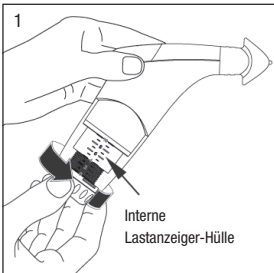


Kennenlernen Ihres Medic Plus

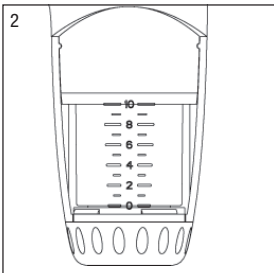
Graphik 1: Einstellung des Medic Plus

Nehmen Sie den Medic Plus und den Nasenclip aus der Verpackung. Stellen Sie die Trainingsbelastung ein und halten Sie den Medic Plus dabei in aufrechter Position: Drehen Sie den Widerstandsregler im Uhrzeigersinn, um die Trainingsbelastung zu erhöhen; drehen Sie den Widerstandsregler entgegen dem Uhrzeigersinn, um die Trainingslast zu verringern. Eine bezifferte Skala ist seitlich am Medic Plus sichtbar. Wenn der Widerstandsregler gedreht wird, bewegt sich die interne Widerstandsanzeige-Hülle nach oben oder unten und zeigt Ihre aktuelle Trainingslast auf dieser Skala an.



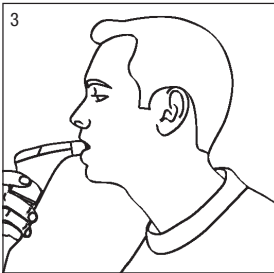
Graphik 2: Belastung 0

Stellen Sie den Medic Plus jetzt auf die Belastung 0 ein. Bei dieser Belastung sollte die Basis der internen weißen Hülle nach der geringsten Belastung auf der Skala ausgerichtet sein, wie in der Graphik angezeigt wird. **Hinweis: Versuchen Sie nicht, die Belastung unter 0 zu verringern, da dies das Verstellgewinde beschädigen kann.**



Graphik 3: Platzieren des Medic Plus im Mund

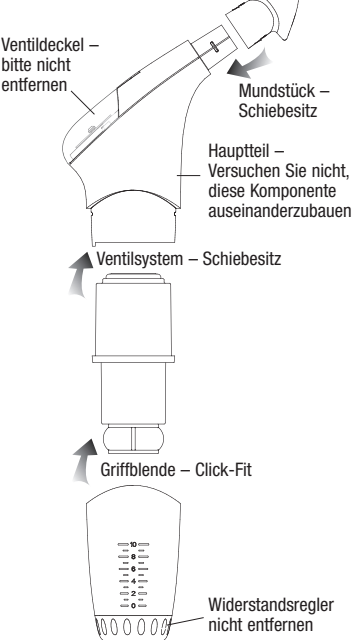
Setzen oder stellen Sie sich aufrecht hin und entspannen Sie sich. Halten Sie den Medic Plus dann am Griff fest und setzen Sie das Mundstück in den Mund. Ihre Lippen sollten dabei die äußeren Blenden fest umschließen, sodass keinerlei Luft durchdringen kann, und der Bissaufsatz des Mundstücks sollte fest zwischen Ihrem Ober- und Unterkiefer sitzen.



6

Medic Plus Montage

Zusammenbau

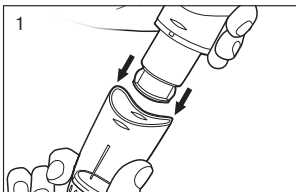


Hinweis: Der POWERbreathe Medic Plus kann noch in weitere Einzelteile auseinandergebaut werden (mit Ausnahme des Hauptteils) – **Dies wird jedoch nicht empfohlen**, da Kleinteile leicht an die falsche Stelle gesetzt werden können.

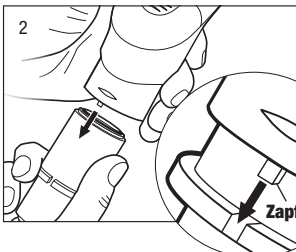
Wenn Sie aufgrund Ihres Gesundheitszustands jedoch mit der absolut kleinsten Belastung beginnen müssen, müssen Sie die in den Graphiken 1 bis 6 dargestellten Anweisungen befolgen.

Wenn Sie unter der Belastungseinstellung "0" trainieren müssen, entfernen Sie das Ventilsystem und/oder die Feder wie unten angezeigt:

Graphik 1: Ziehen Sie leicht an der Griffblende, um diese zu entfernen. (Beim Wiederzusammenbau der Griffblende ist eventuell eine leichte Drehung erforderlich, um das Ventilsystem in den Widerstandsregler zu setzen.)



Graphik 2: Ziehen Sie sanft am Ventilsystem, um es zu entfernen. **Drehen Sie nicht** am Hauptteil oder Ventilsystem, da dadurch der unten angezeigte Zapfen beschädigt werden kann. Um es wieder zusammenzubauen, stellen Sie den Zapfen mit dem Einschub auf und verschieben Sie ihn.

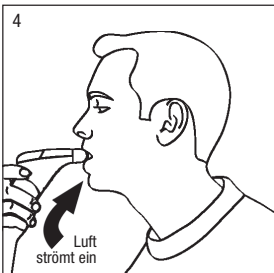


10

Kennenlernen Ihres Medic Plus

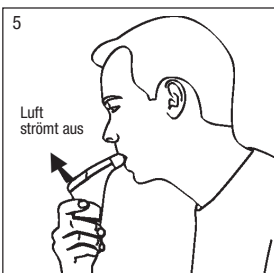
Graphik 4: Einatmen durch den Medic Plus

Atmen Sie so weit aus, wie Sie können, und atmen Sie anschließend schnell und tief durch den Mund ein. Nehmen Sie so schnell wie möglich so viel Luft wie möglich auf, richten Sie Ihren Rücken auf und dehnen Sie Ihren Brustkorb aus.



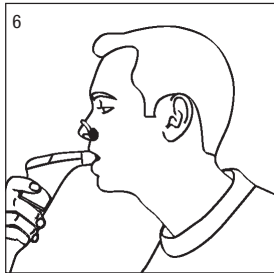
Graphik 5: Ausatmen durch den Medic Plus

Atmen Sie nun langsam und passiv durch Ihren Mund aus, bis Ihre Lungen leer sind; entspannen Sie dabei die Muskeln im Brustkorb- und Schulterbereich. Legen Sie eine Pause ein, bis Sie das Bedürfnis haben, wieder einzuatmen. Wiederholen Sie diese Übung, bis Sie sich sicher fühlen, durch den Medic Plus zu atmen. **Hinweis: Ringen Sie nicht nach Luft – Wenn Sie sich schwindlig fühlen, verlangsamen Sie Ihre Atmung und legen Sie am Ende des Ausatmens eine Pause ein.**



Graphik 6: Verwendung des Nasenclips

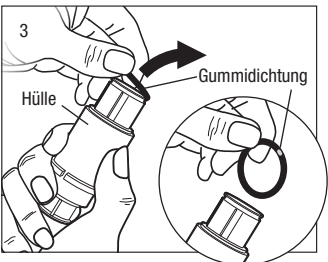
Setzen Sie nun den Nasenclip auf, sodass dieser Ihre Nasenlöcher zusammendrückt, wie in der Graphik dargestellt wird. Setzen Sie nun Ihr Training fort und atmen Sie kräftig ein und langsam und vollständig wieder aus. **Hinweis:** Der Nasenclip erleichtert Ihnen das Atmen durch den Mund anstatt durch die Nase. Dies ist jedoch nicht unbedingt notwendig und manche Personen finden es angenehmer, ohne diesen Nasenclip zu trainieren.



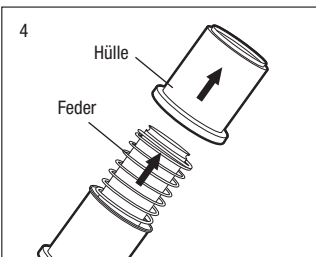
7

Medic Plus Montage

Graphik 3: Um die geeichte Feder aus dem Ventilsystem zu entfernen, die Gummidichtung leicht abziehen und entfernen.



Graphik 4: Entfernen Sie die Hülle vorsichtig und entfernen Sie anschließend die Feder. Ersetzen Sie dann die Hülle, **bevor** Sie die Gummidichtung wieder anbringen.



Graphik 5: Zeigt das wiederzusammengebaute Medic Plus mit vorhandenem Ventilsystem, aber ohne geeichte Feder.



Graphik 6: Zeigt den wiederzusammengebauten Medic Plus, aber ohne vollständiges Ventilsystem und mit dem POWERbreathe Atmungs-Indikatorball.



WICHTIG
Bewahren Sie bitte alle nicht verwendeten Komponenten des POWERbreathe Medic Plus für den späteren Gebrauch und für Garantiezwecke an einem sicheren Ort auf.

11

Training mit Medic Plus

Anleitung für Patienten

Sofern Ihr Arzt Ihnen nichts Gegenteiliges angibt, folgen Sie der nachfolgenden Anleitung. Vor Beginn des Trainings lesen Sie die Vorsichtsmaßnahmen auf Seite 4 dieser Anleitung bitte sorgfältig durch.

Ihre richtige Trainingsbelastung finden:

Die empfohlene POWERbreathe RMT-Routine beträgt 30 Atemzüge zweimal täglich. * Um maximal von dem Training zu profitieren, sollten diese Übungen mit einer möglichst hohen Belastung ausgeführt werden, ohne Unwohlsein zu verursachen.

Setzen Sie Ihren Medic Plus am ersten Trainingstag auf die Belastung 0 (siehe **Graphik 1 - "Gewöhnung an Ihren Medic Plus"**).

Manche Personen finden die Übungen mit dieser Belastung sehr schwierig. Wenn Sie das Gefühl haben, dass Sie die 30 Atemzüge mit dieser Belastung nicht durchführen können, machen Sie eine kurze Pause und fangen Sie von vorn an, bis Sie insgesamt 30 Atemzüge durchgeführt haben.

Wenn Sie Schwierigkeiten hatten, 30 Atemzüge mit einer Belastung bei 0 durchzuführen, trainieren Sie in der ersten Woche zweimal täglich weiter mit dieser Belastung.

Wenn es Ihnen leicht fiel, die 30 Atemzüge mit einer Belastung bei 0 durchzuführen, stellen Sie Ihren Medic Plus am nächsten Tag auf die Belastung 1. Führen Sie die Übungen erneut durch. Fahren Sie mit dieser Methode fort und erhöhen Sie Trainingsbelastung jeden Tag um 1 Einstellung, bis Sie gerade noch 30 Trainingsatemezüge durchführen können. Wenn Sie diesen Punkt erreicht haben, trainieren Sie mit dieser Belastung zweimal täglich während einer Woche weiter.

Nach einer Woche Training mit Medic Plus mit der gleichen Belastung, erhöhen Sie die Trainingsbelastung um eine halbe Drehung. Trainieren Sie mit dieser Belastung während einer weiteren Woche weiter. Ab diesem Zeitpunkt sollten Sie versuchen, die Belastung jede Woche um eine halbe Drehung zu erhöhen.

Um für die Aufzeichnung Ihres Trainingsfortschritts Muster eines üblichen Trainingstagebuchs zu erhalten und leere Tagebuchseiten herunterzuladen/auszudrucken, besuchen Sie: powerbreathe.com

** Das Trainingsprogramm mit 30 Atemzügen zweimal täglich ist ein hochintensives Trainingsprogramm, das sich bei Personen, die trainieren, um ihre allgemeine Fitness zu verbessern, als sehr effektiv erwiesen hat (Romer & McConnell, 2003). Auch wenn dieses Programm intensiver ist, hat es den großen Vorteil, viel kürzer als die traditionellen Trainingsprogramme mit "niedriger Intensität" zu sein. Es wurde vor kurzem nachgewiesen, dass die Vorzüge eines Trainings mit geringer und hoher Intensität ähnlich sind (Gosselink et al, 2010). Wir empfehlen daher das Programm mit dem geringsten Zeitaufwand. Wenn Sie allerdings Schwierigkeiten bei dem hochintensiven Training haben, beziehen Sie sich bitte auf das Kapitel "Training mit geringer Intensität" auf der folgenden Seite.*

8

Anleitung für Fachpersonal im Gesundheitswesen

Kontraindikationen: Bitte lesen die Vorsichtsmaßnahmen auf Seite 4 dieser Anleitung durch, um die Eignung des Patienten für ein Respiratory Muscle Training (RMT) einzuschätzen.

Die Patienten sollten vor Beginn des Trainings in die richtige Anwendung von POWERbreathe Medic Plus RMT eingewiesen werden. Bitte machen Sie sich mit dem Betrieb des Geräts vertraut, bevor sie einen Patienten bei der richtigen Verwendung unterstützen, und beziehen Sie sich dabei auf die Kapitel "Kennenlernen Ihres Medic Plus" und "Training mit Medic Plus - Anleitung für Patienten". Eine Anleitung für das Training mit Medic Plus liegt den Informationen zugrunde, die im 'Breathe'-Magazin der European Respiratory Society veröffentlicht wurden (McConnell et al, Inspiratory muscle training in obstructive lung disease; how to implement and what to expect. September. vol 2(1), S. 39-49, 2005). Der vollständige Artikel kann auf unserer Website heruntergeladen werden.

Der Patient sollte 1 Woche lang mit dieser Belastung trainieren. Danach sollte die Trainingsbelastung wöchentlich erhöht werden, um die Trainingsbelastung bei etwa 60 % der neuen Stärke der inspiratorischen Muskeln des Patienten aufrechtzuerhalten.

Hinweis: Einige Patienten sind möglicherweise nicht in der Lage oder nicht bereit, das Mundstück zu verwenden. In diesem Fall kann das Medic Plus-Mundstück durch eine Gesichtsmaske ersetzt werden, die an den Medic Plus Spacer befestigt wird, um das Training zu ermöglichen.

Einstellung der Trainingsbelastung:

Die klinische Forschung zeigt, dass die Inspiratory Muscle Training (IMT)-Belastungen 30 % der maximalen Stärke der inspiratorischen Muskeln des Patienten übertreffen müssen, um wirksam zu sein. Es ist außerdem erwiesen, dass höhere Belastungen größere Verbesserungen der Stärke der inspiratorischen Muskeln hervorbringen.

Der Patient sollte 1 Woche lang mit dieser Belastung trainieren. Danach sollte die Trainingsbelastung wöchentlich erhöht werden, um die Trainingsbelastung bei etwa 60 % der neuen Stärke der inspiratorischen Muskeln des Patienten aufrechtzuerhalten.

Hinweis: Bei 60 % wird das MIP-Training anstrengend, und es kann eine Weile dauern, bis der Patient 30 Atemzüge durchführen kann, ohne eine Pause einzulegen.

12

Training mit Medic Plus

Erzielung einer guten Trainingstechnik:

Wenn Sie durch Ihren Medic Plus einatmen, versuchen Sie, so tief und so schnell wie möglich einzuatmen. Wenn Sie ausatmen, atmen Sie langsam und vorsichtig aus, bis Ihre Lungen komplett leer sind. Versuchen Sie, so viel Luft wie möglich gegen Ende der Atmung herauszudrücken, um sicherzustellen, dass Ihre Lungen komplett leer sind. Halten Sie Ihre Atmung an, bis Sie den Drang verspüren, wieder einatmen zu müssen (etwa 3-4 Sek.).

Sie werden feststellen, dass es schwieriger wird, Ihre Lungen komplett zu füllen, wenn Sie während einer Trainingseinheit weiter ein- und ausatmen. Das liegt daran, dass Ihre Atemmuskulatur ermüdet. Wenn Sie nicht mehr zufriedenstellend atmen können, machen Sie eine kurze Pause, bevor Sie Ihr Training fortsetzen. Wenn Sie zu Beginn Ihrer Trainingseinheit nicht in der Lage sind, einen vollständigen Atemzug vorzunehmen, ist die Last eventuell zu hoch eingestellt. Reduzieren Sie in diesem Fall einfach die Trainingslast um eine halbe Drehung und fahren Sie mit dem Training fort. **Hinweis:** Das Training sollte eine Herausforderung sein. Am Ende des Trainings mit 30 Atemzügen sollten Sie sich so fühlen, dass Sie nicht mehr weitermachen können.

Wenn Sie außer Atem sind, wenn Ihnen schwindlig ist oder Sie husten müssen, machen Sie eine kurze Pause. Wenn Sie sich erholt haben, fahren Sie mit dem Training sofort fort, bis Sie insgesamt 30 Atemzüge abgeschlossen haben. Wenn Sie eine Trainingseinheit verpassen, holen Sie die Trainingseinheit einfach so schnell wie möglich nach. Wenn Sie sie um mehr als 12 Stunden verpassen, übergehen Sie die verpasste Einheit und machen Sie einfach mit Ihrer nächsten Trainingseinheit normal weiter.

Beibehaltung der Atmung:

Nach 4-6 Wochen sollte sich Ihre Atemmuskulatur wesentlich verbessert haben und Sie sollten bei Aktivität weniger außer Atem sein. In diesem Stadium müssen Sie Ihren Medic Plus nicht jeden Tag verwenden, um Ihre verbesserte Atmung beizubehalten. Wenn Sie mit Ihrem Medic Plus nur 3 Mal in der Woche trainieren, ist dies ausreichend, um ein besseres Lebensgefühl beizubehalten.

"Training mit geringer Intensität"

Wenn Sie Schwierigkeiten beim Training haben, können Sie auf ein weniger intensives, längeres Trainingsprogramm umsteigen, das sich für Personen, die an Atemwegserkrankungen leiden, als sehr effektiv erwiesen hat. Wenn dies der Fall ist, versuchen Sie das fortlaufende 15-Minuten-Training mit geringer Belastungseinstellung (wenden Sie sich im Zweifelsfall an Ihren Arzt).

Wenn die geringste Belastungseinstellung "0" für Sie am Anfang zu schwierig ist, können Sie mit dem POWERbreathe Medic Plus auch ohne Verwendung der geeichten Belastungsfeder oder ohne das komplette Ventilsystem trainieren, um mit der absolut kleinsten Belastung zu trainieren.

Siehe Seiten 10 - 11, Graphiken 1 - 6.

9

Anleitung für Fachpersonal im Gesundheitswesen

Beibringen einer guten Trainingstechnik:

Die ersten paar Tage sind für den Patienten am schwierigsten. Diese erfordern ein behutsames und feinfühliges Coaching und die Gewährung von kurzen Pausen. Die Patienten sollten darin unterstützt werden, das atemlose Gefühl auszuhalten, das durch das Training hervorgerufen wird, und die Trainingsbelastung schrittweise zu erhöhen. Belastungsanstiege von 5-10 % pro Woche können typischerweise erzielt werden.

Es wird geraten, die Patienten beim Training in vollem Umfang ihres maximalen Atemvolumens zu unterstützen, um den gesamten Bewegungsbereich der inspiratorischen Muskeln zu trainieren. Wenn die Atemmuskulatur des Patienten ermüdet, wird es ihm schwer fallen, höhere Lungenvolumina gegen Ende des Einatmens zu erzielen. Bei diesen höheren Lungenvolumina ist die Atemmuskulatur am schwächsten und wird anfällig für die Auswirkungen von Müdigkeit sein. Die Patienten sollten gewarnt werden, dass sie damit rechnen müssen, und sie sollten davon abgeraten werden, über den Punkt hinaus zu trainieren, bei dem sie einen 'zufriedenstellenden Atemzug' erzielen können.

Außerdem sollte den Patienten davon abgeraten werden, so schnell wie möglich gegen die Belastung einzuatmen, um ihre Atemmuskulatur maximal zu erholen. Die Patienten sollten mit einer Kombination aus einer Zwerchfell- und Brustwandbewegung atmen, um ihre Atemmuskulatur während des Trainings vollständig zu einzusetzen. Die Patienten benötigen möglicherweise Pausen während einer Trainingseinheit, um zu

Erhaltungstraining:

Nach einem 4-6-wöchigen Training sollte sich die Atemmuskulatur des Patienten erheblich verbessert haben und er sollte sich bei sportlicher Aktivität weniger außer Atem fühlen. In diesem Stadium ist es nicht notwendig, mit dem Medic Plus täglich zu trainieren, um eine verbesserte Atmung beizubehalten. Das dreimal wöchentliche Training mit Medic Plus ist ausreichend, um die Trainingsergebnisse aufrechtzuerhalten.

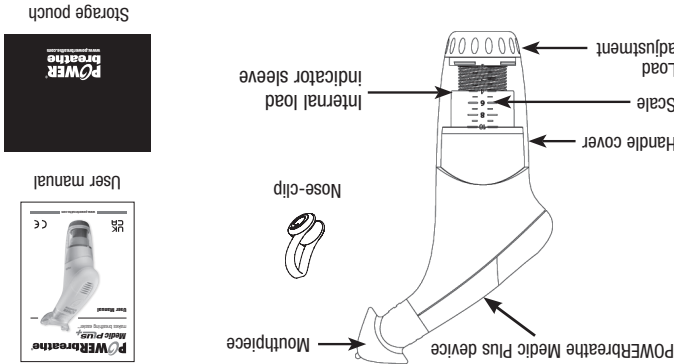
POWERbreathe Medic Plus - Zubehör

Eine Reihe von Zubehörtteilen ist verfügbar, um behinderten Patienten/Nutzern behilflich zu sein, darunter z. B.:

- Spacer
- Atemmaske-Adapter
- Masken
- POWERbreathe-Filter

Weitere Informationen finden Sie unter: powerbreathe.com

13



Product description

POWERbreathe RMT/IMT is clinically proven to improve symptoms, exercise tolerance and quality of life in major debilitating conditions such as COPD, Asthma and Heart Failure. If you or your doctor, would like more information on the clinical effectiveness of POWERbreathe devices, please visit our website (www.powerbreathe.com). If you have any more questions about POWERbreathe, please contact the POWERbreathe distributor in your country.

Please remember: If in doubt, consult your specialist respiratory health doctor.

- Do not use the Medic Plus if you are suffering from a ruptured eardrum or any other condition of the ear
- POWERbreathe Medic Plus is not suitable for patients with marked elevated left ventricular end-diastolic volume and pressure
- POWERbreathe Medic Plus is not suitable for patients with worsening heart failure signs and symptoms after RMT / IMT

Precautions

Disclaimer

POWERbreathe devices are not toys. This product is designed to be used for breathing exercise only. Any other use is not recommended.

Always seek the advice of your doctor or other health provider with any questions you may have regarding a medical condition. This product is not intended to diagnose, cure or prevent any disease. Individual results may vary. No claims are made or implied in the use or results by the use of the equipment herein.

Always read the user manual before use. The material in this manual is for information purposes only.

POWERbreathe devices contain small parts and are not suitable for children under 7 years.

Note: This product is sealed to maintain hygiene and cannot be returned if the seal is broken.

POWERbreathe International Ltd makes no representations or warranties with respect to this manual or with respect to the products described herein. POWERbreathe International Ltd shall not be liable for any damages, direct, indirect or incidental, consequential or special, arising out of or related to the misuse or deviations from the intended use of this material or the products described herein.

POWERbreathe is a patented and design copyright protected product. All rights reserved. Specifications may change without notice due to manufacturer's continuous programme of development.

The POWERbreathe logo type is a registered trademark of POWERbreathe Holdings Ltd. All POWERbreathe product names are trademarks or registered trademarks of POWERbreathe Holdings Ltd.

All details are correct at time of going to press.

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Warranty

Limited 2 year Manufacturer's Warranty

This warranty gives the purchaser specific legal rights. The purchaser may also have other statutory rights. POWERbreathe International Ltd hereby warrants to the original purchaser whose name shall be duly registered with it that the product sold by it is free from defects in the material and workmanship. 2 years (24 months) is from date of purchase.

The obligations of POWERbreathe International Ltd under this warranty are limited to the repair and replacement of such part or parts of the unit as shall be found upon inspection to be defective in material or workmanship. Misuse, abuse or accidents, negligence of the precautions, improper maintenance or commercial use, cracked or broken cases is not covered under this warranty. During the two year warranty period, the product will be either repaired or replaced (at our option without charge). Warranty does not cover damage or consequential damage caused by service not authorised by POWERbreathe International Ltd.

The warranties contained herein are expressly in lieu of any other warranties including implied warranty of merchantability and/or fit for purpose.

POWERbreathe - Respiratory muscle training (RMT) / Inspiratory muscle training (IMT) is drug free, suitable for almost anyone and should cause no harmful side effects when used properly. If you have any doubts about the POWERbreathe Medic Plus device's suitability or you have a medical condition, please consult your doctor.

Please read the following - Precautions and CONTRAINDICATIONS information, to ensure that you use the POWERbreathe Medic Plus device safely and appropriately:

- It is not recommended to use the Medic Plus if you have suffered from or are likely to suffer from Costochondritis.
- Do not make changes to any prescribed medication or prescribed treatment
- When training with your POWERbreathe Medic Plus, you will notice that you have to work harder to breathe in. This is the effect of resistance training acting on the muscles used to inhale – primarily the diaphragm and rib cage muscles. When breathing out, there is no resistance and you can breathe out normally, allowing the chest and breathing muscles to relax, naturally pushing the air from your lungs.
- Used properly, you should begin to enjoy the benefits of using your POWERbreathe Medic Plus in just a few weeks.
- To make sure you get the most from your POWERbreathe Medic Plus, please read this instruction booklet carefully, visit powerbreathe.com and take time to get used to your POWERbreathe Respiratory Muscle Training.

To Activate Your Warranty

Please ensure that you register your POWERbreathe Medic Plus by visiting www.powerbreathe.com Alternatively please retain the sales receipt as proof of purchase date.

Thank You.

Developed, designed and manufactured with pride in the United Kingdom

Medical Device Class 1

Award Winner

WILLIAM MILES

POWERbreathe is not suitable for asthma patients who have low symptom for asthma patients who have low symptom perception and suffer from frequent, severe exacerbations or with an abnormally low perception of dyspnoea.

- POWERbreathe Medic Plus is not suitable with certain conditions such as:
- CONTRAINDICATIONS: Respiratory muscle training (RMT) / Inspiratory muscle training (IMT), such as training with POWERbreathe for asthma patients who have low symptom perception and suffer from frequent, severe exacerbations or with an abnormally low perception of dyspnoea.
- If you are suffering from a cold, sinusitis or respiratory tract infection, we advise that you do not use your Medic Plus until symptoms have disappeared. If in doubt, consult your doctor.

- Whist training with the Medic Plus you should feel resistance when inhaling but it should not be painful. If you should feel pain whilst using the Medic Plus, stop immediately and consult your doctor.
- Some users may experience slight ear discomfort when training with Medic Plus, especially if they are recovering from a cold. This is caused by inadequate equalisation of pressure between the mouth and ears. If symptoms persist, please consult your doctor.
- If you are suffering from a cold, sinusitis or respiratory tract infection, we advise that you do not use your Medic Plus until symptoms have disappeared. If in doubt, consult your doctor.

- A history of spontaneous pneumothorax including family members.
- This product is not intended to diagnose, treat, cure or prevent any disease.
- POWERbreathe Medic Plus is designed for exercising your inspiratory muscles only. No other use is intended or implied.
- Anyone who is under the age of 16 should only use POWERbreathe RMT / IMT with supervision from an adult. The Medic Plus contains small parts and is not suitable for children under 7 years.
- Whist training with the Medic Plus you should feel resistance when inhaling but it should not be painful. If you should feel pain whilst using the Medic Plus, stop immediately and consult your doctor.
- Some users may experience slight ear discomfort when training with Medic Plus, especially if they are recovering from a cold. This is caused by inadequate equalisation of pressure between the mouth and ears. If symptoms persist, please consult your doctor.
- If you are suffering from a cold, sinusitis or respiratory tract infection, we advise that you do not use your Medic Plus until symptoms have disappeared. If in doubt, consult your doctor.

- Large bullae on chest x-ray
- Marked osteoporosis with history of rib fractures
- Desaturation during or following IMT (<94%)
- If you have undergone recent abdominal surgery or have an abdominal hernia
- Pulmonary hypertension
- Marked osteoporosis with history of rib fractures
- Desaturation during or following IMT (<94%)
- If you have undergone recent abdominal surgery or have an abdominal hernia

- Do not attempt to reduce the load adjustment below load 0 – this is the minimum setting and attempting to unscrew the mechanism further may damage the adjustment thread.
- Do not attempt to separate the upper and lower portions of the main body of the device – these should remain permanently joined.
- Please store your Medic Plus in the storage pouch provided or a suitable clean container. Always make sure that your Medic Plus is dry before storage.

Precautions

Care and maintenance

Precautions

POWERbreathe products are designed to be robust and durable. With a little care, your Medic Plus should last many years. Please read the following instructions to ensure that your Medic Plus remains in good condition:

- Do not attempt to reduce the load adjustment below load 0 – this is the minimum setting and attempting to unscrew the mechanism further may damage the adjustment thread.
- Do not attempt to separate the upper and lower portions of the main body of the device – these should remain permanently joined.
- Please store your Medic Plus in the storage pouch provided or a suitable clean container. Always make sure that your Medic Plus is dry before storage.

Cleaning

Your Medic Plus will be exposed to saliva during use and we recommend that you clean it frequently to keep it in good working order.

A few times a week, soak your Medic Plus in warm water for about ten minutes and then wipe it with a soft cloth, under warm running water, paying particular attention to the mouthpiece. Shake off excess water and leave on a clean towel to dry.

Once a week perform the same procedure but soak your Medic Plus in a mild cleansing or approved cleaning solution instead of water. The cleansing solution used must be intended for use on equipment that comes into contact with the mouth, such as that used for babies' bottles. POWERbreathe cleansing tablets are available from retailers nationwide or visit www.powerbreathe.com for further details.

To keep your Medic Plus in good condition, after cleansing with an approved cleansing product hold it upside down under a running tap so that water can run through the device. Shake off excess water and leave on a clean towel to dry.

If further cleaning is necessary the Medic Plus can be disassembled into its component parts as demonstrated in the diagrams on Page 10. If disassembling the Medic Plus be careful not to lose any components parts.

Note: the POWERbreathe Medic Plus is not suitable for dishwashers.

POWERbreathe is not suitable for asthma patients who have low symptom for asthma patients who have low symptom perception and suffer from frequent, severe exacerbations or with an abnormally low perception of dyspnoea.

- POWERbreathe Medic Plus is not suitable with certain conditions such as:
- CONTRAINDICATIONS: Respiratory muscle training (RMT) / Inspiratory muscle training (IMT), such as training with POWERbreathe for asthma patients who have low symptom perception and suffer from frequent, severe exacerbations or with an abnormally low perception of dyspnoea.
- If you are suffering from a cold, sinusitis or respiratory tract infection, we advise that you do not use your Medic Plus until symptoms have disappeared. If in doubt, consult your doctor.

- Whist training with the Medic Plus you should feel resistance when inhaling but it should not be painful. If you should feel pain whilst using the Medic Plus, stop immediately and consult your doctor.
- Some users may experience slight ear discomfort when training with Medic Plus, especially if they are recovering from a cold. This is caused by inadequate equalisation of pressure between the mouth and ears. If symptoms persist, please consult your doctor.
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- Large bullae on chest x-ray
- Marked osteoporosis with history of rib fractures
- Desaturation during or following IMT (<94%)
- If you have undergone recent abdominal surgery or have an abdominal hernia
- Pulmonary hypertension
- Marked osteoporosis with history of rib fractures
- Desaturation during or following IMT (<94%)
- If you have undergone recent abdominal surgery or have an abdominal hernia

- Do not attempt to reduce the load adjustment below load 0 – this is the minimum setting and attempting to unscrew the mechanism further may damage the adjustment thread.
- Do not attempt to separate the upper and lower portions of the main body of the device – these should remain permanently joined.
- Please store your Medic Plus in the storage pouch provided or a suitable clean container. Always make sure that your Medic Plus is dry before storage.

Introduction

Technical specifications

Mouthpiece..... Thermoplastic elastomers (TPE)

Clear handle cover..... Polycarbonate

Soft touch adjuster grip ABS with Santoprene overmoulding

Flap valve..... Silicone 60

O-ring..... Nitrile rubber

Nose-clip rubber..... Silicone 40

Nose-clip bridge..... Nylon

All other components..... ABS (Acrylonitrile Butadiene Styrene)

Load Selection Range Table

	No Spring & No Valve Assembly	No Spring	Load (cm H ₂ O) @ 1l/sec										
Load Setting	-	-	0	1	2	3	4	5	6	7	8	9	10
cm H ₂ O	1 (including ball)	3	9	16	23	29	36	43	50	57	64	71	78

Note: A load of 3cmH₂O can be achieved by removing the spring and replacing the valve assembly for training (see page 10 & 11, diagram 1 - 5). In addition, a load of 1 cm H₂O can be achieved when the complete valve assembly is removed and the POWERbreathe breathing indicator ball is installed (see page 10 & 11, diagram 6).

All values are at a flow rate of 1 litre a Second, consistent with other POWERbreathe models.

Precise load settings may vary marginally due to: (1) the analogue nature of the calibrated spring tensioner and the precision with which the load is selected; (2) a small effect of inspiratory flow rate upon spring compression such that high inspiratory flow rates lead to greater spring compression, and a small increase in load (Caine & McConnell, 2000). This effect is common to all spring loaded devices, and its size is magnified by increasing spring range (it is larger in a spring with a maximum range of 90cmH₂O compared with one with half this range), it is also greater at lower absolute load settings (Caine & McConnell, 2000).

Caine MP & McConnell AK. (2000). Development and evaluation of a pressure threshold inspiratory muscle trainer for use in the context of sports performance. *Journal of Sports Engineering* 3, 149-159.

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User Manual



Getting used to your Medic Plus

Diagram 1: Adjusting the Medic Plus
Remove the Medic Plus and nose-clip from the packaging. Holding the Medic Plus upright, practise adjusting the training load: Rotate the load adjustment knob clockwise to increase the training load; rotate the load adjustment knob anticlockwise to reduce the training load.
Notice that a numbered scale is visible on the side of the Medic Plus. As the load adjustment knob is rotated, the internal load-indicator sleeve will move up or down, indicating your current training load on this scale.

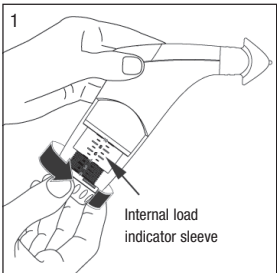


Diagram 2: Load 0
Now set the Medic Plus to load 0. At this load the base of the internal white sleeve should be aligned with the lowest load on the scale, as shown in the diagram. **Note: Do not attempt to reduce the load below 0 as this may damage the adjustment thread.**

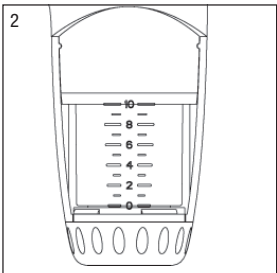
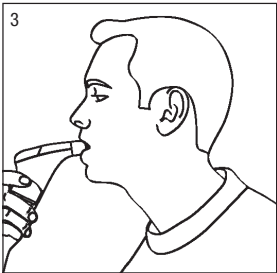
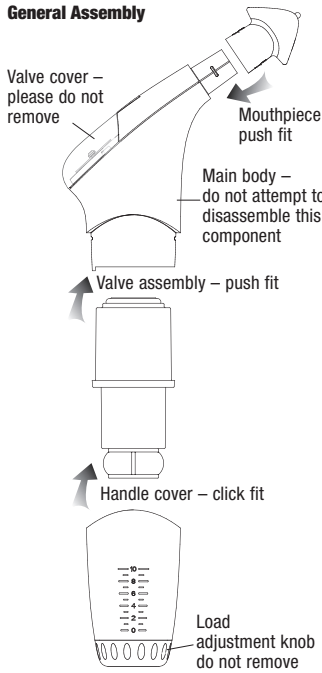


Diagram 3: Placing the Medic Plus in your mouth. Make sure you are sitting or standing upright and feel relaxed. Holding the Medic Plus by the handle, place the mouthpiece in your mouth so that your lips cover the outer shield to make a seal, and the mouthpiece bite blocks are gripped between your upper and lower teeth.



Medic Plus assembly



Note: Whilst the POWERbreathe Medic Plus can be disassembled further into its component parts (with the exception of the main body) – **This is not recommended** as small parts can easily be misplaced. However, if your condition means that you need to start at the absolute lowest load then you will need to follow instructions as shown within diagrams 1 to 6.

If you need to train below load setting “0” remove valve assembly and/or spring as shown below:

Diagram 1: Gently pull to remove handle cover. (When re-assembling handle cover a gentle twist may be required to locate the valve assembly into the load adjustment knob.)

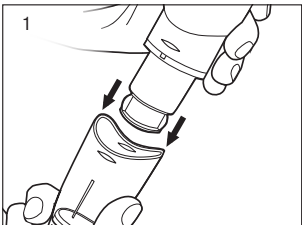
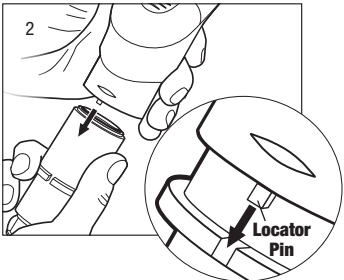


Diagram 2: Gently pull to remove valve assembly **Do Not Twist** main body or valve assembly as it is possible to damage the locator pin indicated below. To re-assemble, line up the locator pin with the slot and relocate.



Getting used to your Medic Plus

Diagram 4: Inhaling through the Medic Plus.
Breathe out as far as you can then take a fast, forceful breath in through the mouth. Take in as much air as you can, as quickly as you can, straightening your back and expanding your chest.

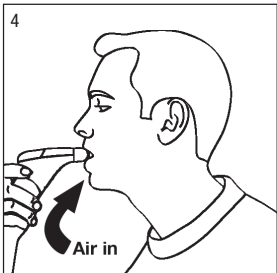


Diagram 5: Exhaling through the Medic Plus.
Now breathe out slowly and passively through your mouth until your lungs are empty, letting the muscles in your chest and shoulders relax. Pause until you feel the urge to breathe again. Repeat this exercise until you feel confident about breathing through the Medic Plus. **Note: do not pant – if you start to feel light-headed, slow down and pause at the end of your breath out.**

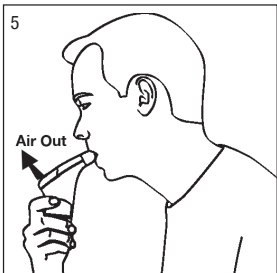
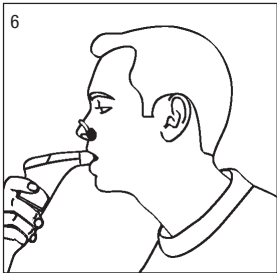


Diagram 6: Using the nose-clip.
Now put the nose-clip on so that it pushes your nostrils together, as shown in the diagram. Continue to practise taking a forceful breath in then breathing out slowly and fully. Note: the nose-clip will help you to breathe through your mouth rather than your nose. However, it is not essential and some people find it more comfortable to train without the nose-clip.



Medic Plus assembly

Diagram 3: To remove the calibrated spring from the valve assembly gently peel back and remove the rubber seal.

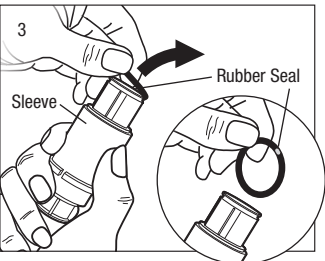


Diagram 4: Carefully remove the sleeve and then remove the spring. Then replace the sleeve **before** re-fitting the rubber seal.

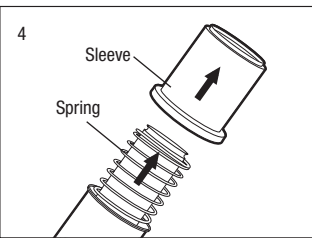


Diagram 5: Shows Medic Plus re-assembled with the valve assembly in place but without the calibrated spring.

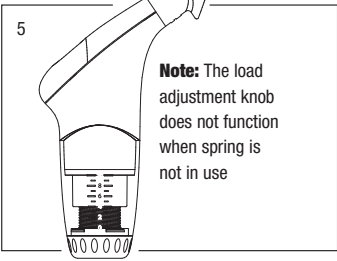
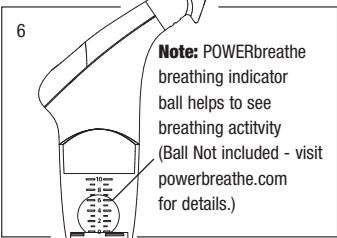


Diagram 6: Shows the Medic Plus re-assembled but without the complete valve assembly and with the POWERbreathe breathing indicator ball.



IMPORTANT
Please keep all the POWERbreathe Medic Plus components not being used in a safe place, for use later on and for warranty purposes.

Training with Medic Plus

Guidance for patients
Please follow the instructions below unless instructed to do otherwise by your doctor. Before commencing the exercises, please ensure that you have read the precautions section on page 4 of this manual.

Finding your correct training load:
The recommended POWERbreathe RMT routine is 30 breaths twice a day.* In order to get the most from the training, these exercises should be completed at a load that is as hard as possible, without causing discomfort.

For the first day of training, set your Medic Plus to load 0 (see Diagram 1 - “Getting used to your Medic Plus”). Some individuals may find the exercises very challenging at this load. If you find you are unable to complete 30 breaths at this load, take a short rest then start again until you have accumulated a total of 30 breaths.

If you found it difficult to complete 30 breaths at load 0, continue to train at this load twice a day for the first week.

If you found you could easily complete 30 breaths at load 0, the next day you should set your Medic Plus to load 1. Complete the exercises again. By this method, continue to increase the training load by 1 setting each day, until you are only just able to complete 30 breaths of training. Once you have reached this point, continue to train at this load twice a day for one week.

After one week of training with the Medic Plus at the same load, increase the training load by half a turn. Continue to train at this load for a further week. From this point onwards you should aim to increase the load by half a turn each week.

For an example of a typical training diary and to download/print blank diary pages, to keep a record of your progress visit: powerbreathe.com

** The 30 breath twice daily training regimen is a high intensity training regimen that has been found to be very effective in people who train to improve their general fitness (Romer & McConnell, 2003). Though more intense, this regimen has the great advantage of being much shorter than the more traditional “Low intensity training” regimens that have been used in clinical studies. Recent evidence suggests that the benefits of low and high intensity training are similar (Gosselink et al, 2010), so we recommend the regimen that is least time consuming. However, if you are experiencing difficulties with the high intensity training, please refer to the section on “Low intensity training” on the following page.*

Guidance for healthcare professionals

Contraindications: Please read the precautions section on page 4 of this manual in order to assess a patient's suitability for respiratory muscle training (RMT).

Patients should be instructed in the proper use of the POWERbreathe Medic Plus RMT before commencing training. Please familiarise yourself with the operation of the device prior to assisting a patient in its correct use referring to the sections “Getting used to your Medic Plus” and “Training with Medic Plus - Guidance for Patients”. Guidance on training with Medic Plus is based on information published in the European Respiratory Society’s ‘Breathe’ journal (McConnell et al, Inspiratory muscle training in obstructive lung disease; how to implement and what to expect. September. vol 2(1),pp39-49, 2005). Visit our website to download the full article.

If you have access to a means of measuring inspiratory muscle strength such as a POWERbreathe KH1 or KH2 device, you may set the initial training load to 30-40% of Maximal Inspiratory Pressure (MIP) using the conversion table on pg16. The training load should then be increased by half a turn each day for the next 7-10 days up to 60% of baseline MIP.

The patient should train at this load for 1 week. Thereafter, the training load should be increased weekly to maintain the training load at approximately 60% of the patient's new inspiratory muscle strength.

Note: at 60% MIP training will be strenuous and it may take some time before the patient is able to complete 30 breaths without taking a break.

Setting the training load:
Clinical research indicates that inspiratory muscle training (IMT) loads must exceed 30% of the patient’s maximal inspiratory muscle strength in order to be effective. There is also evidence that heavier loads yield greater improvements in inspiratory muscle strength.

Training with Medic Plus

Achieving good training technique:
When you inhale through your Medic Plus, you should breathe in as deeply and as quickly as possible. When you exhale, breathe out slowly and gently until your lungs are completely empty. Try to squeeze out as much air as possible towards the end of the breath to ensure your lungs are completely empty. Pause until you feel the urge to breathe in again before inhaling again (Approx 3-4 secs).

You will notice that it becomes harder to completely fill your lungs as you continue to breathe during a training session. This is because your breathing muscles are becoming tired. If you can no longer take a satisfying breath, take a short break before continuing your training. If you find you are unable to complete a breath early in your training session, the load may be set too high. In this case, simply decrease the training load by half a turn, then continue your training session. **Note:** Training should feel challenging. At the end of the 30 breaths training, you should aim to feel as if you cannot continue further.

If you feel out of breath, light-headed or you need to cough, take a short break. As soon as you have recovered, continue the training session until you have completed a total of 30 breaths. If you miss a training session, simply complete the session as soon as possible. If you miss it by more than

12 hours, ignore the missed session and carry on with your next training session as normal.

Maintaining your breathing:
After 4-6 weeks your breathing muscles should have improved substantially and you should feel less breathless during activity. At this stage you will not need to use your Medic Plus every day to maintain your improved breathing. Training with your Medic Plus just 3 times a week should be sufficient to continue to enjoy a better lifestyle.

“Low intensity training”– If you are experiencing difficulties with the training, you may wish to progress to a less intense, longer training regimen that has proven very effective for people who suffer from respiratory conditions. If so, you could consider trying the 15 minutes continuous breathing on a low load setting (consult your medical practitioner if in doubt).

If the lowest load setting “0” is too heavy for you to start with, then POWERbreathe Medic Plus allows you to train without using the calibrated load spring or the complete valve assembly to train at the absolute lowest load. See pages 10 - 11, diagrams 1 - 6.

Guidance for healthcare professionals

Teaching good training technique:
The first few days are the most challenging for the patient who will require careful and sensitive coaching, including the allowance of short breaks. They should be encouraged to tolerate the breathless sensation induced by training, and to increase the training load progressively. Typically, increases in load of 5-10% per week can be achieved.

It is advisable to encourage patients to train across the full extent of their vital capacity in order to train the full range of motion of the inspiratory muscles. As the patient’s inspiratory muscles fatigue, they may find it hard to achieve higher lung volumes towards the end of inspiration. At these higher lung volumes the inspiratory muscles are weakest and will be most prone to the effects of fatigue. Patients should be warned to expect this and should be discouraged from training beyond the point where they are able to achieve a ‘satisfying breath’.

Patients should also be encouraged to inhale against the load as rapidly as possible in order to maximally recruit their inspiratory muscles. Patients should breathe with a combination of diaphragmatic and chest wall movement in order to utilise all of their inspiratory muscles during training. Patients may require breaks during a training session in order to cough, or because they feel too breathless. It is

POWERbreathe Medic Plus - Accessories
A range of accessories to help patients/users with special needs are available, for example:

- Spacer
- Oxygen Mask Adapter
- Masks
- POWERbreathe Filters

For more information please visit: powerbreathe.com

S'habituer à votre Medic Plus

Schéma 1 : Réglage du Medic Plus

Retirez le Medic Plus et le clip nasal de l'emballage. En tenant Medic Plus verticalement, exercez-vous à régler la dose d'entraînement : Faites tourner le bouton de réglage de la dose dans le sens des aiguilles d'une montre pour augmenter la dose d'entraînement, et dans le sens inverse des aiguilles d'une montre pour diminuer le niveau d'entraînement. Observez l'échelle graduée qui se trouve sur le côté du Medic Plus. Lorsque vous tournez le bouton de réglage de la dose, le manchon indicateur de dose interne se déplace vers le haut ou vers le bas, indiquant votre dose actuelle d'entraînement sur cette échelle.

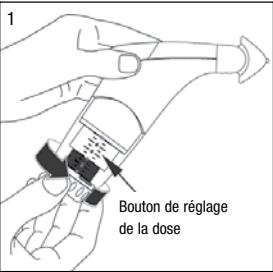


Schéma 2 : Dose 0

Réglez maintenant le Medic Plus sur le dosage 0. À ce niveau, la base du manchon blanc interne doit être alignée avec la dose la plus basse de l'échelle, comme indiqué au schéma. **Remarque : N'essayez pas de régler la dose inférieure à 0, car vous pourriez endommager le filetage de réglage.**

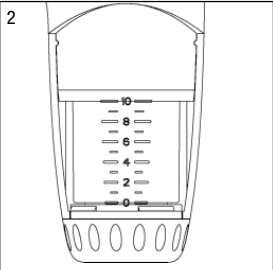
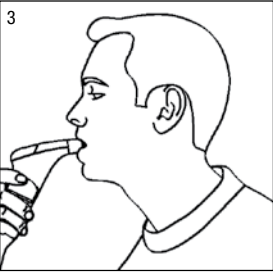


Schéma 3 : Mettez le Medic Plus dans votre bouche.

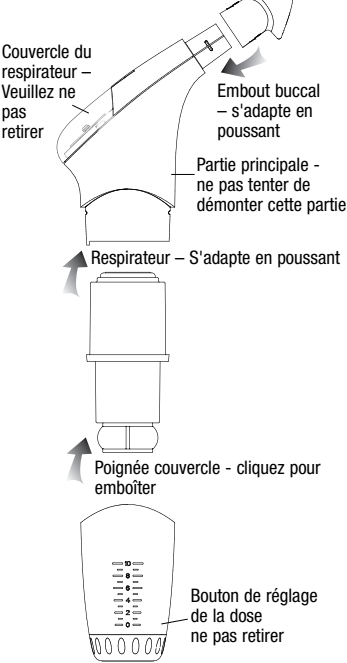
Assurez-vous d'être installé en position assise ou debout et de vous sentir détendu. En tenant le Medic Plus par la poignée, mettez l'embout buccal dans la bouche, les lèvres le recouvrant hermétiquement, en maintenant fermement les parties à mordre entre les mâchoires supérieure et inférieure.



6

Montage du Medic Plus

Montage générale



Si vous avez besoin de vous muscler à un dosage inférieur à « 0 », retirez le respirateur et / ou le ressort comme indiqué ci-dessous :

Schéma 1 : Tirez doucement pour retirer le couvercle poignée. (Lorsque du remontage du couvercle poignée, il faut légèrement le faire pivoter pour mettre le respirateur dans le bouton de réglage du dosage.)

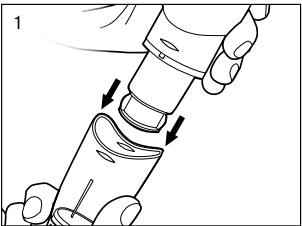
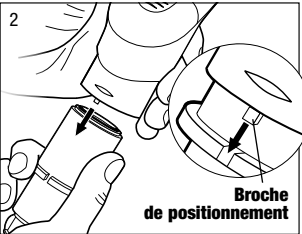


Schéma 2 : Tirez doucement pour retirer le respirateur. **Ne pas tordre** la partie principale ni le respirateur, car il est alors possible d'endommager la broche de positionnement, indiquée ci-dessous. Pour remonter, aligner la broche de positionnement avec la fente, et remettre.



Remarque : Bien que le POWERbreathe Medic Plus puisse être démonté plus amplement au niveau de ses pièces (à l'exception de la partie principale) – **Cela est déconseillé** car les petites pièces peuvent facilement être égarées.

Toutefois, si votre état physique vous indique de commencer à la dose la plus faible absolue, alors vous devez suivre les instructions comme indiqué aux schémas 1 à 6.

10

S'habituer à votre Medic Plus

Schéma 4 : Inhalation par le Medic Plus Videz vos poumons au maximum puis inspirez rapidement et énergiquement par la bouche. Inspirez autant d'air que vous le pouvez, aussi vite que possible, en redressant le dos et en gonflant la poitrine.



Schéma 5 : Expiration par le Medic Plus.

Expirez maintenant lentement et passivement par la bouche, jusqu'à ce que vos poumons soient vides, en laissant les muscles de votre poitrine et de vos épaules se détendre. Faites une pause jusqu'à ce que vous ressentiez à nouveau le besoin de respirer. Recommencez l'exercice jusqu'à ce que vous vous sentiez à l'aise en respirant avec le Medic Plus. **Note : ne vous trouvez pas à bout de souffle. Si vous avez la tête qui tourne, ralentissez et faites une pause après une expiration.**

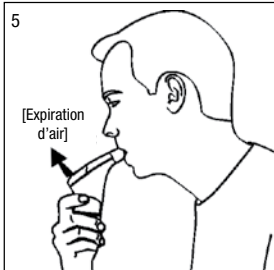
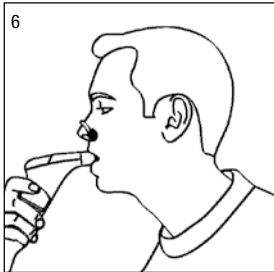


Schéma 6 : Utilisation du clip nasal.

Mettez à présent le clip nasal de façon à ce qu'il comprime vos narines, comme indiqué sur le schéma. Continuez à vous exercer en inspirant vigoureusement, puis en expirant lentement et à fond. Note : le clip nasal aide à respirer par la bouche plutôt que par le nez. Il n'est cependant pas indispensable, et certains préfèrent s'entraîner sans clip nasal.



7

Montage du Medic Plus

Schéma 3 : Pour retirer le ressort étalonné du respirateur, retirez doucement le joint en caoutchouc et l'enlever.

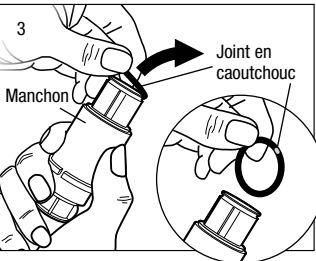


Schéma 4 : Retirez délicatement le manchon, puis le ressort. Remettez ensuite le manchon **avant** de remettre le joint en caoutchouc.

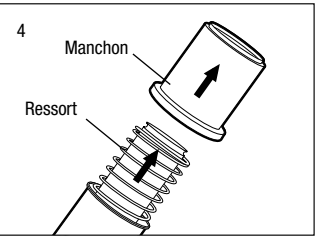


Schéma 5 : Montre le Medic plus remonté, respirateur en place, mais sans ressort étalonné.

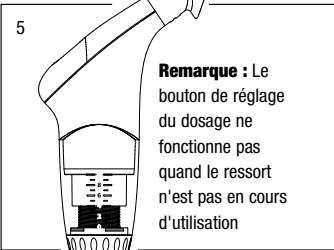
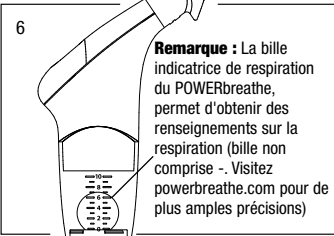


Schéma 6 : Indique le Medic Plus remonté mais sans tout le respirateur, et accompagné de la bille indicatrice de respiration du POWERbreathe.



IMPORTANT

Veillez conserver toutes les pièces inutilisées du POWERbreathe Medic Plus dans un endroit sûr, pour une utilisation ultérieure et aux fins de la garantie.

11

S'exercer avec Medic Plus

Indication pour les patients

Veillez suivre les instructions ci-dessous, à moins d'instructions contraires de la part de votre médecin. Avant de commencer les exercices, veuillez vous assurer d'avoir lu la section des précautions à la page 4 de ce mode d'emploi.

Trouvez le bon dosage de musculation :

La routine recommandée d'utilisation du POWERbreathe RMT est de 30 respirations, deux fois par jour.* Afin de profiter au maximum de la musculation, ces exercices devraient être faits sur un dosage aussi dur que possible, sans causer de l'inconfort.

Lors de la première journée de musculation, mettez votre Medic Plus sur le dosage 0 (**voir Schéma 1 - « S'habituer à votre Medic Plus »**).

Certaines personnes peuvent trouver les exercices très difficile à ce dosage. Si vous vous trouvez incapable de respirer 30 fois à ce dosage, prenez un peu de repos, puis recommencez jusqu'à ce que vous ayez réalisé un total de 30 respirations.

Si vous trouvez qu'il est difficile de respirer 30 fois sur la dose 0, continuez de vous muscler à ce dosage deux fois par jour, pendant la première semaine.

Si vous sentez que vous pouvez facilement respirer 30 fois à la dose 0, le lendemain, vous devez régler votre Medic Plus sur le dosage 1. Faites à nouveau les exercices. En suivant à cette méthode, continuez d'augmenter la dose de musculation d'1 réglage par jour, jusqu'à ce que vous puissiez parvenir à 30 respirations. Une fois que vous avez atteint ce point, continuez à ce dosage deux fois par jour, pendant une semaine.

Après une semaine de musculation avec le Medic Plus à la même dose, augmentez-la d'un demi-tour. Continuez de vous muscler à cette dose pendant une semaine. supplémentaire. A partir de là, vous devriez viser à augmenter la dose d'un demi-tour chaque semaine.

Pour un exemple d'un agenda type de musculation et pour télécharger / imprimer les pages vidéos d'un agenda visitez www.powerbreathe.com

** L'aroutine de musculation deux fois par jour de 30 respiration, est une routine intense qui s'est révélée très efficace chez les personnes qui s'entraînent pour améliorer leur condition physique générale (Romer et McConnell, 2003). Bien que plus intense, cette routine a le grand avantage d'être beaucoup plus courte que les routines traditionnelles de « musculation de faible intensité », qui ont été utilisées dans les études cliniques. Des indices récents, laissent à penser que les avantages d'une routine de faible et grande intensité sont similaires (Gosselink et al, 2010), c'est pourquoi nous recommandons la routine prenant le moins de temps. Toutefois, si vous rencontrez des difficultés au niveau de la musculation à haute intensité, veuillez vous référer à la rubrique « Musculation de faible intensité » en page suivante.*

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Indications pour les professionnels des soins de santé

Contre-indications : Veuillez lire la rubrique traitant des précautions à la page 4 de ce mode d'emploi, afin d'évaluer l'aptitude d'un patient à la musculation des muscles respiratoires (RMT).

Les patients doivent être informés de l'utilisation correcte du POWERbreathe Medic Plus RMT avant de commencer la musculation. Veuillez vous familiariser avec l'utilisation de l'appareil avant d'aider un patient à faire de même, en vous référant aux sections «S'habituer à votre Medic Plus» et «S'exercer avec Medic Plus - Guide pour les patients ». Les indications sur les exercices avec Medic Plus, reposent sur les informations publiées dans le journal de l'European Respiratory Society 'Breathe' (McConnell et al, musculation des muscles inspiratoires dans le cadre de la maladie pulmonaire obstructive : comment mettre en œuvre et à quoi s'attendre. Septembre. vol 2 (1), page 39 à 49, 2005). Visitez notre site pour télécharger l'article complet.

Le patient doit s'exercer à ce dosage pendant 1 semaine. Par la suite, la dose d'entraînement doit être augmentée chaque semaine, pour la maintenir à environ 60% de la nouvelle résistance des muscles inspiratoires du patient.

Remarque : Certains patients peuvent être incapables ou ne pas vouloir utiliser l'embout buccal. Dans ce cas, l'embout buccal Medic Plus peut être remplacé par un masque, attaché à une entretoise Medic Plus, pour permettre de faire les exercices.

Réglage de la dose de musculation :

Les études cliniques indiquent que les doses pour la musculation des muscles inspiratoires (IMT), doivent excéder 30 % de la résistance maximale des muscles inspiratoires du patient afin d'être utiles. Il est également prouvé que des doses plus conséquentes améliorent plus amplement la résistance musculaire inspiratoire.

S'exercer avec Medic Plus

Parvenir à une bonne technique de musculation :

Lorsque vous inspirez par votre Medic plus, vous devez respirer aussi profondément et aussi rapidement que possible. Lorsque vous expirez, expirez lentement et doucement jusqu'à ce que vos poumons soient complètement vides. Essayez de retirer le plus d'air possible vers la fin de la respiration, pour s'assurer que vos poumons soient complètement vides. Arrêtez-vous jusqu'à ce que vous sentiez l'envie de respirer à nouveau, avant d'inspirer à nouveau (environ 3-4 secondes).

Vous remarquerez qu'il devient plus difficile de remplir complètement vos poumons, au fur et à mesure que vous continuez à respirer lors d'une séance de musculation. C'est parce que vos muscles respiratoires fatiguent. Si vous ne pouvez plus respirer de façon satisfaisante, faites une courte pause avant de poursuivre votre musculation. Si vous vous trouvez dans l'incapacité d'arriver à la fin d'un respiration au début de votre séance de musculation, la dose peut être trop élevée. Dans ce cas, diminuez simplement la dose de musculation d'un demi-tour, puis reprenez votre séance. **Remarque :** La musculation devrait être un difficile. A la fin des 30 respirations de musculation, vous devriez viser à sentir ne plus pouvoir continuer.

Si vous vous sentez à bout de souffle, un peu étourdi ou si vous avez besoin de tousser, faites une courte pause. Dès que vous avez récupéré, reprenez la séance jusqu'à ce que vous ayez terminé un total de 30 respirations. Si vous manquez une séance de musculation, il suffit de la faire dès que possible. Si vous n'en faites pas pendant plus de 12 heures, ignorez la

séance manquée, et poursuivez avec votre prochaine séance de musculation, comme d'habitude.

Conserver votre respiration :

Au bout de 4-6 semaines, vos muscles respiratoires devraient s'améliorer sensiblement et vous devriez vous sentir moins essoufflé pendant pendant vos activités. A ce stade, vous n'aurez pas besoin d'utiliser votre Medic Plus tous les jours pour maintenir l'amélioration de votre respiration. Se muscler avec votre Medic Plus juste 3 fois par semaine, devrait être suffisant pour continuer à jouir d'une meilleure qualité de vie.

« Musculation à faible intensité »— Si vous rencontrez des difficultés lors de la musculation, il se peut que vous désiriez progresser à une vitesse moins rapide, qui s'est avérée très efficace chez les personnes souffrant de maladies respiratoires. Dans l'affirmative, vous pouvez envisager d'essayer la respiration continue pendant 15 minutes, sur un faible dosage (consultez votre médecin en cas de doute).

Si le dosage le plus faible, « 0 », est trop difficile pour commencer, alors POWERbreathe Medic Plus vous permet de vous entraîner sans utiliser le ressort de dosage étalonné ni tout le respirateur, pour vous muscler (entraîner) au dosage le plus faible et absolu. Voir pages 10 - 11, schémas 1 - 6.

9

Indications pour les professionnels des soins de santé

Enseigner à une bonne technique de musculation :

Les premiers jours sont les plus difficiles pour le patient, qui aura besoin d'un encadrement attentif et délicat, notamment de courtes pauses. Il devraient être encouragés à tolérer la sensation d'essoufflement provoqué par la musculation, et augmenter le dosage progressivement. En principe, l'augmentation de la dose de 5-10 % par semaine peuvent être atteinte.

Il est recommandé d'encourager les patients à s'exercer en faisant appel à toute leur capacité vitale, en vue d'exercer gamme complète de mouvement des muscles inspiratoires. Au fur et à mesure que les muscles inspiratoires du patient fatiguent, il peut trouver difficile d'inspirer de plus grand volumes d'air en fin d'inspiration. A ces volumes pulmonaires plus élevés, les muscles inspiratoires sont les plus faibles, et seront les plus vulnérables aux effets de la fatigue. Les patients doivent être avertis de s'attendre à ceci, et devraient être dissuadés de s'exercer au-delà du point où ils sont en mesure de « respirer de façon satisfaisante ».

Les patients doivent également être encouragés à inhaler au dosage, aussi rapidement que possible afin de récupérer au maximum leurs muscles inspiratoires. Les patients doivent respirer en faisant bouger le diaphragme et la paroi de la cage thoracique, afin d'utiliser l'ensemble de leurs muscles inspiratoires pendant les exercices. Certains patients peuvent nécessiter des pauses pendant une séance

pour tousser, ou parce qu'ils se sentent trop essoufflés. Il est important que la durée de celles-ci soient réduites au minimum, afin de maintenir le rythme des exercices, mais cela doit également être fait avec doigté, et soutenu par une explication des raisons pour lesquelles il est important de faire durer au minimum les périodes forcées de « repos ».

Exercices d'entretien :

Après 4-6 semaines d'entraînement, les muscles inspiratoires du patient devraient s'être considérablement améliorés, et il devrait se sentir moins essoufflé pendant l'exercice. A ce stade, il n'est pas nécessaire de s'entraîner avec Medic Plus chaque jour afin de maintenir une meilleure respiration. Faire des exercices de musculation avec Medic Plus trois fois par semaine, sera suffisante pour conserver les fruits des exercices.

POWERbreathe Medic Plus - Accessoires

Une gamme d'accessoires pour aider les patients / utilisateurs ayant des besoins spéciaux, sont disponibles, par exemple :

- Entretoise
- Adaptateur pour masque d'oxygène
- Masques
- Filtres POWERbreathe

Pour de plus amples informations, veuillez vous rendre sur le lien : powerbreathe.com

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POWERbreathe®
Medic Plus+
facilita la respirazioneSM



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Per altre zone visitare www.powerbreathe.com



Sviluppato, progettato e prodotto con orgoglio nel Regno Unito
Dispositivo medicale di classe I

Attivazione della garanzia
Registrare POWERbreathe Medic Plus su www.powerbreathe.com
In alternativa, conservare le ricevute per la data della prova d'acquisto.
Grazie.

Muscle Training.
Per avere la certezza di trarre il massimo dal dispositivo POWERbreathe Medic Plus, leggere attentamente il presente manuale d'istruzioni, visitare il sito www.powerbreathe.com e dedicare il tempo necessario all'allenamento con POWERbreathe Respiratory.

Se utilizzato correttamente, POWERbreathe Medic Plus consentirà di usufruire dei benefici derivanti dal suo impiego nell'arco di alcune settimane.

Durante l'allenamento con POWERbreathe Medic Plus, l'inspirazione risulterà più faticosa per effetto dell'allenamento di resistenza che agisce sui muscoli utilizzati per l'inspirazione, principalmente quelli del diaframma e della cassa toracica. Al momento dell'espirazione non si incontra alcuna resistenza e si riesce quindi a respirare in modo normale, il che consente di rilassare il torace e la muscolatura respiratoria grazie alla spinta naturale dell'aria che fuoriesce dai polmoni.

POWERbreathe (RTM) utilizza una tecnica nota come allenamento di resistenza, che rafforza la muscolatura respiratoria facendola lavorare con maggiore intensità, in pratica come accade quando si usano dei pesi per aumentare la potenza dei muscoli delle braccia.

Il training della muscolatura respiratoria (RMT) con POWERbreathe rafforza i muscoli respiratori, riducendo la dispenda durante l'esercizio o l'attività quotidiana.

POWERbreathe (RTM) non prevede l'uso di farmaci; è adatto a tutti e non causa effetti collaterali dannosi se utilizzato correttamente. In caso di dubbi sull' idoneità del dispositivo consultare il proprio medico.

Al fine di prevenire un'eventuale trasmissione di infezioni si raccomanda di non condividere il proprio Medic Plus con altre persone anche se propri familiari.

Il presente prodotto non è stato concepito per la diagnosi, il trattamento, la cura o la prevenzione di alcuna patologia.

Il dispositivo POWERbreathe Medic Plus è stato concepito esclusivamente per l'esercizio del polmone dovuto a lesione traumatica come la rottura di una costola, in quanto può causare il ripetersi della condizione. Dopo uno pneumotorace traumatico e/o la rottura di una costola, non utilizzare Medic Plus prima del recupero completo.

Iptensione polmonare

Ample bullee nelle radiografie del torace

Marcata osteoporosi con anamnesi di fratture delle costole

Desaturazione durante o dopo l'IMT (<94%)

CONTRONDISCAZIONI Si sconsiglia l'allenamento della muscolatura respiratoria (RMT) / allenamento della muscolatura al proprio medico

Alcune persone potrebbero percepire un lieve fastidio alle orecchie durante il training

seguenti condizioni:

POWERbreathe Medic Plus, ai pazienti nelle

Introduzione

Specifiche tecniche

Boccaglio.....	Elastomeri termoplastici (TPE)
Copri-impugnatura trasparente.....	Policarbonato
Impugnatura regolatore soft touch	ABS con iniezione sovrapposta di Santoprene
Valvola a cerniera	Silicone 60
O-ring	Gomma di nitrile
Gomma del tappanaso	Silicone 40
Ponticello del tappanaso	Nylon
Tutti gli altri componenti	ABS (Acrilonitrile Butadiene Stirene)

Nota: i materiali sono conformi alla FDA in termini di composizione, additivi e proprietà laddove pertinente ai sensi dei Requisiti essenziali della Direttiva sui dispositivi medicali 93/42/CEE (Allegato 1)

Tabella dei range di selezione del carico

	Niente molla e Niente gruppo valvola	Niente molla	Carico (cm H ₂ O) a 1l/sec										
Impostazione del carico	-	-	0	1	2	3	4	5	6	7	8	9	10
cm H ₂ O	1 (sfera inclusa)	3	9	16	23	29	36	43	50	57	64	71	78

Nota: Si può raggiungere un carico di 3cmH₂O rimuovendo la molla e sostituendo il gruppo valvola per l'allenamento (vedere pagine 10 e 11, schema 1 - 5). Si può inoltre raggiungere un carico di 1 cm H₂O rimuovendo il gruppo valvola completo e installando la sfera dell'indicatore di respirazione POWERbreathe (vedere pagine 10 e 11, schema 6).

I valori si intendono a una portata di 1 litro al secondo, in conformità ad altri modelli POWERbreathe.

Le impostazioni del carico precise possono variare marginalmente a causa di: (1) tipologia analoga del tenditore a molla calibrato e precisione nella selezione del carico; (2) lieve effetto della portata inspiratoria alla compressione della molla per cui portate inspiratorie elevate inducono una maggiore compressione della molla e un lieve aumento del carico (Caine & McConnell, 2000). È un effetto comune a tutti i dispositivi caricati a molla e la sua dimensione è ingrandita dall'aumento del range della molla (maggiore nelle molle con range massimo di 90cmH₂O rispetto a quelle con range dimezzato), è maggiore anche con impostazioni di carico assolute (Caine & McConnell, 2000).

Caine MP & McConnell AK. (2000). Development and evaluation of a pressure threshold inspiratory muscle trainer for use in the context of sports performance. *Journal of Sports Engineering* 3, 149-159.

Precauzioni

Il presente prodotto non è stato concepito per la diagnosi, il trattamento, la cura o la prevenzione di alcuna patologia.

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seguenti condizioni:

POWERbreathe Medic Plus, ai pazienti nelle

se in fase di guarigione da un raffreddore, se il dispositivo Medic Plus, specialmente con il dispositivo Medic Plus non è adatto per la condizione dell'orecchio del timpano o altra condizione

Non utilizzare Medic Plus in caso di rottura magliori informazioni sull'efficacia clinica dei dispositivi POWERbreathe, medic e pazienti possono visitare il nostro sito web (www.powerbreathe.com). Per ulteriori chiarimenti su POWERbreathe, rivolgersi al distributore nel proprio paese.

POWERbreathe Medic Plus non è adatto ai pazienti con peggioramento di sintomi e segnali di insufficienza cardiaca dopo RMT / IMT

N.B.: In caso di incertezza, consultare uno pneumologo.

Precauzioni

Cura e manutenzione

Precauzioni

I prodotti POWERbreathe sono stati concepiti per essere solidi e duraturi. Anche con una manutenzione minima, Medic Plus durerà molti anni. Leggere attentamente le seguenti istruzioni in modo da mantenere sempre il Medic Plus in buone condizioni:

- Non abbassare la regolazione del carico sotto lo 0, in quanto si tratta dell'impostazione minima e tentare di svitare ulteriormente il meccanismo può causare danni alla filettatura di regolazione.
- Non tentare di separare la sezione superiore e inferiore della struttura principale del dispositivo, in quanto dovranno restare sempre unite.
- Conservare Medic Plus nella custodia fornita o in un contenitore pulito idoneo. Prima di riporlo, accertare sempre che Medic Plus sia asciutto.

Pulizia

Durante l'utilizzo il dispositivo Medic Plus è esposto alla saliva, pertanto si raccomanda di pulirlo frequentemente al fine di mantenerlo in un buono stato operativo.

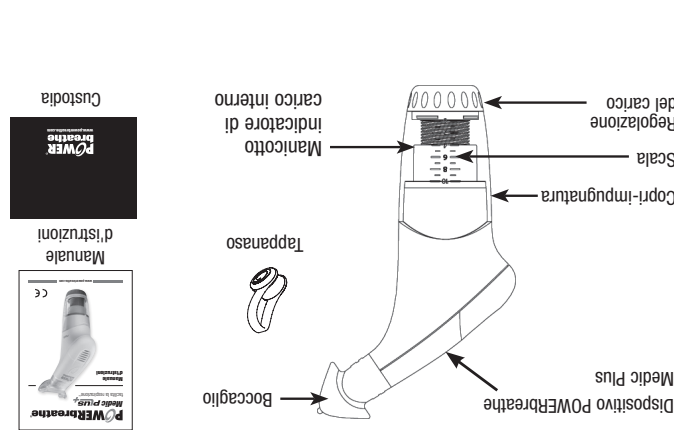
Alcune volte la settimana immergere il dispositivo Medic Plus in acqua calda per almeno dieci minuti, quindi strofinarlo con un panno morbido imbevuto di acqua corrente calda prestando particolare attenzione al boccaglio. Rimuovere l'acqua in eccesso e lasciare asciugare su un panno pulito.

Una volta alla settimana eseguire la stessa procedura immergendo però il dispositivo Medic Plus in una soluzione detergente neutra o approvata anziché in acqua. La soluzione detergente utilizzata deve essere idonea all'utilizzo su un apparecchio destinato al contatto con la bocca, come a esempio quella utilizzata per i biberon. Le pastiglie POWERbreathe possono essere ordinate presso rivenditori di tutto il mondo, in alternativa visitare il sito www.powerbreathe.com per maggiori dettagli.

Per conservare il dispositivo POWERbreathe in condizioni ottimali, capovolgerlo dopo la pulizia sotto l'acqua corrente in modo che l'acqua possa passarvi attraverso. Rimuovere l'acqua in eccesso e lasciare asciugare su un panno pulito.

Per una pulizia più in profondità, smontare Medic Plus nei relativi componenti come riportato sugli schemi a pagina 10, prestando attenzione a non smarrire i pezzi.

Nota: POWERbreathe Medic Plus non è lavabile in lavastoviglie.



Descrizione del prodotto

Il dispositivo POWERbreathe Medic Plus non è adatto per la condizione dell'orecchio del timpano o altra condizione

Non utilizzare Medic Plus in caso di rottura magliori informazioni sull'efficacia clinica dei dispositivi POWERbreathe, medic e pazienti possono visitare il nostro sito web (www.powerbreathe.com). Per ulteriori chiarimenti su POWERbreathe, rivolgersi al distributore nel proprio paese.

POWERbreathe Medic Plus non è adatto ai pazienti con peggioramento di sintomi e segnali di insufficienza cardiaca dopo RMT / IMT

N.B.: In caso di incertezza, consultare uno pneumologo.

Precauzioni

Disclaimer

I dispositivi POWERbreathe non sono giocattoli. Questo prodotto è stato concepito esclusivamente per consentire l'esecuzione di esercizi respiratori. Qualsiasi altro utilizzo è altamente sconsigliato.

Consultare un medico o altro operatore sanitario per eventuali chiarimenti su un determinato quadro clinico. Il presente prodotto non è stato concepito per la diagnosi, la cura o la prevenzione di alcuna patologia. I singoli risultati potrebbero differire. Non sono previste rivendicazioni, neppure implicite, nell'uso o come conseguenza dell'utilizzo dell'apparecchio in questione.

Leggere sempre il manuale d'istruzioni prima dell'uso. Il materiale contenuto nel presente manuale ha esclusivamente fini informativi.

Il dispositivo POWERbreathe contiene parti di piccole dimensioni, pertanto se ne sconsiglia l'utilizzo da parte di bambini di età inferiore ai 7 anni

Nota: Il presente prodotto è stato sigillato al fine di preservarne l'igiene e non potrà essere reso se non più sigillato.

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Garanzia limitata del produttore di 2 anni

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Le garanzie qui indicate sostituiscono espressamente qualsiasi altra garanzia implicita di commerciabilità e / o idoneità a un particolare scopo.

Conoscere Medic Plus

Schema 1: Regolazione di Medic Plus

Estrarre Medic Plus e il tappanaso dalla confezione. Tenere Medic Plus in posizione eretta per regolare il carico di allenamento: Ruotare la manopola di regolazione del carico in senso orario per aumentare il carico di allenamento e in senso antiorario per ridurlo.

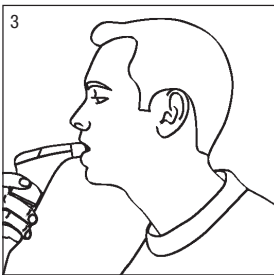
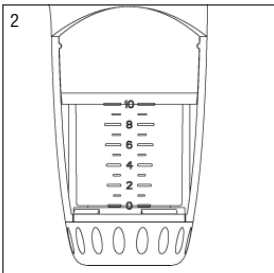
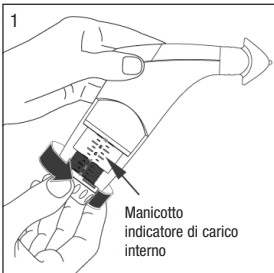
Si osservi che sul lato di Medic Plus è riportata una scala numerica. Quando si ruota la manopola di regolazione, il manicotto dell'indicatore di carico interno si sposterà in alto o in basso, mostrando il carico di allenamento corrente sulla scala di riferimento.

Schema 2: Carico 0

Impostare ora il carico di Medic Plus a 0. Con tale carico, la base del manicotto bianco interno dovrà essere allineata al carico minimo sulla scala, come mostrato nello schema. **Nota: non abbassare il carico sotto lo 0 in quanto potrebbe danneggiare la filettatura di regolazione.**

Schema 3: Inserimento di Medic Plus in bocca.

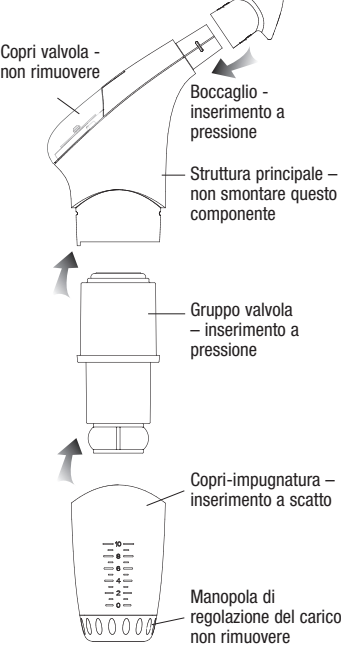
Stare seduti o in posizione eretta e rilassarsi. Tenendo Medic Plus dall'impugnatura, inserire il boccaglio in bocca in modo che le labbra coprano la protezione esterna per creare una barriera e che il morso del boccaglio venga a trovarsi stretto tra l'arcata dentale superiore e quella inferiore.



6

Gruppo Medic Plus

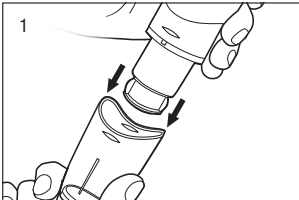
Montaggio generale



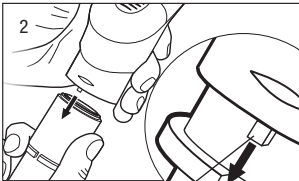
Nota: sebbene si possa smontare ulteriormente POWERbreathe Medic Plus nei pezzi dei rispettivi componenti (a eccezione della struttura principale), **non è consigliabile farlo** in quanto si potrebbero facilmente montare i pezzi piccoli in posizioni errate. Tuttavia, qualora la condizione imponga di iniziare al minor carico in assoluto, seguire le istruzioni riportate sugli schemi da 1 a 6.

Per allenarsi al di sotto dell'impostazione di carico "0", rimuovere il gruppo valvola e/o la molla come mostrato di seguito:

Schema 1: Tirare delicatamente per rimuovere il copri-impugnatura. (Per rimontare il copri-impugnatura applicare una leggera torsione in modo da individuare il gruppo valvola nella manopola di regolazione del carico.)



Schema 2: Tirare delicatamente per estrarre il gruppo valvola **Non torcere** il corpo principale o il gruppo valvola in quanto potrebbero danneggiare il perno del posizionare riportato sotto. Per rimontare, allineare il perno del posizionatore con la scanalatura e riposizionare.



Posizionatore
Perno

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Conoscere Medic Plus

Schema 4: Inspirazione con Medic Plus.

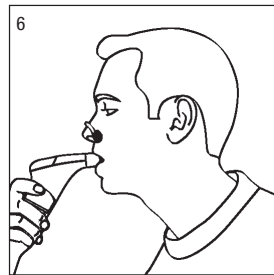
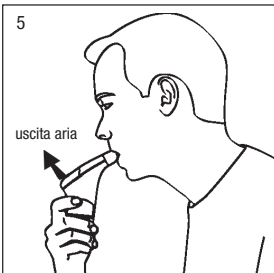
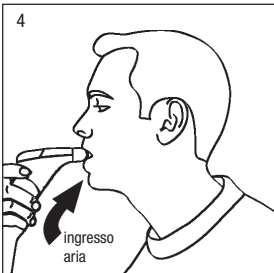
Espirare fin quando si riesce, quindi inspirare in modo veloce ed energico attraverso la bocca. Inspirare più aria possibile, il più velocemente possibile, raddrizzando la schiena ed espandendo il torace.

Schema 5: Espirazione con Medic Plus.

A questo punto espirare in modo lento e passivo con la bocca fino a svuotare completamente i polmoni, rilassando la muscolatura del torace e delle spalle. Interrompere finché non si percepisce la necessità di respirare ancora. Ripetere l'esercizio finché non si è sicuri di respirare attraverso Medic Plus. **Nota: non ansimare, se si percepisce la testa leggera, rallentare e interrompere al termine dell'espiazione.**

Schema 6: Uso del tappanaso

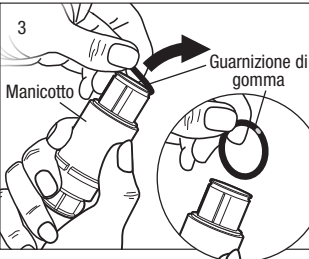
A questo punto, indossare il tappanaso in modo da unire le narici, come mostrato nello schema. Continuare l'allenamento con un'inspirazione energica seguita da un'espiazione lenta e profonda. Nota: il tappanaso aiuta l'utente a respirare con la bocca anziché con il naso. Non si tratta tuttavia di un accessorio fondamentale e alcune persone trovano più comodo allenarsi senza tappanaso.



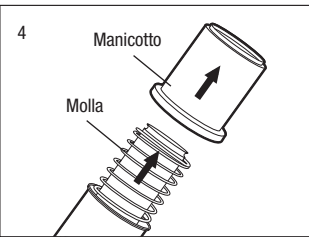
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Gruppo Medic Plus

Schema 3: Per estrarre la molla calibrata dal gruppo valvola staccare delicatamente la guarnizione in gomma e rimuoverla.



Schema 4: Estrarre con cautela il manicotto, quindi rimuovere la molla. Sostituire quindi il manicotto **prima** di rimontare la guarnizione di gomma.



Schema 5: Mostra Medic Plus rimontato con il gruppo valvola inserito, ma senza la molla calibrata.



Schema 6: Mostra Medic Plus rimontato, senza il gruppo valvola completo e e con la sfera dell'indicatore di respirazione POWERbreathe.



IMPORTANTE

Conservare in un luogo sicuro i componenti POWERbreathe Medic Plus non in uso, a scopo di riferimento futuro o a fini di garanzia.

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Allenamento con Medic Plus

Guida per i pazienti

Seguire le istruzioni indicate fatto salvo laddove diversamente indicato dal proprio medico. Prima di iniziare gli esercizi, leggere la sezione relativa alle precauzioni a pagina 4 del presente manuale.

Individuare il carico di allenamento corretto:

Il ciclo consigliato di POWERbreathe RMT è di 30 respirazioni due volte al giorno.* Per ottimizzare l'allenamento, eseguire gli esercizi al carico massimo possibile, senza causare disagio.

Il primo giorno di allenamento, impostare il carico di Medic Plus a 0 (**vedere lo schema 1 - "Conoscere Medic Plus"**). Per alcune persone gli esercizi possono risultare molto impegnativi con questo carico. Se non si riesce a completare le 30 respirazioni con questo carico, riposarsi brevemente e riprendere fino a raggiungere 30 respirazioni in totale.

Qualora completare 30 respirazioni a carico 0 risulti troppo difficoltoso, continuare l'allenamento con questo carico due volte al giorno per la prima settimana.

Qualora si completino facilmente le 30 respirazioni a carico 0, il giorno successivo impostare Medic Plus a carico 1. Completare nuovamente gli esercizi. Con questo metodo, continuare ad aumentare il carico di allenamento di 1 step al giorno, finché si riuscirà a completare soltanto 30 respirazioni di allenamento. Raggiunto questo livello, continuare ad allenarsi con questo carico due volte al giorno per una settimana.

** Il regime di 30 respirazioni due volte al giorno si è rivelato molto efficace per le persone che si allenano per migliorare la forma fisica generale (Romer & McConnell, 2003). Sebbene più intenso, questo regime presenta il notevole vantaggio di essere molto più breve dei tradizionali regimi di "allenamento a bassa intensità" utilizzati negli studi clinici. Evidenze recenti indicano che i benefici dell'allenamento a bassa e alta intensità siano simili (Gosselink et al, 2010), per questo si raccomanda quello meno dispendioso in termini di tempo. Tuttavia, in caso di difficoltà con l'allenamento ad alta intensità, fare riferimento alla sezione "Allenamento a bassa intensità" alla pagina seguente.*

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Guida per operatori sanitari

Controindicazioni: Leggere la sezione sulle precauzioni a pagina 4 del presente manuale per valutare l'idoneità del paziente all'allenamento della muscolatura respiratoria (RMT).

Prima di iniziare l'allenamento, istruire i pazienti sull'utilizzo corretto di POWERbreathe Medic Plus RMT. Acquisire familiarità con il funzionamento del dispositivo prima di assistere un paziente nel suo utilizzo corretto facendo riferimento alle sezioni "Conoscere Medic Plus" e "Allenamento con Medic Plus - Guida per i pazienti". La guida all'allenamento con Medic Plus si basa sulle informazioni pubblicate dalla rivista della European Respiratory Society "Breathe" (McConnell et al, Inspiratory muscle training in obstructive lung disease; how to implement and what to expect. September. vol 2(1),pp39-49, 2005). Per scaricare l'articolo intero, visitare il nostro sito web.

Nota: è possibile che alcuni pazienti non riescano o non vogliamo utilizzare il boccaglio. In tal caso, sostituire il boccaglio Medic Plus con una maschera facciale collegata a un distanziale Medic Plus, per consentire l'allenamento.

Impostazione del carico dell'allenamento:

La ricerca clinica indica che, per essere efficaci, i carichi dell'allenamento della muscolatura inspiratoria (IMT) devono superare il 30% della forza della muscolatura inspiratoria massima del paziente. È stato inoltre dimostrato che carichi più pesanti producono miglioramenti maggiori nella forza della muscolatura inspiratoria.

Se si possiede un mezzo di misurazione della forza della muscolatura inspiratoria come il dispositivo POWERbreathe KH1 o KH2, impostare il carico dell'allenamento iniziale al 30-40% della pressione inspiratoria massima (MIP) utilizzando la tabella di conversione a pagina 16. Il carico dell'allenamento dovrà essere quindi aumentato di mezzo giro al giorno per i successivi 7-10 giorni fino al 60% della MIP base.

Il paziente dovrà allenarsi a questo carico per 1 settimana. Intensificare quindi l'allenamento ogni settimana per mantenere il carico a circa il 60% della nuova forza della muscolatura inspiratoria del paziente.

Nota: al 60% l'allenamento della MIP sarà estenuante e potrà essere necessario del tempo prima che il paziente riesca a completare 30 respirazioni ininterrotte.

Allenamento con Medic Plus

Come ottenere una buona tecnica di allenamento:

Quando si inspira con Medic Plus, inspirare il più a fondo e rapidamente possibile. Espirare lentamente e delicatamente fino a svuotare completamente i polmoni. Cercare di respirare più aria possibile verso fine respirazione per svuotare completamente i polmoni. Prima di inalare di nuovo, fare una pausa finché non si percepisce la necessità di inspirare di nuovo (appross. 3-4 sec).

Si osserverà che diventa difficoltoso riempire completamente i polmoni continuando a respirare durante la sessione di allenamento. Questo avviene perché la muscolatura respiratoria si sta affaticando. Se non si riesce più a respirare bene, fare una breve pausa prima di continuare l'allenamento. Se si ritiene di non riuscire a respirare a fondo all'inizio della sessione di allenamento, è possibile che il carico sia eccessivo. In questo caso, ridurre semplicemente il carico di allenamento di mezzo giro e continuare la sessione di allenamento. **Nota:** l'allenamento dovrà essere impegnativo. L'obiettivo, al termine delle 30 respirazioni di allenamento, è non riuscire a proseguire.

Fare una breve pausa, qualora ci si senta senza fiato, si abbia la testa leggera o si debba tossire. Appena si recupera, proseguire la sessione di allenamento fino a completare 30 respirazioni in totale. Quando si salta una sessione di allenamento, recuperarla appena possibile. Se si salta per oltre 12 ore, ignorare la sessione saltata e continuare con la successiva come di consueto.

Mantenimento della respirazione

Dopo 4-6 settimane, la muscolatura respiratoria dovrebbe essersi irrobustita significativamente e il paziente dovrebbe sentirsi meno affaticato durante l'attività. In questa fase, non sarà necessario utilizzare Medic Plus ogni giorno per mantenere una migliore respirazione. Sarà sufficiente allenarsi con Medic Plus soltanto 3 volte a settimana per continuare a godere di uno stile di vita migliore.

"Allenamento a bassa intensità"— In caso di difficoltà nell'allenamento, si può passare a un regime di allenamento meno intenso che si è rivelato molto efficace per le persone affette da problemi respiratori. In tal caso, provare la respirazione continua per 15 minuti con un'impostazione a basso carico (in caso di incertezza consultare il medico).

Se l'impostazione di carico minimo "0" risulta eccessiva come inizio, sarà possibile allenarsi con POWERbreathe Medic Plus senza utilizzare la molla di carico calibrata o il gruppo valvola completo per esercitarsi con il carico minimo in assoluto. Vedere le pagine 10 - 11, schemi 1 - 6.

Guida per operatori sanitari

Come insegnare una buona tecnica di allenamento:

I primi giorni sono i più impegnativi per il paziente che necessiterà di un supporto attento e sensibile, con piccole pause consentite. Dovrà essere incoraggiato a tollerare la sensazione di mancanza di fiato indotta dall'allenamento e ad aumentare gradualmente il carico dell'allenamento. Si possono ottenere solitamente aumenti di carico del 5-10% alla settimana.

È consigliabile incoraggiare i pazienti ad allenarsi per l'intera portata della loro capacità vitale per allenare l'intera gamma di movimento della muscolatura respiratoria. Dato l'affaticamento della muscolatura inspiratoria del paziente, può essere difficile raggiungere volumi polmonari maggiori verso la fine dell'inspirazione. A volumi polmonari maggiori corrisponde la massima debolezza della muscolatura inspiratoria, che sarà più predisposta agli effetti dell'affaticamento.

Avvertire i pazienti che questo potrebbe accadere affinché non si scoraggino dinanzi a un allenamento oltre il punto in cui riescono a raggiungere una "respirazione soddisfacente".

Incoraggiare inoltre i pazienti a inspirare contrastando il carico il più rapidamente possibile per ottimizzare i muscoli inspiratori. I pazienti dovranno respirare con una combinazione di movimenti della parete toracica e diaframmatica per utilizzare tutti i muscoli inspiratori durante l'allenamento. Durante una sessione di allenamento, i pazienti

possono richiedere delle pause per tossire o quando si sentono senza fiato. È importante ridurne la durata al minimo per mantenere lo stimolo dell'allenamento, sebbene anche questo debba essere gestito con attenzione e supportato dalla spiegazione sull'importanza di minimizzare la durata di tali periodi di "riposo forzato".

Allenamento di mantenimento:

Dopo 4-6 settimane di allenamento, la muscolatura inspiratoria dovrebbero essere migliorata in modo sostanziale e il paziente dovrebbe sentirsi meno senza fiato durante l'esercizio. In questa fase non è necessario allenarsi con Medic Plus ogni giorno per mantenere i miglioramenti respiratori ottenuti, ma sarà sufficiente allenarsi tre volte alla settimana per mantenere gli effetti dell'allenamento.

POWERbreathe Medic Plus - Accessori

È disponibile una gamma di accessori per aiutare pazienti/utenti con esigenze speciali, per esempio:

- Distanziale
- Adattatore per maschera a ossigeno
- Maschere
- Filtri POWERbreathe

Per maggiori informazioni visitare powerbreathe.com

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