

OUR DECLARATION OF INTENT

The Les Mills global family is made up of 16,000 fitness clubs, 100,000 instructors and millions of participants from 112 countries around the globe.

SEPARATED BY GEOGRAPHY, RELIGION, RACE, COLOR AND CREED, WE ARE UNITED IN OUR LOVE OF MOVEMENT, MUSIC AND THE PURSUIT OF HEALTHY LIVING, BOTH FOR OURSELVES AND OUR PLANET.

AT LES MILLS WE BELIEVE IN THE DIGNITY OF EACH INDIVIDUAL WITHIN OUR COMMUNITY AND STRIVE TO RESPECT THE RIGHTS AND FREEDOMS OF ALL.

In our choice of role models, music and movements we understand that different people and societies have different standards for dress, popular culture and dance.

WE ALSO KNOW THAT WHAT IS CONSIDERED APPROPRIATE IN SOME CONTEXTS CAN BE SEEN AS INAPPROPRIATE IN OTHERS.

As a company that leads group fitness experiences for millions of people every day, we walk a fine line between delivering cutting-edge, innovative products and ensuring that accepted norms are upheld and respected.

Choosing, licensing and matching choreography to the right music is a huge challenge! We screen the music we use and try to avoid language and references that may cause offense. If we can, sometimes there will be an alternative track (at the bottom of the track list) for you to use instead.

WE EMBRACE OPEN COMMUNICATION WITH OUR GLOBAL FAMILY SO DIFFERENCES OF OPINION CAN BE EXPRESSED, AND COMPROMISES REACHED.

ABOVE ALL, WE ARE PASSIONATE ABOUT DELIVERING LIFE-CHANGING FITNESS EXPERIENCES, EVERY TIME, EVERYWHERE.

BLAH BE LOUD AND HEARD

Tell us what you think of this release.
Visit lesmills.com/BLAH

RPM 70



From L-R: Jamie Benton (Shadow), Fatma Azzouz, Glen Ostergaard, Washington Chishaya, Sandra Knudsen (Shadow)

RPM 70 brings a blend of short speed intervals and longer endurance climbs and, of course, our normal focus of cardio peak training where we work and recover.

For this release the highlight tracks are Tracks 2 and 3.

In Track 2 we've really amped up the pace. There are four short efforts – however, it's not your normal seated sprint here: there are two 15-second seated sprints and then two 15-second Standing Attacks!

As we are standing and sprinting, it's crucial we've got adequate resistance on. Because all four efforts are short, everyone should be able to achieve that top pace. There's also heaps of rest between the efforts, so both factors will help your riders achieve that maximum effort for sure!

Track 3 is much faster than any climbing track we've ever had. Most Track 3's are at about 75rpm, but this one is 87rpm! The sheer speed of the track alone will fatigue you early on! However, the fact that there's not much recovery will most likely send you and your riders over the edge! Be sure to option to reduce resistance in the seated phases if needed; this will take the edge off a little, BUT make sure they put it back on when they stand.

In Track 4, to ensure everyone achieves success we are building into the speed phases. There's 30 seconds in which to build pace just under the beat and then 30 seconds at top speed, with the last block being a bit longer, at 45 seconds at 1/1. By building into the work, it will help your riders achieve riding on the beat as the efforts are shorter.

In Track 5, we introduce options to go faster than the rhythm at 1/1+. Set up the choreography in the first block, then option the faster tempo in the other five blocks in the Standing Attacks.

Remember to talk about SMARTSTART always at the beginning of the class. Address the new people to the program by telling them that if they want to stay for the first 4 tracks then leave, that's OK. Then they can add one track the following week, and so on – until they can do an entire class. Don't forget to remind them about this again after Track 4.

RPM 70 is a wicked release – it's a game-changer, which will challenge both the new and seasoned riders.

Forah ☺ M.O.

RPM Presenters

Glen Ostergaard (New Zealand) is Program Director for both RPM and BODYPUMP™. He began his group fitness career with BODYATTACK™ and is based in Auckland.

Fatma Azzouz (France) is a RPM, BODYPUMP and CXWORX™ Instructor and Trainer, a BODYBALANCE™/BODYFLOW® and SH'BAM™ Instructor, and a Pilates instructor. She is also General Fitness Manager at a club in Soustons.

Washington Chishaya (United Kingdom) is an RPM, BODYWIVE 3.1™ and CXWORX Instructor and Trainer and a BODYATTACK and BODYPUMP Instructor. He is based in London.

Hey instructors! When it comes to mixing up past releases, please try to select tracks from the most recent material to reflect current music and training principles. If you are teaching older releases, be sure to mix with modern tracks and **do not change the choreography**; teach the tracks as they were created but you can apply more modern coaching language and terminology. If using Track 8 (Ride Home/Stretch) from Release 63 onwards, then do not also teach a Track 9 (Stretch) from releases prior to RPM 63.

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BODYPUMP & BONE HEALTH

It has been predicted that, by the year 2020, osteoporosis will afflict 14 million people in the over-50 population, globally.

An additional 47 million are likely to suffer from low bone mass.

Why should we be worried?

Having low bone mineral density can be devastating as we age. Fractures of the hip are a common occurrence for older people with osteoporosis. Statistics tell us that **one in five people over 50 years of age will die within 12 months following a hip fracture**, and less than one third will regain their normal level of functioning.

Loss of bone density can start at as young as 35 years old, and after the age of 40, the rate of decline accelerates. **It's vital that we build a peak bone mass before this rapid decline**, and that we maintain this bone mass later on in life.

Resistance training is prescribed to maintain and increase bone mass. The traditional prescription has been to lift heavy loads for low repetitions. Although this type of training is accepted widely, it is not always practical for certain populations. Lifting very heavy weights in the gym can present barriers for older and untrained adults and women, for whom this type of high intensity can be outside the realm of their physical capabilities.

Les Mills BODYPUMP is highly attended, both by older participants and women. This program is seen as being more achievable and less intimidating than the traditional strength training model of heavy weights for low reps. However, until now, there has been no specific

evidence as to how BODYPUMP affects bone density.

Previous studies have presented conflicting evidence as to whether a low-load, high-repetition program can increase bone mineral density. This lack of clear consensus led us to conduct a study to discover what effect BODYPUMP can have on this issue.

A total of 20 adults completed a 27-week study at the FITOLOGY group fitness studio.

They were randomly put into two groups – either total-body resistance strength training or core strength training. The participants were 28 to 63 years of age and included people who suffered from osteopenia, and also those who were postmenopausal. These are two populations who would greatly benefit from increasing bone mineral density.

The strength training group completed classes in BODYPUMP, the core training group took classes in BODYBALANCE/BODYFLOW, and both groups also participated in RPM.

The results were rather amazing.

The group that took part in BODYPUMP saw their arm bone mineral density increase by 4%, leg by 8%, pelvis by 7% and spine by 3%.

The BODYPUMP group gains in squat strength were 25.3% greater than that of the core strength group. This increase in squat strength was directly related to increases in their bone density. In other words, increasing your ability to squat will improve your bone mineral density.

The other strong improvement was an increase in pelvis bone mineral density. Improving bone density in both the pelvis and legs is extremely significant when it comes to **avoiding potentially fatal fractures of the hip.**

One of the really great things about BODYPUMP is that it is a very accessible program for older and untrained adults and women. As the load is low and you select your own weights, it is an easier program to practise long term trying to lift heavy loads in the weights room. Participants with osteopenia increased their bone density around the hip and pelvis area by 29% while our postmenopausal women saw 22% increases in the same region.

The results of this study clearly show that a low-load, high-resistance program is an effective way to increase bone mineral density. **BODYPUMP, therefore is the perfect way to stay fit and strong and remain healthy as we age.**

For more on this study, go to <http://www.minervamedica.it/en/journals/sports-med-physical-fitness/article.php?cod=R40Y9999N00A150155>



MIXING RELEASES

How you mix up tracks has a major effect on how many calories your participants will burn.

We ask that you teach each new release for at least two weeks after launching. This is to give people time to master any new exercises and become familiar with the new choreography. It also creates a bond between instructors and participants around the globe, as we all experience the magic of a new release at the same time.

But how long is too long to be teaching the same release? Should we EVER mix releases?

To answer these questions, we looked at calorie expenditure from three different new releases and measured the output in over 1,000 workouts. Each person completed three classes a week from our cardio formats, plus two BODYPUMP classes.

The first time a person completes a new class, their caloric expenditure is slightly less than in their regular classes.

Participants tell us they do not feel as confident about the exercises when they are new. However, the second time a person completes that release their caloric expenditure is back to the levels we would expect to see during a typical class.

Unfortunately, if we continue to repeat exactly the same tracks for the next three to five classes, **caloric expenditure decreases and then actually stays below normal.** Based on after-class survey data, this drop in expenditure is because the participants find the class slightly less challenging and interesting. Members know what to expect and they learn how to minimize their expenditure. Quite simply, they cheat!

Consider the people who come to YOUR class. New people will need more time to become familiar with each workout. To deliver a quality class to your members, you also need to have enough time to feel confident about the choreography. But, based upon calorie expenditure we can provide the following guidance for you and your club.

What is the ideal number of tracks to switch up every week?

- **Change RPM and BODYPUMP the most.** If you are teaching a regular group of members, try to **change 6 to 8 tracks per week** in order to maximize energy expenditure.
- For BODYATTACK, BODYCOMBAT and SH'BAM try to switch out **3 to 5 tracks each week.**
- For BODYSTEP, BODYVIVE, CXWORX and BODYBALANCE/ BODYFLOW try to vary your playlist by **2 to 4 tracks each week.** LES MILLS GRIT Series has specific considerations for each release. Check your choreography notes for these guidelines.

When you mix releases it is important that you select your playlists carefully. Programs such as BODYCOMBAT, BODYJAM, or BODYBALANCE/ BODYFLOW often have a sequence of movements that are introduced, mastered, and repeated throughout the release. Therefore, it may not be possible to follow these guidelines for every release.

And, of course, be aware of how many tracks you can switch each week while still being able to master and deliver the choreography in a clear, motivating way.

The bottom line is that we want to provide the best fitness experience in every class... so how about it? Give it a try-mix it up!



RPM COACHING

Stay on top of your game with Coaching.

We've made some key changes to the Coaching Layers.

Here's what you need to know to make your **new people feel successful AND provide challenges for your hardcore riders.**

Layer 1

Layer 1 has been separated into two components: the Track Introduction and the Setup.

Track Introduction

- Names the track
- Introduces the Track Focus
- Explains the training objective and associated benefits
- Profiles the track: how many hills, the number of intervals and length of the efforts
- "Track 3, Hills. Three climbs, each one is 60 seconds. In this track we will develop leg strength by using heavy resistance, working in and out of the saddle."

Setup

We prepare the class by telling them what **Position** to ride in and the **Resistance** to use, and by explaining the **Pace**.

Layer 2

Layer 2 has three key parts:

Improve Execution

Help your class to improve their cycling skills, eg "Slide forward in the saddle and point your toes slightly to go faster."

Manipulate Intensity

We use Physical Intensity cues of easy, moderate or hard. This tells our riders:

- How hard they should be working
- How they should FEEL when working at those intensities

How they can achieve the correct intensity if they're not feeling it? The easiest way to communicate intensity is by describing **how the muscles should feel**, and how **heavy they should be breathing**. For example, "You should be doing open-mouthed breathing and needing lots of air right now."

Educate

People want to know the WHY behind the exercises. Cues like, "Sit the hips back in the saddle to engage the glutes" will help everybody understand why they are doing what they are doing too!

Layer 3

Layer 3 is where we motivate and drive everyone to give their absolute best. It's about inspiring people, but allowing them to have fun!

Inspire people by Being the Athlete – using your own physicality to inspire the people in front of you. When you are pushing hard yourself, your riders will work hard too. Use lots of praise and encouragement to keep everyone in the workout. Celebrate people's efforts and recognize their achievements.

Create an Inspirational Journey by using imagery. This is where you help people to visualize the road in front of them, and understand how they are supposed to feel. Direct them to thinking about long roads or sprints, using their imagination to create the journey.

Finally, we use **Motivational Cues**. These are the cues that push people beyond what they thought they were capable of, and it's a big part of the reason that members come to our classes – we take them somewhere they couldn't have got to on their own.

- **Extrinsic** cues focus on the external rewards we get from training. For example, "Our sprinting tracks give us athletic, toned legs".
- **Intrinsic** cues refer to how the exercise will make you feel, eg "Push hard here and you'll be buzzing for the rest of the day."
- **Positive** cues commend the class: "You guys look great; I can see how hard you are working."
- **Dissatisfaction** (or 'challenging') cues can be used to push our regular riders by being a little tough on them – "Who can dig deeper right now and give me more resistance?"

So there you have it – **you're totally up to date!** Watch the filming class for examples of how to use these Coaching Layers in this release.



RPM SCIENCE UPDATE

RPM combines the effects of 2 training modalities: Cardiovascular training coupled with short bursts of intensity.

What are the key benefits of these 2 training methods?

CARDIOVASCULAR TRAINING

This is what most people are doing when they jump on a treadmill or a stationary bike. It involves sustained periods of exercise operating between 60 and 80% of your maximum heart rate and it challenges the capacity of our muscles to operate for long periods of time.

This type of training generates the following changes:

- **Increases aerobic capacity**

Cardiovascular training increases our aerobic capacity – meaning we get better at providing oxygen to our muscles when they need it.

- **Improves heart function**

It improves heart function by decreasing our resting heart rate and increasing our stroke volume – or the amount of blood that exits the heart on each beat.

- **Reduces blood pressure, decreases cholesterol and body fat**

It also reduces blood pressure, decreases cholesterol and increases the mobilization and utilization of fat, ie it generates fat loss. Cardiovascular disease is the biggest killer in the Western world, so when these changes take place we go a long way to reducing the risks associated with this condition.

SHORT BURSTS OF INTENSITY

The second lot of effects comes from the Peaks of Intensity in each working phase. In some of these peaks our experienced riders will reach intensities of over 85% of their maximum heart

rate. Training at these levels for short periods accelerates our fitness gains.

Changes experienced with this type of training include:

ACCELERATED CHANGES IN OUR VO2

Increasing the intensity for short periods in conjunction with this cardiovascular base has been shown to rapidly improve VO2.

CHANGES IN BODY COMPOSITION

Including these short bursts of effort in our training will cause changes in our body composition. Many studies have shown that including these variations in intensity is more effective at reducing fat than steady-state training — throughout the workout.

So how do we know that RPM delivers on these results?

A study conducted at Loughborough University in the UK⁽¹⁾ measured the effects of doing RPM for 8 weeks on individuals who were not regularly active. Participating in classes 3 times per week, with no changes in diet, generated the following benefits:

- An 11% increase in VO2
- A 7% reduction in systolic blood pressure
- A 13.6% reduction in body fat
- Total cholesterol decreased by 13% including a 23.3% reduction in Low Density Lipoproteins or LDL's – also known as 'bad' cholesterol.

The participants also reduced – on average – 1 inch (3cm) in their waist circumference.

The subjects in this trial had a compliance rate of 95% during the study, which was very high for this type of group. Many of the participants achieved a heart rate of 95% of their maximum during the workouts – indicating the effectiveness of the program to hit short peaks of intensity from a cardiovascular training base.

RPM delivers the combined benefits of cardiovascular conditioning with multiple peaks of intensity, along with the advantage of great instruction and awesome music that increases the attendance beyond what we normally see with this type of training.

CYCLING AT SPEED

RPM utilizes a variety of pedaling speeds, with some sections of the class encouraging riders to sprint at cadences of up to 140rpm depending on their level of experience and ability.

A literature review⁽²⁾ on high-cadence training illustrated the following facts about this type of exercise:

- Contrary to concerns, it does not appear that cycling at high speeds increases the risk of injury.
- Most of the risk factors associated with cycling are related to bike setup and technique errors.
- Helping new participants with their bike set up – ensuring they have good technique and only increase speeds within their capabilities – will therefore resolve these issues.

The review also stated that high-cadence training has been shown to increase caloric expenditure and encourage the activation of type II muscle fibers. Including speed intervals in RPM provides variety and delivers great training benefits.

So there you have it – proof that RPM really will deliver amazing results for your participants. We hope this information helps you to teach with the passion and confidence this fantastic program deserves!

(1) Group cycling is an effective intervention to improve cardio-metabolic health in overweight sedentary individuals. Faulkner, S.H, presented at European Congress on Obesity, 2015

(2) The use of high cadence in cycling and the applications to RPM. J., Lythe 2009