

# Oticon ♦ Sumo DM



child  
friendly  
hearing  
care



The proven digital Super Power  
for children

**oticon**  
PEOPLE FIRST



# Sumo DM

## – Proven for children

With maximum power and ease of use – and unparalleled fitting flexibility – Sumo DM is fast becoming the professionals' preferred choice for children with severe-to-profound hearing loss.

Designed to support the acquisition of language and auditory skills, Sumo DM does more than any other hearing instrument to help children achieve their full potential.

# Powerful benefits

- ◆ **More speech and audibility**  
Sumo DM uses only the most advanced technologies to maximize the speech input and control unwanted noise. The amplification is intelligently adjusted to fit the child's needs.
- ◆ **DSL v5.0: The new paediatric standard**  
The new DSL v5.0 rationale provides the extra gain required for children with severe-to-profound hearing losses without adding so much compression that the signal becomes distorted. With a clearer signal the child gains more access to crucial speech cues.
- ◆ **Freedom from feedback**  
Sumo DM applies Dynamic Feedback Cancellation to remove the risk of feedback, so that activities such as changing clothes or giving hugs won't trigger sudden whistling sounds.
- ◆ **A child-friendly design**  
Sumo DM is the world's smallest digital Super Power hearing aid. Smart controls make it simple to handle, while the status light makes it easy for parents and caregivers to see that it's providing amplification.
- ◆ **Robust and reliable**  
Sumo DM doesn't let children down. High quality components make it highly resilient to everyday wear and tear, and low battery drain ensures more power for longer periods.
- ◆ **An extra boost with high-end FM solutions**  
In noisy situations children can use an extra boost. Sumo DM is compatible with all major FM systems - and the interlocking adaptor shoe always stays in place.





# What young users are saying:

Children all over the globe are using Sumo DM every day. And they are experiencing all sorts of benefits.

On the following pages you can see what three young Sumo DM users have to say about this powerful instrument. Their reports are supplemented by testimonials from their families and audiologists.

To learn how 12-year-old Jesper, 4-year-old Allyse and 8-year-old Clément have been progressing – and how their audiologists rate the Sumo DM technology in general – just turn the page and read on!



# Jesper



*Twelve-year-old Jesper from Denmark has been wearing hearing aids ever since he was a baby. This is what he thinks of Sumo DM...*

“I think that sound is clearer with Sumo DM. When I use them with our FM system at home or when we go to friends’ houses, it’s easier to hear the TV. With my old instruments, if I was playing on my computer and the door was shut I couldn’t hear anyone on the other side, but with these I can hear the sounds coming from the living room. I can also hear other people more clearly – and I’m getting better at talking myself.”

Jesper also finds Sumo DM’s child-friendly features very useful:

“It’s good that it beeps when I turn the volume up and down and when I change the program, because then I know where I am. And sometimes I can hear it beeping when the batteries need changing. I like wearing these hearing aids and I wear them all the time, because not being able to hear is really boring.”

**Jesper’s mother:** “Jesper has always been really motivated to try new things. He’s interested in sounds and he really wants to understand what people are saying. I didn’t think he could ever play football with normal-hearing children but hearing aids have helped him do that. He has always wanted to talk and lately his language skills have really improved. He is beginning to understand more and more and his attention to and understanding of sound has increased with Sumo DM.”

“I know that Jesper finds these instruments better than his previous ones because he tells me so. I think the reason he uses them so much is because he loves sound and really understands the benefits of being able to hear.”





*Mariann Borlund, Fredericiaskolen, Denmark*

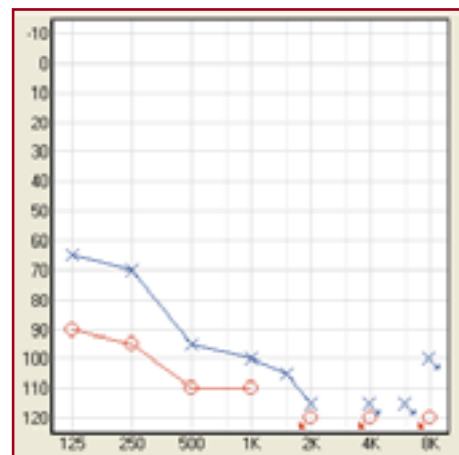
**Jesper's audiologist:** "When I began fitting Sumo DM I found the Genie fitting software quite easy to use; the prescribed settings are almost always good, so we don't have to fine tune them much. I found the Feedback Manager very useful during the fitting because, unlike other types of software where the kids have to sit still during the measurement procedure,

Genie can do the testing while they are on the move. And that provides a much more realistic picture."

"Jesper's been fantastic at helping us get his settings just right. He provides lots of feedback and seems to like the different programs. He is also very fond of listening to music with the new Sumo DMs. I think he finds the five operating modes very useful too. And the fact that the FM shoe always stays firmly in place is also handy. Teachers are happy with that - and with the status light - because it tells them the instrument is working. And everyone likes the fact that the batteries last a long time."

## Did you know...

that the Sumo DM FM receiver locks securely into the battery door to prevent loss?



*Jesper's audiogram*

# Allyse



*Four-year-old Allyse from the USA has been using hearing aids for only two years, but that doesn't stop her from making a few candid observations about her new Sumo DMs:*

"I can hear better now than before..."

"They stay on all the time. I can't just turn them off when mummy yells at me!"

"I can hear what my brothers are saying – and now I can even fight back!"

"I think the colour is really nice."

**Allyse's parents:** "Allyse has a strong and independent personality: with her old hearing aids she used to turn them off when she didn't want to hear something or someone – like her mummy. Now, she can't 'turn me off', because when the light is on, I know my daughter can hear me. With these new instruments she can talk in sentences – and what a difference that makes!"

Allyse doesn't seem to be as frustrated as she used to be; she can hear clearly now and she wears these instruments for longer periods than the old ones."

## Did you know...

that Sumo DM is the world's smallest Super Power BTE – and also one of the most powerful ones?



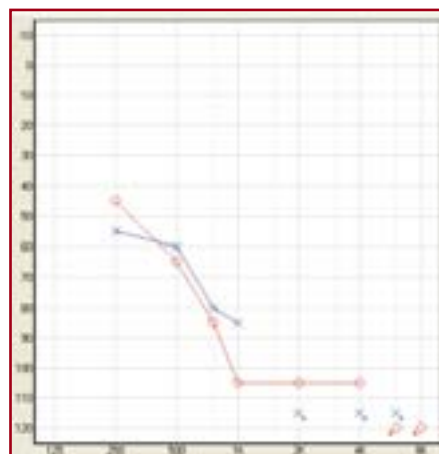
“Allyse isn’t the only one that finds Sumo DM easier to use; with the special light her nurses know exactly what state the battery is in. Size-wise, these instruments are really good because they fit nicely behind her ears, and they always stay in place. The red and blue markers for left and right are very useful because they don’t come off as easily as stickers do. And that makes it easier for the nurses too.”



*Pamela K Schaffer, Sacred Heart Hospital, USA*

**Allyse’s audiologist:** “We chose to fit Allyse with Sumo DM instruments because they are more powerful than the ones she had before, and because the Feedback Manager is more effective. Another advantage is that the software enables me to more effectively shape the frequency response and compression ratios to meet Allyse’s needs.”

“The main benefits Sumo DM has been able to provide versus Allyse’s old hearing aids are an increase in gain with less feedback, plus visual confirmation that the instruments are functioning. Allyse’s responses to speech have significantly improved; as soon as we turned the instruments on, she instantly smiled!”



*Allyse’s audiogram*

# Clément

*Eight-year-old Clément from France is something of an expert on hearing aids. This is how he views Sumo DM...*



“The first thing I do when I wake up in the morning is to put my hearing aids on, and the last thing I do before I go to sleep is to take them off. I can’t live without them. When I got these new ones I chose the blue colour because they look really cool. I like them because I can hear more and because the sounds never get too loud.”

“I think that when other people are talking I can hear them more clearly than I used to. And when mummy and daddy are talking, they don’t have to keep saying things again and again. Even when they are standing behind me I can hear them and understand what they are saying. I also like these new hearing aids because they don’t whistle as much as my other ones did.”

**Clément’s parents:** “We are so happy with these instruments because Clément hears so much better with them. He loves to watch cartoons on TV with the volume on full blast. When we ask him why it’s so loud, he says that it’s not because he can’t hear, but because he likes it that way! In that respect he’s just like any other boy of his age.”

“Clément is very bright. He goes to a mainstream school and thanks to his hearing aids we think he’s doing just fine. With his old instruments he had some difficulty with the school’s FM system, but with the new ones he doesn’t have any problems at all.

## Did you know...

that the Sumo DM LED is extremely helpful in letting caregivers know that the instrument is working correctly?



In general Sumo DM seems to be very reliable and easy to use; Clément has no trouble operating them and no difficulty changing the programs himself.”



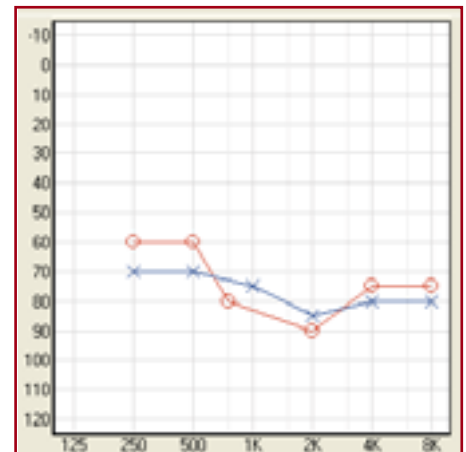
*Frédérique Vignault, Toulouse, France*

**Clément’s audiologist:** “Clément is such a clever boy; I’ve been watching him develop ever since he was six months old.

“Last summer his hearing aid broke, so we decided to upgrade to Sumo DM. The refit has been very easy, with very little fine tuning needed. The aided thresholds are between 10 and 25 dB SPL below 2kHz, and 40 dB SPL at 4 kHz - and he has experienced no discomfort with very loud sounds. Even in very noisy environments Clément can wear this instrument without problems.”

“The extra gain is probably the reason why Clément improved his speech understanding. He scored 90% in an open set speech recognition test at 55 dB input, without lip reading. Like all boys of his age, Clément loves to run around.

And with the new Sumo DM he has no feedback problems. Nor does he have oxidization problems due to perspiration. Overall, the results are so promising that his family has asked me to refit his little brother with Sumo DM. And we will try our best to do that!”



*Clément’s audiogram*

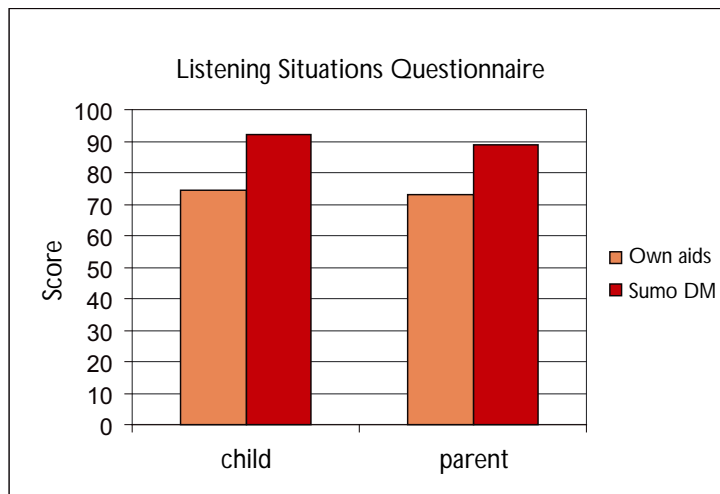


# The Sumo DM study

*The purpose of the study was to evaluate the benefits of Sumo DM for children with profound hearing loss. Nine children between the ages of 5-16 participated at three independent clinics in the USA. All were full-time hearing aid users, and all were integrated into the school system.*

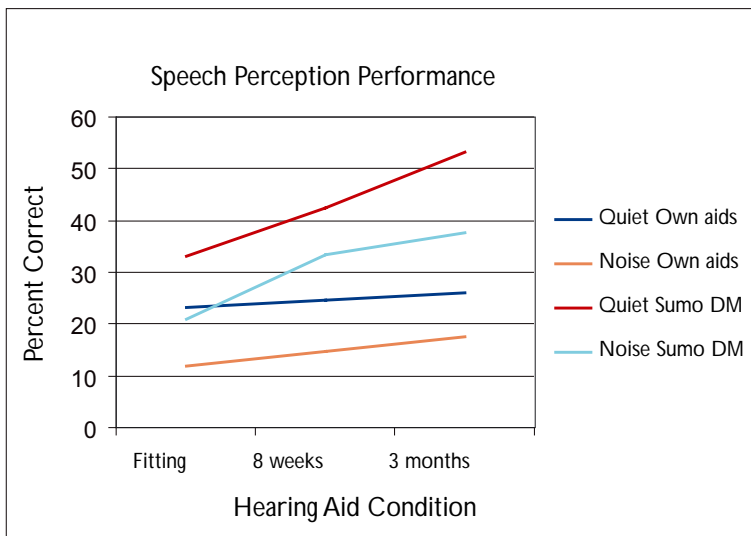
## Measurement criteria

The children's speech recognition scores were measured at the beginning of the study; after eight weeks, and after three months. Sumo DM's performance in various everyday listening situations was evaluated using the Listening Situations Questionnaire (LSQ).



*Scores for parents and children indicating the significant perceived improvement with Sumo DM in the child's actual listening situations.*

The children experienced an immediate improvement in speech understanding both in quiet and in noise. In the objective tests, both parents and children reported significant improvements in everyday activities. All nine children preferred Sumo DM and they continued to wear them at completion of the study.



*Percentage correct scores for speech understanding performance in quiet and noise for both the child's own aids and Sumo DM. Significant improvements in speech understanding for the Sumo DM instruments were observed at each time period. Additionally the rate of improvement with Sumo DM was far greater than the rate of improvement with the child's own devices.*

### **A unique dimension**

This particular test was unique because the child's' previous hearing aids were re-tested after three months in order to avoid any ambiguity. As children mature and become familiar with tests, performance will often improve even with their own instruments. But when the old ones were refitted, the improvements were clearly not as great as they were for Sumo DM – indicating that they could not be attributed to test learning or maturation.

### **Conclusion**

The study indicates that Sumo DM does offer significant improvements: all children participating reported significant benefits in terms of objective and subjective evaluations, thus reinforcing the need to give children with profound hearing loss access to the latest in hearing aid technology.



# Making it easier to help children achieve their full potential

Children deserve every opportunity to explore the world, perfect their skills and achieve their full potential. Helping them in the pursuit of these goals are devoted parents, audiologists and teachers. And these dedicated caregivers merit all the support they can get.

## **An attentive partner**

Oticon makes a contribution by developing genuinely child-friendly solutions. The needs of the child and family drive our innovation. And even though our solutions are as sophisticated as can be, they are also practical and exceptionally easy to use.

Technology is only a part of the solution where children are concerned. We aim to give people the support tools they need to ensure that the formative years of the children in their care are as fruitful and as rewarding as possible.

That's what "child friendly hearing care" is all about!





# People first



We believe that it takes more than technology and audiology to create the best hearing instruments. That's why we put the individual needs and wishes of people with hearing loss first in our development of new hearing care solutions.