Guide to optimizing the stress-recovery balance

FIRSTBEAT

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INTRODUCTION

Stress management is not about avoiding stress, but about managing the overall load of life. The key is to find a balance between work, leisure time and sleep, and between activity and rest.

Lifestyle Assessment will visualize what some of the key stressors in your daily life are, what helps you to recover and what the effects of your physical activity are. This allows you to develop a manageable rhythm of life and regulate your stress, activity and rest in a more optimal way. By making small changes in your daily life, you can significantly affect your well-being, performance and ability to cope.

This guide will provide tips for better stress man-age-ment, enhancing recovery and finding exercise that provides optimal benefits.

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GOOD OR BAD STRESS?

Stress is a normal physiological reaction that elevates the body's activation level. The effect of short-term stress is usually beneficial, but when prolonged, it becomes unhealthy.

In an acute stress reaction, the body's activation level rises, which is seen as increased heart rate and metabolism. Stress is good or beneficial, for example, when you have a deadline and need to finish a speci-fic work task. When the acute stress situation is over, the body is able to calm down (Figure 1).

Long-term stress without sufficient recovery is unhealthy. Constant hurry, an unhealthy lifestyle and excessive pressure or worrying keep the body at a high activation level and prevent it from calming down and recovering (Figure 2).

If the sleep periods, leisure time or weekends do not allow the body to recover sufficiently, it can be a sign of prolonged, negative stress. During especially demanding periods in life, extra stressors should be minimized to keep the overall load manageable.

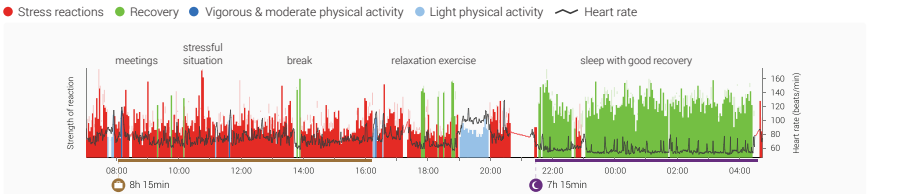


Figure 1. Good stress helps us function effectively when needed, but does not prevent recovery during sleep and relaxation.

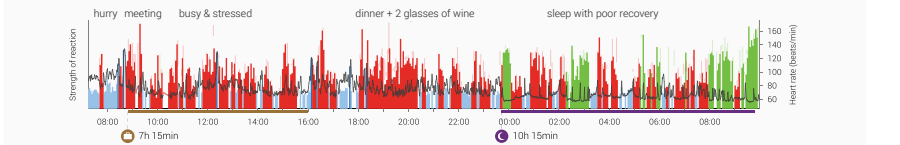


Figure 2. Bad (negative) stress maintains a high activation level constantly and prevents recovery even during sleep.

MOST COMMON CAUSES OF STRESS

Alcohol and drugs, work stress, relationship problems and poor physical condition are among the most common stressors. Negative emotions also tend to stimulate the secretion of stress hormones.

Even one stress factor can load the body, but the combined effect of several stressors at the same time can be significant.

When the body is already strained, for example due to being too busy, under work pressure or struggling with a cold, even 2 units of alcohol or intensive exercise can tip the scale and essentially eliminate good-quality recovery during sleep.

The stronger and of longer duration the stressor is, the bigger the risk of exhaustion or illnesses (Figure 3).

Physical stressors	Psychological stressors
• Alcohol, other drugs and stimulants	• Work stress
• Illnesses and medications	• Constant hurry and time management problems
• Pain and infections	• Sudden life changes and crises
• Sleep problems, lack of sleep, mixed-up sleep rhythm	• Relationship problems, e.g. ongoing arguments and disagreements
• Poor fitness	• Negative emotions, e.g. fear and hatred
• Overweight	• Stressful things right before bedtime, e.g. work emails or pressure
• Intensive exercise, physical overload	
• Menopause	

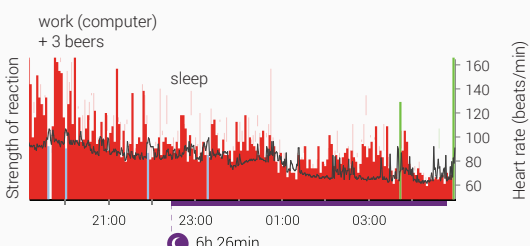


Figure 3. Work stress and late work, together with 3 units of alcohol can completely eliminate physiological recovery during sleep.

- Stress reactions
- Recovery
- Vigorous & moderate physical activity
- Light physical activity
- Heart rate

RECOGNIZE AND TAME STRESS

Recognizing stress can be difficult because one's own psychological feelings can be in conflict with the body's physiological stress state. Firstbeat Lifestyle Assessment will help you to identify bad or negative stress. The following symptoms can also indicate excessive stress:

Physical symptoms of stress:	Psychological symptoms of stress:
• Sleep problems • Physical symptoms, pain • Frequent illnesses; prone to infections • Digestive problems • Reduced or increased appetite • Increased blood pressure, heart symptoms • Weak recovery, chronic fatigue	• Mood changes • Problems with memory • Lack of motivation • Anxiety • Irritability, restlessness • Inability to concentrate • Increased or decreased need for contact / intimacy • Changes in use of stimulants, alcohol or drugs

When you feel stressed, think about these questions:

- Have you slept enough?
- Have you eaten and drunk regularly?
- Have you found time for physical activity?
- Do you get joy / satisfaction from what you do?

It is important to react in time. It's your choice whether to keep worrying about the way things are, or to take action to solve the problem. Take one step at a time - even small changes can help you gain significant results and improvements.

Even when you are very busy, do not skip meals, forget to drink or cut down on sleep. This helps you to keep your performance level high. A good guideline is to aim for 80% of your choices to be ones that support health and wellness.

RECOVERY INCREASES THE BODY'S RESOURCES

Recovery means a lowered activation level of the body, for example during sleep or relaxation. The body needs regular recovery to maintain health and good performance and replenish consumed resources.

In addition to sleep, rest and relaxation, good physical fitness and healthy nutrition support recovery. Good friends and relationships, nice hobbies, humor and a positive outlook on life are also a good counterbalance to stress.

DO YOU RECOVER DURING SLEEP?

Sufficiently long, good-quality sleep is necessary for good health. The need for sleep is individual, but a general recommendation is at least 7 hours. It's important to be aware of how much sleep you need, and to attempt to sleep enough to match that need.

Different stressors, such as stress, illnesses and heavy physical or mental load can weaken recovery. Thus, at stressful times it can be necessary to increase the amount of sleep to counter the heavier load.

If you do not recover during sleep, it is important to identify the causes of stress or overload and determine if it is temporary or more chronic (Figures 4 and 5). If the situation has been going on for a long time, you should react to it promptly.

Tips for better sleep:

- Reduce stressors / factors known to weaken sleep (e.g. alcohol and stimulants)
- Avoid strenuous exercise within 3-4 hours before sleep
- Learn to slow down in the evening (e.g. reading, relaxation exercises)
- Regular sleep rhythm
- Work through worries / stressful things already during the day

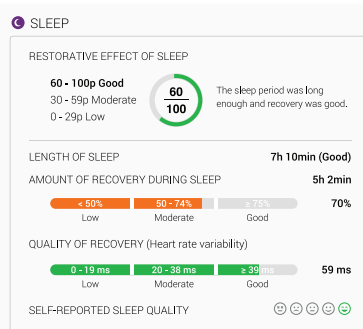


Figure 4. The restorative effect of sleep is affected by sleep duration and the amount and quality of recovery. A good result can be reached e.g. by sleeping 7.5h with mostly good recovery.

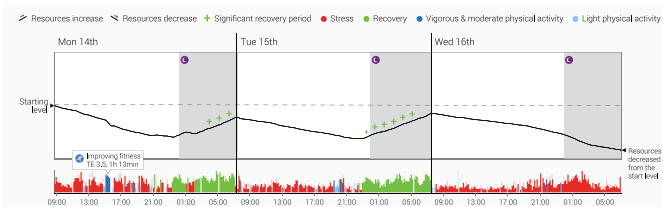


Figure 5. If you are not able to replenish your resources during sleep, it's important to identify the reasons and react to them.

FIND WAYS TO RELAX THAT WORK FOR YOU

Even a few minutes of relaxation during the day can help to lower the body's stress level and improve work efficiency. By relaxing, you can improve your mood, become more effective at problem solving and learn to regulate your activation level to fit the situation.

It is important to learn to recognize how stress affects your body. Do you hold your breath, grind your teeth or tense your muscles? You can consciously relax your body by, for example, breathing calmly and deeply in and out a few times. The relaxing effect can be potentiated by holding your breath for a few seconds after each inhalation and exhalation (Figure 6).

Lifestyle Assessment shows if your body recovers physiologically when you attempt to recover and when it's meaningful (e.g. during sleep or rest), and what activities help you to recover.

Relaxation methods:

- Breathing exercises, meditation, mindfulness
- Art and culture, e.g. music, reading
- Massage, touch, heat
- Crafts, sewing, cooking
- Easy physical activity, e.g. yoga or stretching
- Strolling in nature, fishing etc.
- Family, friends, humor

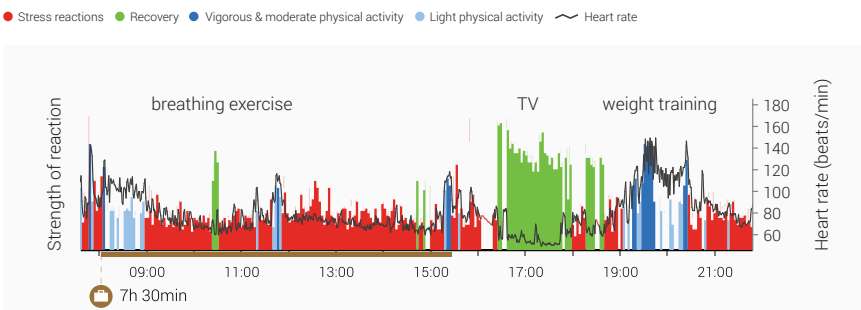


Figure 6. Even a short moment of relaxation can calm the body and the mind and help you recover.

REGULAR EXERCISE IMPROVES YOUR ABILITY TO HANDLE STRESS

By being physically active on a regular basis, you can recover better and your ability to handle stress improves (Figure 7). Physical activity promotes health and prolongs life, supports mental well-being and improves the performance of your brain.

Lifestyle Assessment shows the effect of your physical activity on health and fitness (Figure 8). You can get significant health benefits by being physically active approximately 30 minutes per day at a moderate intensity (getting slightly out-of-breath and sweaty). The activity can be some kind of endurance exercise or for example brisk yard work. The training effect value tells if the exercise improved your fitness level.

For purposes of health, it is important that you develop both endurance, muscular strength and flexibility. The effects of endurance (aerobic) exercise are focused on the heart, lungs and respiratory system, whereas strength and flexibility training affect the muscles and joints.

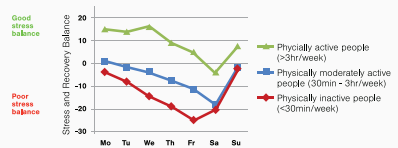
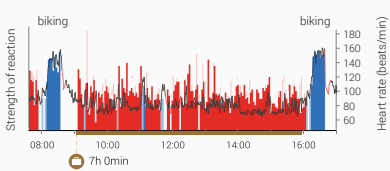


Figure 7. People who are physically active over 3 hours per week recover better than less active people (Firstbeat 2014).

Endurance activities	Strength and coordination/ flexibility activities
• Running, hiking • Biking • Nordic skiing • Swimming • Ball games	• Gym training • Group exercise (dance, aerobics) • Heavy physical work • Yoga, pilates • Stretching, coordination exercises



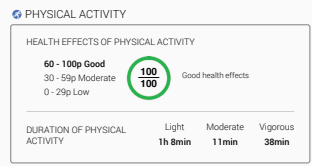


Figure 8. Lifestyle Assessment shows you the health effects of your physical activity. A good result can be reached e.g. with 30 min of moderate or 20 min of vigorous physical activity.

HOW TO SAFELY IMPROVE YOUR FITNESS

Physical activity that is very light does not improve your fitness level, but on the other hand, frequently repeated, very intensive exercise can lead to overtraining. Thus, a balanced exercise program includes both light and moderate to vigorous physical activity.

During light physical activity, the training effect is low (1). The highest training effect (5) is achieved with very high-intensity exercise of sufficient duration. High-intensity exercise weakens recovery acutely, but as long as it's balanced with appropriate recovery and easier exercise, it is an effective way to improve fitness (Figure 9).

A beginning exerciser should avoid frequent high-intensity workouts when getting started. Workouts with a training effect of 4 or 5 are usually not needed at all in the beginning. When the fitness level improves, the body can handle more strenuous exercise sessions regularly.

Even for a fit person, it is important to let the body recover between harder sessions, with easier workouts. Light physical activity does not load the body, and can thus be done for longer periods of time. Good examples include hiking, walking, yard work, and other daily activities that increase metabolism.

Basic principles of exercise:

- Increasing training volume or intensity too quickly increases the risk of injuries and overtraining.
- A fit person can handle a harder training load than a beginning exerciser or an unfit person.
- An overloaded body cannot handle intensive exercise. Many illnesses also put restrictions on the person's ability to exercise, especially intensively.
- Even a small amount of physical activity every day promotes health. It's better to do something than to be completely inactive.

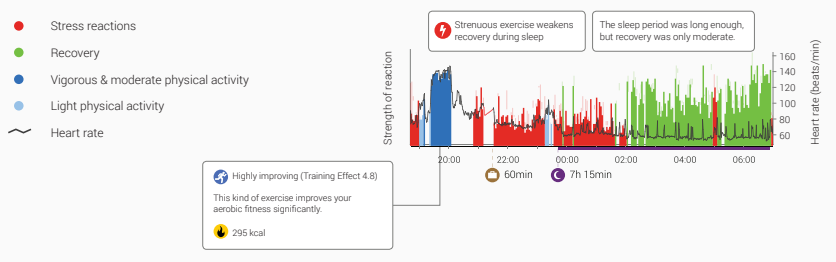


Figure 9. Strenuous exercise (training effect 4-5) weakens recovery acutely, but is effective in improving one's fitness level.

FINE TUNE YOUR PERFORMANCE WITH GOOD NUTRITION

An irregular meal rhythm leads to a fluctuating blood sugar level and raises stress hormone levels. To utilize the full potential of your body and the brain, you should eat something every 4 hours. Fluctuating blood sugar can easily lead to irritability, fatigue and concentration problems, and can increase the craving for unhealthy snacks.

Make sure your diet includes whole grains, root vegetables, fruits and berries and high-quality proteins. When each meal includes, for example, fish, chicken, beans or yoghurt, you will stay sated and focused longer.

Remember these tips:

- A low-carbohydrate diet, together with heavy exercise can increase stress hormone levels. Low / insufficient energy intake is a strain on the body and the mind.
- Ensure that you get enough omega-3 fatty acids by favoring oily fish and including cold-pressed vegetable oils and nuts in your diet.
- Caffeine accelerates the activity of the nervous system, so during stressful periods it can be good to cut down on the use of caffeine.

Brain chemistry affects the ability to fall asleep. Thus, it is important to include easily-absorbing carbohydrates in your evening meal (e.g. banana, porridge). Avoid foods that contain a lot of protein or fats, such as large portions of meat.

Many people try to enhance falling asleep with alcohol, but even one unit can affect recovery negatively. People who are struggling with getting good sleep should stop consuming coffee or other stimulants at least six hours before going to sleep.

It's good to keep in mind that if the baseline diet is balanced and healthy, it's no problem to allow some exceptions every once in a while.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