress [11,12]. Thus, working with patients to find powerful motivators to get moving, formalizing the counseling into an exercise prescription, and collaborating with the patient to co-create goals that are specific, measurable, action oriented, realistic and time sensitive, increases a patient's self-efficacy that he or she can indeed be successful at exercising. With exercise, small successes breed large rewards for the body and mind.

Exercise Prescription Basics

Even though physical activity has been found to be useful as a treatment for depression, anxiety and stress, many clinicians hesitate to write an exercise prescription, despite calls for making physical activity counseling a priority [13]. Many point to lack of knowledge or time as a factor [14]. Although the benefits of regular exercise have been well documented, exercise is also not risk free [15]. Regular physical activity reduces the incidence of cardiovascular disease overall, however, vigorous physical exertion does acutely and transiently increase the risk of sudden cardiac death [16,17]. To get started writing safe exercise prescriptions, follow these key recommendations: Never have

a sedentary patient go from no activity to vigorous activity. This is the most common way to experience a myocardial infarction while exercising [18].

Always perform a risk stratification process prior to prescribing exercise. Partnering with the patient's primary care physician or cardiologist will be important if the patient has known metabolic, endocrine or cardiovascular disease or signs and symptoms of these diseases.

Patients must properly warm-up and cool-down as part of the training session. The American College of Sports Medicine advocates for a warm-up that consists of at least 5-10 minutes of light to moderate intensity cardiorespiratory and muscular endurance activities. The conditioning phase consists of 10-60 minutes of aerobic, resistance, balance, and/or sports activities. This phase is followed by a cool-down period of at least 5-10 minutes of light to moderate intensity activity. Stretching for at least 10 minutes is recommended to conclude the session [19].

Start low and go slow: when commencing an exercise routine, start at low intensity, low frequency, and low duration and work up slowly, first increasing time of exercise until reaching 30 minutes, then increasing frequency of exercise until reaching five days a week and then slowly increasing intensity of exercise, making sure the patient is medically cleared for an increase in intensity.

Assessing Exercise Program Risk

Prior to starting any exercise program, safety must be ascertained. For healthy patients, a screening Physical Activity Readiness Questionnaire (PAR-Q) can be used [20]. If a patient answers 'No' to all of the PAR-Q questions they can consider slowly initiating physical activity without seeing a physician. However, if a patient answers 'Yes' to one or more questions, further questioning should occur. A more detailed examination can risk stratify a patient into the ACSM's low risk, moderate risk, or high risk groups. There are 8 risk factors to consider, adding up the number of risk factors can classify a patient's risk status (Table 1).

Risk Factors to Consider
Age: male ≥ 45 or female ≥ 55 years old
Family history: history of a myocardial infarction or sudden cardiac death in first degree relatives; a male < 55 or female < 65 years old
Hypertension: (blood pressure $\geq 140/90$)
Smoking : Current smoker or quitting within the previous 6 months
Dyslipidemia : (LDL ≥ 130 mg/dl or HDL ≤ 40 mg/dl; or total ≥ 200 mg/dl if only available cholesterol level)
Blood glucose level: fasting blood glucose ≥ 100 mg/dl
BMI: BMI > 30 or waist > 102 cm for men and > 88 cm in women
Sedentary lifestyle: not achieving thirty minutes of physical activity three days a week for three months
Note: Having a HDL of > 60 mg/dl is considered a negative risk factor.

Table 1: Patient risk factors.

Note. Data adapted from ACSM's Health-Related Physical Fitness Assessment Manual, pages 15-20, 2008 and ACSM's Guidelines for Exercise Testing and Prescription Ninth Edition, pages 19-38, 2014.

Patients are considered low risk if they are a male < 45 years old or a female < 55 years old, asymptomatic, and have no more than one risk factor. These patients can be cleared for low, moderate, and vigorous intensity activity. It is recommended that they start with low intensity exercise and gradually increase. Moderate risk patients include males $\geq$ 45 years old and females $\geq$ 55 years old or those who meet the criteria for two or more risk factors. These patients can be cleared for low and moderate intensity exercise. However, further evaluation is recommended for vigorous intensity physical activity. Sedentary patients should start at a low intensity and gradually build to greater intensities [21]. The most dangerous time to exercise is a sedentary patient starting a high (vigorous) intensity program or activity. High risk patients are individuals with one or with known cardiovascular, metabolic, or pulmonary disease. Further evaluation and testing are recommended before initiating an exercise program in these patients [19]. Utilizing a team of complementary expert specialists, such as a cardiologist, endocrinologist, or pulmonologist is helpful at this stage as the patient will likely require a stress test.

Physical Activity Guidelines and Program Design

Once a patient has been cleared to exercise safely, exercise prescription conversations can commence. The ultimate goal is to get patients to meet, or exceed the Health and Human Services (HHS) National Guidelines for physical activity for adult Americans. These recommendations call for people to achieve 150 minutes of moderate intensity physical activity, or 75 minutes of vigorous physical activity, in a week [22]. Additionally, the HHS states that more extensive benefits come from increased minutes of exercise, up to 300 minutes, and beyond, of moderate physical activity achieved in a week [22]. However, any physical activity is better than none.

Progression

A well designed program gradually progresses patients from their current level of activity, to the recommended levels in a safe and effective fashion. For sedentary individuals, the initial conditioning stage occurs during the first 4 weeks of activity. General advice is to "start low and go slow," and increase by no more than 10-20% per week. Two to three exercise sessions per week is a good place to start. Exercise intensity should be around 50% of a person's maximal heart rate (MHR). MHR can easily be estimated by subtracting a person's age from 220 (220 - age in years). Exercise duration should gradually be increased until patients can complete a 30 minute session. At this point, additional exercise sessions can be added [19]. Patients are more likely to sustain an exercise routine if they enjoy the activity.

After 4 weeks, patients enter the improvement stage. This period lasts up to 6 months and consists of systematic increases in time, intensity, and frequency [19]. Caution should be taken to adhere to the 10-20% increase rule per week, and to adjust only one domain at a time. Once a patient has been exercising for 6 months, according to the ACSM, they are considered to be in the maintenance phase [19]. Cross training and variety in exercise selection become more important variables to manipulate in this phase. Variety can help keep exercise fun, fresh, and exciting and is an important component for injury prevention.

Similar approaches should be taken for resistance training and flexibility. The ACSM recommends training each major muscle group two times per week on non-consecutive days. The same 10-20% progression apply. Recommendations include working up to 2-4 sets of each exercise. Repetition ranges vary depending on the goal. In young adults, strength and power can be improved by doing 8-12 repetitions per set. In middle age and older adults, the ACSM recommends doing 10-15 repetitions for strength and power increases. Muscular endurance can be prioritized by doing 15-20 repetitions per set [19].

Flexibility is another important area of fitness to consider as part of the exercise prescription. It is most effective when the muscle is warm and can be done after light aerobic activity or a hot bath. The ACSM recommends 2-3 days per week of dedicated stretching to improve range of motion. This can include static, dynamic, and ballistic stretching. Each stretch should be held for 10-30 seconds to the point of tightness or slight discomfort. The stretch should be repeated 2-4 times, accumulating 60 seconds per stretch [19].

Lastly, an often overlooked area of fitness is neuromotor control including balance, coordination, gait and agility. Recommendations for adults, particularly older individuals, are 2-3 bouts of 20-30 minutes per weeks of balance oriented exercise. Examples of this include Tai Chi, Qigong, and Yoga [19]. After considerations regarding risk and physical activity guidelines are made, it is time to write the prescription.

FITT: Exercise Prescription Components

The exercise prescription is simple and composed of four parts. The exercise prescription is much like a prescription for medicine with type of medicine, dose, frequency and duration. Clinicians can easily remember the components of the exercise prescription by using the acronym FITT, which stands for frequency, intensity, time and type.

Frequency

The frequency, or number of occurrences of exercise sessions, should be matched to the patient's availability and current level of activity. It is always better to err on the side of caution and start low and go slow. Some patient's may only be able to realistically complete one exercise session per week, and that is fine to start with. Initial frequency goals should aim for 3 sessions per week. Once a patient can complete a 30 minute session, additional exercise bouts can be added to achieve 5 or more days per week [19].

In addition to formal exercise sessions, it is still important to encourage more physical activity throughout one's day. Sedentary behavior is associated with reduced functional capacity, osteoporosis, obesity, anxiety and depression, hypertension, cardiovascular disease, colon cancer, stroke, breast cancer, and type 2 diabetes mellitus [23]. Some research has suggested that one hour of daily physical exercise cannot compensate for the negative effects of inactivity on insulin levels and plasma lipids if the rest of the day is spent sitting [24]. In general, some is good, but more is better!

Intensity

Multiple different methods exist to determine exercise intensity. Cardiorespiratory fitness generally focuses on heart rate. A percent of the maximal heart rate (MHR) of an individual is selected (estimated $MHR = 220 - \text{age in years}$) based on the level of intensity one is seeking [25]. The different intensities and their respective percentages of MHR

include: very light (<50% MHR), light (50-63% MHR), moderate (64-76% MHR), vigorous (77-93% MHR), very hard (> 94% MHR), and maximal (100% of MHR) [19]. Using heart rate is not effective if the patient is on beta blockers and is less useful in the elderly.

Alternatively, the Borg scale of perceived exertion was developed [26]. It is a subjective scale, ranging from 6-20 where a patient rates how hard they feel like they are working (e.g. 7 = very, very light; 11 = fairly light; 13 = somewhat hard; 15 = hard; 19 very, very hard). A high correlation exists between a person's perceived exertion rating times 10 and his or her actual heart rate during physical activity. Despite being subjective measure, a person's exertion rating may provide a fairly good estimate of heart rate during physical activity [26]. This scale is widely used in cardiac rehabilitation centers as an easy way to monitor intensity.

Perhaps the most simplified testing method to estimate intensity is the "sing" or "talk test". "In general, if you're doing moderate-intensity activity you can talk, but not sing, during the activity. If you're doing vigorous-intensity activity, you will not be able to say more than a few words without pausing for a breath [27]. Low intensity exercise still allows for one to talk or sing while exercising.

Time

Fitness can improve in sessions as short as 10 minutes long and can be split into morning and afternoon workouts [28-30]. If the patient can only do 5 minutes, then starting at 5 minutes works. Some time is better than no time! Perhaps the most basic prescription for patients is a 5 minute walk from their home before turning around to come back. Whatever the initial time goal, the most important aspect is allowing the patient to set their own goal and their own type of exercise. The ultimate goal for time is to meet the guidelines of accumulating 150 minutes of moderate intensity physical activity in a week or 75 minutes of vigorous intensity physical activity in a week. Working slowly towards these goals is recommended. Patients should only participate in vigorous intensity physical activity if cleared medically for that level of exertion.

Type

What is the best type of exercise? The exercise that a patient will actually do. There is limitless flexibility in this category. The only real salient points are patient safety and patient engagement. For many, variety is key. If a patient enjoys walking, biking, swimming, yoga, or Zumba encourage them to do all of them if they have the time and opportunity. There is no right or wrong answer to the question what type of exercise should a patient do. The danger point is intensity of the activity. For example if a sedentary patient loves soccer or ice hockey and decides to sign up for an adult league, this is dangerous, as the patient will be going from sedentary to vigorous activity. The place to start with these patients is doing basic drills of that sport at low intensity at home or in a local field or ice rink. Patients should partake in activities that they truly enjoy. The exercise counselor or professional fitness trainer can encourage activity exploration and help ensure that patients are getting a balanced fitness program that includes cardiorespiratory exercise, resistance training, flexibility work, and balance/agility training. The most important part of choosing the type of exercise is to be supportive of the patient choosing the most exciting, interesting, enjoyable, safe, and fun activities for them, FITT: Exercise Prescription.

F = Frequency

I = Intensity

T = Time

T = Type

The Coach Approach

Research has shown that 15% of pharmaceutical prescriptions given to patients are never filled and 50% of those suffering from chronic disease cease to adhere to prescription recommendations [31]. Yet, when the patient feels recognized by their clinician as a partner in the health process, the rate of adherence is increased [32]. The clinician can achieve this level of connection by utilizing the COACH™ Approach. Adhering to the COACH™ Approach will motivate the patient to be more likely to follow through on the exercise prescription recommendations. The COACH™ Approach differs from interacting with the patient as an expert or sole authority and instead recognizes the autonomy of the individual as a method of gaining trust and encouraging compliance with recommendations.

Curiosity

Each patient is unique. The determination to maintain a level of curiosity about the patient as an individual plays a role in not only understanding them, but also, in creating a prescription that will hold their interest and create a level of excitement instead of dread. Some people like to run or pursue solitary activities, for others group activities are best. Curiosity will help bring out what is important and what matters.

Openness

An attitude of openness, non-judgment, and acceptance toward the patient help the patient to feel understood and encourage collaboration. Physicians sharing personal experiences with efforts to increase physical activity levels themselves have been shown to increase the patient's perception of how believable and how motivating the physician is [33]. With the physician using an open mind, the patient sees the process as one of collaboration instead of dictation.

Appreciation

Expressing appreciation may not come naturally in the typical clinician-patient relationship. However, appreciation and recognition are powerful motivators. Appreciating any effort made by the patient to be more active and acknowledging the patient's character strengths that can help the patient reach his or her goals are forms of appreciation that will help propel the patient forward.

Compassion

Showing compassion to a patient requires focusing on delivering messages and listening without a judgmental attitude. Compassion recognizes humanity and failure. It also is the belief that one can overcome obstacles to achieve a goal. When a clinician listens attentively and reflects statements used by the patient or summarizes ideas, thoughts and feelings expressed by the patient, the patient feels heard and understood. In this way, the clinician demonstrates to the patient the compassion that he or she feels inside. This is an important step toward collaborating successfully.

Honesty

All interactions with patients are built on a foundation of trust. Honesty fosters trust and establishes an atmosphere that is conducive to the work of co-creating a plan of action toward a healthier lifestyle. This means honesty with the medical facts, the clinical findings, and lab results. "This BMI puts you in the category of obesity which is a recognized clinical condition according to the American Medical Association," might be difficult to say to a patient, but when said in a non-judgmental, matter of fact way, it is more acceptable and can allow for further discussion about the topic. "You fall into the category of sedentary, which is a risk factor for cardiovascular disease," is another fact that needs to be communicated in this COACH approach style. After stating the facts, checking in with the patient and asking, "What do you think about that?" can help a patient manage the difficult news and express his or her fears and feelings. This too fosters a high quality connection between clinician and patient.

A study by Hillsdon et al compared two approaches of counseling patients on the addition of physical activity with a control. The first approach involved collaborating, negotiating, and conversing with the patient about exercise. The second approach utilized warning, advising and directing about the exercise and its benefits. When compared, those patients who experienced the collaboration and negotiation approach to their care were found to have exercised more minutes with compared with the second approach [34]. The COACH™ Approach is a powerful tool to aid in the likelihood of success when writing exercise prescriptions.

Its Fun: Exercise Prescriptions that Work

A relative newcomer to the field of medicine and wellness, the exercise prescription is designed to take advantage of the use of exercise as medicine. By the addition of this lifestyle behavioral change tool, patients can lose weight, improve their cardiovascular health, and reduce the effects of depression, anxiety and stress. Yet, the prescription can only be effective if it contains the right information for the patient to follow and the patient has inherent interest in the prescribed activity. Similar to pharmaceutical prescriptions, missing information leaves the patient confused and unable to follow the recommendation or worst, renders it useless. The IT'S FUN algorithm is an easy way to remember what considerations must be made and what information to include when writing an exercise prescription (Table 2).

I = Interest level in exercise
t = Timeline of exercise history
s = Signs, symptoms and risk factors for disease
F = Favorite activities
u = Unusual activities or ideas
n = Negotiate and narrow the focus for exercise

Table 2: It's fun mnemonic.

Interest level

The first step, that must take place as soon as an exercise prescription is considered, is a conversation with the patient to determine their interest level in participating in an exercise program. If

the level of interest or confidence level is too low, this will become an impediment to the process that may not be overcome. Interest level can be determined by asking a series of questions while showing compassion and curiosity toward the patient.

How interested are you in talking about physical activity today?

Are you looking to increase your level of exercise any time soon?

Are you interested in how exercise may help decrease the amount of stress (depression, anxiety) you are feeling?

If the patient is not interested in exercise at all, and says, "There is no way that I can exercise. I have no time, and I am too tired." Then, he or she is in the pre-contemplative stage of change for adopting routine physical activity. This patient is not ready to go forward in the algorithm. Thus, strategies directed at the pre-contemplative stage are the first step in counseling this type of patient. One simple strategy is to ask the patient's permission to share how exercise can benefit their particular ailments and conditions. A statement and question similar to this can open the door for a conversation, "I hear you say that there is no way you can possibly exercise now since you are working two jobs and your feet hurt. May I share with you some ways that exercise could help you with glucose control and perhaps reduce the amount of insulin you require each day?" Most patients respond to this request for permission with a yes. They have control and use their autonomy to allow the clinician to share information that is directly relevant to them as the patient. This plants a seed for the initiation of exercise. There are several ways to plant seeds for pre-contemplators. Another way is to tell stories of people who were in similar situations to that patient and let them hear the dramatic story of how the patient's life was changed by exercise. Recommending a book such as Spark by John Ratey will allow them to consider the psychological benefits of exercise on their own time, if they are interested. If nothing else, stating, "I understand that exercise is not a possibility for you at this point in your life. There are so many powerful effects of exercise that help a patient's mind including improving mood, decreasing stress levels, and reducing anxiety levels as well as effects that help a patient's body including improving cardiac and metabolic functioning. Exercise is powerful medicine. Its effects are as powerful as many medications. When you are ready and willing to speak about how exercise can enhance your life, I am here for you and will be really excited to have a conversation about exercise with you." This simple statement honors that patient's autonomy, and it demonstrates how important exercise is. Most importantly, it keeps the door open for future counseling sessions to focus on exercise.

Timeline

Key sources of information about a patient's condition related to depression, anxiety and stress can be discovered by referring to a detailed functional medicine timeline. By examining the antecedents (family history, genetic factors, and trauma), triggers, and mediators in the order in which they occurred, the clinician can gain valuable insight into what will likely be the best course of action to help alleviate a patient's suffering. Asking about an exercise history including "What did you do as a child for exercise, as a teenager in high school, as a college student, as a young adult, and what are you currently doing?" is important. It helps the clinician to understand how exercise has played a role in the patient's health and well-being throughout their lives. Time of depression might correlate with times of sedentary behavior preceding and or during the depression. Times of health and happiness might be connected to times of increased physical activity. By asking

about an exercise history, the clinician can really get to know the patient and how activity affects his or her health.

Signs and symptoms

As with any prescription, it is important to make an accurate assessment of signs and symptoms to determine the appropriateness of the recommendation. Answers to direct questions, such as “Are you having any chest pain?” Or “Are you experiencing any episodes of shortness of breath?” will indicate the effectiveness of the exercise recommendation for the patient. The Physical Activity Questionnaire (PAR-Q) is used at many fitness facilities to screen members before starting an exercise routine. The clinician can follow the American College of Sports Medicine (ACSM) guidelines for risk stratification reviewed in detail previously in this article. It is important for a patient to be properly screened prior to beginning an exercise routine. Any history of, risk factors for, signs of or symptoms of cardiac, metabolic, or endocrine conditions warrant further evaluation with a work up, labs, EKG, stress test, or consultation with a specialist, depending on the patient’s individual situation.

Favorites

Adherence to a physical activity program is aided if the activity holds inherent enjoyment for the patient. It is therefore helpful to inquire about the patient’s preferred ways to exercise. Probing for favorites can take the following form:

When you were active, what was your favorite physical activity?

If you could do any exercise in the world, what would it be?

If you had all the time in the world, what would you do for exercise?

What activities bring you the most joy?

Unusual activities and ideas

While it is useful and recommended to investigate exercises known and enjoyed by the patient, it is equally important to serve as a resource for unusual activities. When thinking of exercises, many patients may struggle to look for new ideas and relate the term “exercise” only to working out in a gym, jogging or biking. Creative approaches to physical activity can excite and motivate patients to get started. In addition, discussing motivators, pesky obstacles, strategies around barriers, and individual strengths, requires searching for the unique, the personalized, and the most powerful ideas, which are not usually the most common or straightforward ideas. Discovering motivators to exercise that connect to the patient’s priorities and sense of purpose is essential. For example, the patient might want to be able to keep up with his or her grandchildren on the playground and in a game of scrabble, describing the benefits of exercise in relation to brain derived growth factor, BDNF, (also known as miracle grow for neurons) as well as the cardiorespiratory fitness gains that exercise provides can help the patient view exercise as a way of empowering his or her body and mind and a way to keep up with young people. Many people equate exercise with weight loss efforts, but it is much more than that. Not many people know that exercise can increase the size of the hippocampus (area of the brain that is involved in memory consolidation). Emphasizing this little known, unusual fact, can help to change a patient’s perspective on exercise. Providing new ideas becomes particularly important once the patient has adhered to exercise prescriptions for a length of time and has reached the level of

maintenance. Novel ideas infuse a measure of freshness to the exercise program and may prevent periods of relapse.

Negotiate and narrow the focus

The final product of the exercise prescription will be the result of a collaborative process in which the patient is included and the terms are negotiated. Undoubtedly, the conversation between the clinician and the patient created a myriad of ideas- each valuable in its own right. The list of ideas needs to be narrowed down to create a plan that can be implemented. The following series of questions can be used to help narrow the focus and create a prescription in which the patient feels both included and motivated:

Of all the things we have discussed today about exercise, what sticks with you?

What are you taking away from our discussion about exercise?

What way forward do you see for yourself with regards to increasing physical activity?

What is one small step you could take to move toward your exercise goal?

A critical part of the negotiation step is to make sure the patient has a safe goal. For example, it is not safe for a sedentary patient to engage in vigorous activity. Often after an inspiring counseling session on exercise, a patient might feel motivated to get started by “running a marathon.” This is a lofty goal but not one that is appropriate in the short term for a sedentary patient. This long term goal needs to be broken down into multiple small steps, starting with a walking routine. A sedentary patient needs to start with a low intensity exercise. This will be a negotiation process with the patient. Similarly, if a sedentary man wants to go back to enjoying ice hockey, he will need to start with small steps such as buying skates that fit, sharpening the skates if he has older ones that fit, going to an open ice skating session and starting at a low intensity while comfortably skating around the rink. Explaining the importance of increasing cardiorespiratory fitness levels before jumping into a game situation is critical with the patient. Negotiating and discussing the possibility of a walking program or a stationary bicycling program that could be used to increase fitness in a safe and effective way so that the patient will ultimately, in weeks or months, be able to enjoy his target activity of ice hockey will be the art of exercise prescription writing and counseling (Figure 1).

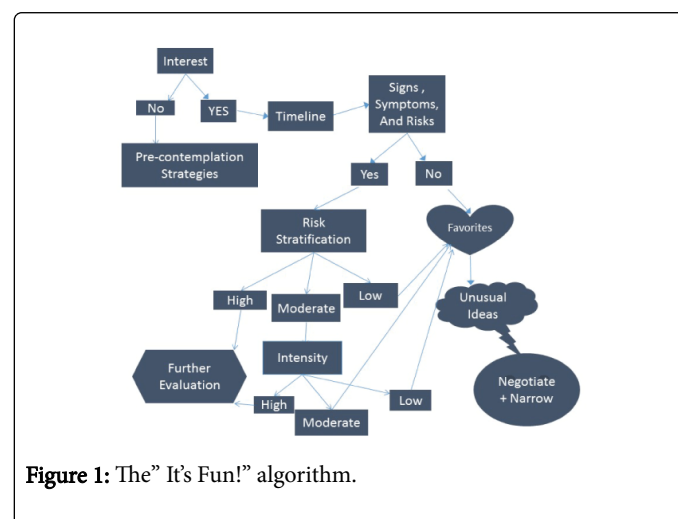


Figure 1: The “It’s Fun!” algorithm.

Description of Figure 1: The algorithm has six main steps.

Step one: Check in on interest level. If the patient is not interest and is in pre-contemplation for exercise, then planting seeds, sharing information with permission and most importantly making a connection that leaves the door open for future conversations are the goals.

Step two: Create an exercise timeline and determine the patient's current level of exercise as well as past levels.

Step three: Or safety, use the risk stratification system to determine the level of risk the patient has for cardiac events during exercise. Depending on the level of risk, the patient is cleared for different intensities of physical activities. Collaborating with a primary care physician, cardiologist, or other specialist depending on the patient's medical condition is advised. Further work up may be required prior to moving forward with the algorithm. It is risky and dangerous for a patient to go from sedentary to vigorous intensity exercise.

Step four: Explore past and present favorite activities.

Step five: Discover unusual activities of interest and unusual ideas about motivators for exercise, unusual ideas to get around barriers to exercise or unusual ways to use particular character strengths to reach exercise goals.

Step six: Negotiate and narrow down the focus of the exercise session by discussing ways forward and making sure they are realistic, safe, and empowering for the patient.

By using the IT'S FUN algorithm to guide the exercise prescription writing process, a clinician can help reduce the effects of depression, anxiety, and stress in a way that is safe for the patient, honors their autonomy, and increases motivation as well as self-confidence. It is important that this process include the utilization of the COACH Approach to reach its maximum potential. By acting as a coach, and not a dictator, a clinician will be the catalyst for sparking the patient's desire to participate in their own story of wellness success.

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