

[Priest, D., & Karageorghis, C. I. \(2008\). A qualitative investigation into the characteristics and effects of music accompanying exercise. \*European Physical Education Review\*, 14\(3\), 347-366. doi:10.1177/1356336x08095670](#)

**Summary by:** Mahnoor

Purpose: identify and describe the motivational qualities of music and their effects in the context of gymnasias

Method: 13 participants were interviewed, various backgrounds – music classes, cardiovascular training and resistance training with varying diversity and sexes

Results: some say that having the rhythm associate to the beat in which you're moving is beneficial, have a desire to keep up with it. If the beat is too heavy then it can pull participants down, some prefer hard beats. Generally, a fast tempo was considered to be motivating. Some say harmonies or key changes inspire them. Lyrics can also be highly motivational to listen to during exercise, remind you of your ambitions. Time of day also influences music, in the morning most prefer gentle and then later on people prefer stronger rhythms.

Discussion: the importance of rhythm in determining the response to music. Synchronous with physical movement. Music can be used to evoke mental imagery that is related to physical activity.

Conclusions: rhythm is the most salient factor and should be considered when selecting a piece of music, specialized music preferences develop when you are exercising (different from regular music taste).

### **Simpler terms sentences:**

This article interviewed 13 individuals of different sexes, ethnicities and exercise backgrounds. Though music properties vary from person to person, generally most prefer rhythms to match with the movement of their body. Music taste changes from your regular music preference, some develop specialized music preferences depending on the type of exercise. Lyrics also play an important role when seeking motivational music during exercise.

### **Potential songs**

#### Rhythm

- Mi Gente – J Balvin
- Wake me up – Avicii

#### Lyrics

- Happy – Pharrell
- Sunday best – Surfaces

[English, T., Mavros, Y., & Jay, O. \(2019\). Listening to motivational music mitigates heat-related reductions in exercise performance. \*Physiology & Behavior\*, 208. doi:https://doi-org.libaccess.lib.mcmaster.ca/10.1016/j.physbeh.2019.112567](https://doi.org.libaccess.lib.mcmaster.ca/10.1016/j.physbeh.2019.112567)

**Summary by:** Marin Shiell

**Purpose:** to determine whether listening to motivational music diminishes heat-related reductions in exercise performance and leads to a greater increase in thermal and cardiovascular strain.

**Methods:** 12 participants completed 30 mins of cycling, followed by a 5 min rest period, and then 15 mins cycling time trial. Participants either listened to self-selected motivational music during the 5 min rest and 15 min time trial or listened to no music. Music was rated using the Brunel Music Rating Inventory (BMRI-3), which guides participants to rate the rhythm, style, melody, tempo, sound, and beat. Only songs scoring in the highly motivational range (36-42/42) were accepted. Exercise took place in either a 21 degree C (NEU) chamber or a 36 degree C (HOT) chamber. Total work, core temperature, HR, and BP were measured.

**Results:** Total work was greater when listening to music in both the NEU and HOT conditions. Also, in the HOT condition, the greater total work while listening to music resulted in higher core temp and higher rate-pressure product.

**Conclusions:** Listening to motivational music while exercising can diminish heat-related reductions in performance, leading to improved performance overall. Moreover, improved performance leads to an increase in thermal and cardiovascular strain in hot conditions.

### **Simple terms:**

Overall, exercise performance can be improved by listening to motivational music in hot or room temperature conditions. Although the 22 participants in this study may have varied in their personal music taste, the key components that characterize motivational music were common across participants. Motivational music tends to be fast paced (>120 bpm) and is associated with positive emotions, which could be due to greater levels of dopamine release in the brain.

### **Potential Songs:**

- Titanium (126 bpm) – David Guetta (feat. Sia)
- I Can't Stop (140 bpm) – Flux Pavilion
- Let's Go (128 bpm) – Calvin Harries (feat. Ne-Yo)
- I Could Be The One (128 bpm) – Avicii, Nicky Romero
- Head & Heart (123 bpm) – Joel Corry (feat. MNEK)
- The Business (120 bpm) – Tiësto

[Belkhir, Y., Rekik, G., Chtourou, H., & Souissi, N. \(2020\). Effect of listening to synchronous versus motivational music during warm-up on the diurnal variation of short-term maximal performance and subjective experiences. \*Chronobiology International: The Journal of Biological & Medical Rhythm Research\*, 37\(11\), 1611–1620.](#)

**Summary by:** Marin Shiell

**Purpose:** To determine which type of music (synchronous or motivational) is better at improving short-term maximal performance (STMP) and subjective experiences during exercise, and under what conditions (morning versus afternoon).

**Methods:** Participants consisted of 16 male university students. Each participant completed 6 warm-up sessions on the Cycloergometer Monark model 894E in a random order: two 10-min warm-ups with synchronous music (WUSM), two with motivational music (WUMM), and two with no music (WUWM). Warm-ups were either completed during the morning or afternoon. Following each warm-up, they completed a 30-s Continuous Jump (CJ<sub>30</sub>) test. Synchronous music had a tempo of 60 bpm and motivational music had a tempo of >120-140 bpm. STMP was measured during the CJ<sub>30</sub> test, subjective experiences (RPE and FS) were measured after the warm-up and at the of the CJ<sub>30</sub>, and body temp was measured before and after warm-up, and at the end of the CJ<sub>30</sub>.

**Results:** Performance on the CJ<sub>30</sub> test was better during the afternoon than the morning session with and without music, but subjective experience did not differ depending on time of day (TOD). Listening to music enhanced STMP during the CJ<sub>30</sub> test in both TOD conditions, with greater enhancement in the morning. Subjective experience was better in the WUMM than WUWM condition during both times of the day. Overall, STMP was better in the WUMM than WUSM condition regardless of TOD, but subjective experience did not differ between music types.

**Conclusions:** The results of this study indicate that listening to motivational or synchronous music during a warm-up will improve STMP and subjective experience compared to no music. Between these two types of music, motivational music will lead to a greater STMP compared to synchronous music, and this difference will be further enhanced in the morning. Subjective experience, including affect (Feeling Scale) and perceived exertion (RPE) does not differ between music types.

### **Simple terms:**

If you want to improve your overall exercise performance, listening to music during your warm-up is a great idea. Listening to either synchronous or motivational music will improve your performance on a subsequent task compared to no music. Listening to either type of music is a valuable strategy in terms of subjective experience, but if you are more concerned with how you perform during exercise rather than how you feel, you should listen to motivational music because it will lead to the best overall performance. No matter what time of day you prefer to exercise, music will provide a significant

benefit to your performance and subjective experience, but the benefits of music will be most noticeable during morning sessions.

### **Potential Songs:**

#### Motivational Songs:

- “Don’t Stop the Music” (128 bpm) - Rihanna
- “Survivor” (161 bpm) - Destiny’s Child
- “Power” (154 bpm) - Kanye West
- “Motivation” (171 bpm) - Normani
- “All of the Lights” (142 bpm) - Kanye West
- “Sugar” (120 bpm) - Maroon 5
- “Animal” (148 bpm) - Neon Lights
- “I Don’t Know Why” (120 bpm) - NOTD, Astrid S

#### Synchronous Songs:

- “Green Light” (62 bpm) - John Legend & Andre 3000
- “Here” (61 bpm) - Alessia Cara

[Patania, V. M., Padulo, J., Iuliano, E., Ardigo, L. P., Cular, D., Miletic, A., & De Giorgio, A. \(2020\). The Psychophysiological Effects of Different Tempo Music on Endurance Versus High-Intensity Performances. FRONTIERS IN PSYCHOLOGY, 11. https://doi-org.libaccess.lib.mcmaster.ca/10.3389/fpsyg.2020.00074](https://doi.org.libaccess.lib.mcmaster.ca/10.3389/fpsyg.2020.00074)

**Summary by:** Marin Shiell

**Purpose:** To determine whether high intensity exercise is more sensitive to the benefits of music than endurance exercise. To do so, the authors examined ratings of perceived exertion (RPE) after low and high intensity exercise, while listening to different types of music or no music at all.

**Methods:** Participants consisted of 19 active young women. Each participant completed an endurance exercise and a higher intensity exercise. Participants performed each exercise four times under four different music conditions: no music (NM), with music at 90-110 bpm (LOW), with music at 130-150 bpm (MED), or with music at 170-190 bpm (HIGH). During each music condition, a total of four pop songs were played with each subsequent song having a higher bpm than the song played before it. Also, throughout each trial, heart rate (HR) and RPE were measured.

**Results:** HIGH tempos (170-190 bpm) correlate with the greatest reduction in RPE in both high intensity and endurance-based exercise. MED (130-150 bpm) and LOW tempos (90-110 bpm) also provide a reduction in RPE compared to no music, but the reduction is not as great as it is in the HIGH tempo condition. Between high intensity and endurance exercise, endurance exercise appears to be more sensitive to the benefits of music.

**Conclusions:** Listening to music can reduce RPE during both high intensity and endurance exercise. However, people engaging in endurance exercise appear to be more sensitive to external input due to mental fatigue and greater perceived effort compared to high intensity exercise. Thus, reductions in RPE due to music are greater in endurance than high intensity conditions. Reductions in RPE also appear to coincide with increasing tempo, such that the greater the bpm, the lower the RPE.

### **Simple terms:**

Incorporating music into your exercise routine is always a good idea. Whether you prefer high intensity activities or more endurance-based exercises, music has been proven to reduce feelings of tiredness, strain, and overall perceptions of exertion during physical activity. The benefits of listening to music during exercise seem to be greater in endurance exercise due to its slower and more mentally challenging nature. In terms of selecting the best type of music for your exercise, the most important factor appears to be tempo. Songs with fast tempos—between 170-190 bpm—correlate with the greatest reductions in perceived exertion in both types of exercise, but especially in endurance exercise.

## Potential Songs:

- “Paper Planes” (172 bpm) - M.I.A.
- “Irreplaceable” (176 bpm) - Beyoncé
- “Umbrella” (174 bpm) - Rihanna, Jay-Z
- “Bye Bye Bye” (173 bpm) - NSYNC
- “Blinding Lights” (172 bpm) - The Weeknd
- “Tomorrow” (175 bpm) - BTS
- “Just One Day” (190 bpm) - BTS