

# IS YOUR CLIENT'S MEDICATION AFFECTING THEIR TRAINING?



Medications can alter obese clients' physiological responses to exercise. *William Sukala* looks at the effects of commonly encountered medications on exercise, and what you can do to minimise risk to your clients.

**O**besity is commonly associated with other health conditions such as diabetes, high blood pressure, elevated lipids, and heart disease. As a personal trainer working with obese individuals, you will inevitably come across clients who are taking prescription medications for a variety of conditions. It is important to be aware that some medications can alter your client's physiological response to exercise and that this may require you to modify your exercise prescription. Here, we look at common medications you are likely to encounter, their possible influence on exercise, and the actions you can take to minimise risk to your clients.

**NB:** where blood pressure is alluded to, specific blood pressure values are not given because what's 'too low' for one individual may be fine for another.

## **Beta blockers: for blood pressure, chest pain, arrhythmias**

Beta blockers, such as Metoprolol (Betaloc), slow the heart rate, which has the benefit of reducing stress on the heart and lowering blood pressure. Clients taking this type of medication may complain of feeling very tired and lethargic. Remember that usual heart rate calculations will not apply to clients using this medication, since their pulse is unlikely to reach the target heart rate. Rating of perceived exertion (RPE) is a more useful tool. Aim for an intensity that falls in the range of moderate to somewhat hard (12-13) on the Borg 6-20 scale. Because beta blockers lower

blood pressure, you should be aware that blood pressure may continue to drop even after your client finishes their exercise session. Make sure your client performs a gradual cool down and drinks water to reduce the risk of hypotension (abnormally low blood pressure).

## **Nitrates: for chest pain, chronic heart failure**

Nitrates, such as Nitroglycerin (Nitro-Dur), are commonly prescribed for individuals with stable angina (coronary artery disease) and are often administered when the client feels chest pain. These medications cause blood vessels to dilate (expand), so you should monitor your client for any dizziness or light-headedness which may occur. In working with clients with stable coronary artery disease, it may be advisable to obtain more information and work in conjunction with your client's medical management team (doctor and/or practice nurse).

## **Calcium channel blockers: for angina, blood pressure, atrial fibrillation**

Depending on which calcium channel blocker your client is taking (examples include amlodipine, felodipine), the medication may or may not reduce heart rate. Ideally you should investigate the effects of the individual medication in order to be sure. Blood pressure is generally reduced with calcium channel blockers, so it is advisable to have your client perform

a gradual cool down to facilitate blood out of the periphery (limbs) and back to central circulation in order to minimise the risk of post-exercise hypotension (low blood pressure).

## **ACE (Angiotensin Converting Enzyme) inhibitors: for blood pressure, chronic heart failure, coronary artery disease**

ACE inhibitors, such as cilazapril (Inhibace), generally lower blood pressure and may or may not reduce heart rate. It is advisable to investigate which ACE inhibitor your client is taking to determine the specific effects. As with other cardiac medications, be aware of the risk of post-exercise hypotension. Have your client perform a gradual cool down to reduce the risk of post-exercise hypotension.

## **Diuretics: for oedema, chronic heart failure**

Diuretics, such as frusemide, promote water loss through urination. This causes a reduction in blood volume which reduces blood pressure. Have your client perform a gradual cool down to help reduce the risk of post-exercise hypotension. Check your client's blood pressure before and after exercise to ensure that it is within normal limits.

## **Lipid-lowering medications: for high cholesterol, LDL cholesterol, high triglycerides**

Lipid lowering medications, such as simvastatin (Lipex), generally do not have any effect on heart rate and blood

pressure. However, nicotinic acid has the potential to lower blood pressure.

### Diabetes (oral meds): for high blood sugar

Oral hypoglycaemic medications, such as metformin, work in one of three ways: stimulating the pancreas to release more insulin; increasing sensitivity to insulin already present; or promoting slow breakdown of foods into glucose. Because these medications and exercise both lower blood sugar, you must be particularly aware of the risk of hypoglycaemia (abnormally low glucose levels). If you're working with clients with pre-diabetes or type 2 diabetes, be sure they are medically stable, well-managed, and have permission to exercise. Have your diabetic clients check their blood sugar before and after exercise and familiarise yourself with their usual glucose patterns. If pre-exercise blood sugar levels are 5.5 mmol/L or less, then a small snack may help boost glucose levels to accommodate the exercise session.

With your client's assistance, you should seek specific information regarding their condition from their medical management team.

### Blood thinners: for blood clots, heart attack, stroke

Blood thinning agents, such as aspirin, clopidogrel (Plavix) and coumadin, are unlikely to have any effect on heart rate or blood pressure. However, for individuals who use blood thinners and who may have impaired balance (older clients), you should be vigilant of trip hazards in your facility. A fall may result in internal bleeding which could be worsened by the blood thinning medication.

Most personal trainers have clients who are trying to lose weight, some of whom are obese and taking medication. By familiarising yourself with the potential effects of their medication, you can help them to lose weight safely on their journey towards wellness. **11**



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Bill is a clinical exercise physiologist with two decades experience in both clinical and preventive health care settings. He currently lectures in clinical exercise physiology at Southern Cross University. Bill is an international presenter, author, and industry consultant, and holds a PhD in the area of diabetes and obesity research. In 2011 he was named Australian Fitness

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