

# Accessible meetings, courses and conferences

– a tool for the all-inclusive organiser



## **Accessible meetings, courses and conferences – a tool for the all-inclusive organiser.**

Order number IS – 1137 / E  
ISBN 82-8081 – 038 – 2

Produced by the Directorate for Health and Social Affairs  
Postal address: P. Box 8054 Dep. N-0031 Oslo, Norway  
Visiting address: Universitetsgaten 2, Oslo  
Telephone No: +47 24 16 30 00  
[www.shdir.no](http://www.shdir.no)

June 2004

The project group that has developed this guide included Kristin Bille, Kirsti Bøhm, Jane Victoria Flower and Knut Prytz, all working at the Directorate for Health and Social Affairs.

A reference group with representatives of the Norwegian Dyslexia Association, the Norwegian Association of Asthma and Allergy, the Norwegian Association of the Deaf, the Norwegian Association of the Hard of Hearing, the Norwegian Association of the Disabled and the Norwegian Federation of Organisations of Disabled People, has assisted during the development of the guide.

Total number of copies: 2000

An electronic copy can be ordered from [www.shdir.no/deltasenteret](http://www.shdir.no/deltasenteret), the publication list.

A paper and CD copy may be ordered from:  
The Directorate for Health and Social Affairs  
Trykksakekspedisjonen  
Telephone: +47 24 16 33 68  
Telefax: + 47 24 16 33 69  
E-mail: [trykksak@shdir.no](mailto:trykksak@shdir.no)

## PREFACE

Any organiser being responsible for the planning of meetings, courses and conferences, use time and energy to prepare the event to ensure that everybody is satisfied. From experience we know that some participants will still not be satisfied because the organiser lacked the knowledge of how to plan an event that includes all.

Adaptation and accessibility include many single factors. It is also a matter of holistic thinking. Planning according to the principles of the term universal design is based on the heterogeneity of the population.

About 20 per cent of the Norwegian population have a permanent disability, according to Statistics Norway. These disabilities include allergies, reduced mobility, sight and hearing or reduced ability to understand information. In addition a large part of the population experiences a disability during parts of their lives. This means that in most audiences there will be somebody with some sort of disability.

The Directorate of Health and Social Affairs believes it is necessary to achieve a greater awareness and more knowledge of adaptations of events, so that persons with whatever kind of disability may participate along the same lines as others. In the Government White Paper No. 40 (2002-2003) "Reduction of disabling barriers" it is stated that "the Government will focus upon the state as a demanding customer. The type of demands that the state makes, will influence the form and content of the products and services made by the market in general".

In this guide the Directorate of Health and Social Affairs has collected relevant advice and information in order to remove barriers towards disabled people. The guide is meant to be a working tool in the planning of events, and the Directorate hope it will be very useful.

As an introduction the notion "universal design" is presented. Thereafter we provide an overview of which concerns to be made in the planning phase, in the implementation and after the conclusion of an event. This is summed up in a checklist made for you who are about to organise the event, and an overview with advice and proposals you should pass on to those who will make presentations. You will also find information about adaptation measures which will be of great importance to different groups of disabled people.

This guide you will also find electronically at [www.shdir.no/deltasenteret](http://www.shdir.no/deltasenteret)

The Directorate wishes to thank all who have contributed to this guide, and will be grateful to receive any suggestions for improvements.

Oslo, September 2003



Gunn-Elin Aa. Bjørneboe  
Director of Division



Anne Lieungh  
Director of Department

## TABLE OF CONTENT:

<b>Preface</b>	<b>3</b>
<b>1. Introduction</b>	<b>5</b>
Universal design	5
Accessible events	5
<b>2. Before, during and after an event</b>	<b>6</b>
Preparations	6
Implementation	11
Follow up-activities	12
<b>3. Working tools</b>	<b>13</b>
Checklist	13
Information note to speakers	21
<b>4. Measures for different groups of users</b>	<b>22</b>
Asthmatics and allergists	25
Mobility impaired people	27
People with hearing impairments	29
People with reading and writing impairments	31
Visually impaired people	33

# 1. INTRODUCTION

## Universal design

The term “universal design”, also known as “planning for all”, has become popular during recent years both in the USA, Europe and in Norway. Equal treatment and equality are basic parts of the idea of universal design. The ideology behind the term is that you should not make special solutions for different user groups, but create universal solutions for all. This means that the bottom line of all planning activities should be universal usability, to include people of all ages, with different abilities, people with or without disabilities.

One of the objectives of universal design is to adapt for active participation for all people in all fields of life.

“Universal design is the design of products and environments in such a way that they can be used by all humans, to as large a degree as possible, without any need for adaptation and special design.”

(The definition is taken from the Centre for Universal Design at the North Carolina State University in USA.)

## Accessible events

Who would never have experienced difficulties in following a lecture because the sound or the light were bad, or that the participants in a seminar had problems finding their way in an over-complex locality?

Many organisers do not know what is required for premises to be accessible. Speakers are often uncertain on how to make their presentation in a way that is fruitful for all. Everybody wants to achieve a successful event with happy participants, but what is important to remember and how do you do it?

A successful event is one that ensures that participants with disabilities are also able to take part in all activities and get results from being present. It requires awareness of the individual parts of different kinds of events and knowledge of different user needs, in order to ensure good solutions that meet individual requirements for being able to participate on an equal level as others. A wheelchair user is not necessarily disabled where buildings and surroundings are made in a way to ensure free movement. A hard of hearing person does not need to feel disabled if assistive technology is available and well functioning. A person with reading- and writing impairments is not necessarily disabled if information is transmitted by sound and not only in writing.



### 3 BEFORE, DURING AND AFTER AN EVENT

A good result depends on good preparations. It may be feasible to split the planning up in three parts: What is essential to remember during preparations, during the implementation and after the conclusion of an event.



#### **Preparations**

##### **The choice of venue**

The organiser must check out the accessibility to, and within, the premises where the meeting, course, or conference is to be organised. This is relevant for all parts of the premises, including the meeting rooms, the plenary session room, the rooms for parallel sessions, working group sessions and, if relevant, the accommodation rooms. All participants, speakers as well as audience, must have the possibility to participate on equal terms. Nobody should be excluded because of a disability. When evaluating the accessibility of a venue, one must take into consideration that among the audience there may be people with reduced mobility, visual impairments, hard of hearing people or people with allergies. If you wish to engage an organisation or a company to organise the conference, the accessibility requirements at the venue must be specified in writing.

Elements to evaluate before choosing the venue: (Also refer to the checklist)

- Transport and arrival
- Physical accessibility at arrival: parking, outdoor areas and entrance
- Finding your way: orientation and signs
- Physical accessibility at the premises: conference room, meeting rooms, working group rooms, dining hall/lunch room, toilets and internal communication facilities
- Light conditions
- Sound conditions
- Internal climate/air
- Communication facilities
- Security
- Pedagogical conditions
- Services and assistance

### **Agenda**

The setting up of the agenda also affects accessibility. The sessions should be limited to 60 minutes, and there should be breaks between sessions. The schedule should be followed, because many people make their plans according to it, for instance medication in connection with eating or transport agreements. Enough time must be allocated for moving from one place to another for meals, so that time consuming queues are avoided.

### **Invitation and registration**

The invitations should be accessible and be sent out both as ordinary mail and E-mail. The electronic version should be accessible also for visually impaired people and people with reading impairments. It should be text based, and graphical presentations, frames and likewise avoided. Alternatively it may be one graphical presentation and one text-only version. All that is presented on Internet should be based on the international guidelines for accessibility as produced by the Web Accessibility Initiative (WAI) by World Wide Web Consortium (W3C). In the invitation it should be made clear that participants have the possibility to report special requirements important for their participation.

This may concern:

- Assistance on arrival
- If need for assistance, are they accompanied by a personal assistant?
- Need for sign language interpretation
- Need for writing interpretation
- Need for hearing aid loop
- Need for specific diet or menu
- In which format should material be available before, during and after the conference (large print, electronically, tape, Braille).

- Which needs are connected to the presentation of information provided during the conference?
- Important needs regarding accommodation, if relevant:
  - Needs for allergy rooms and allergy bed clothing (synthetic quilt and pillow)
  - Needs for non-smoking and carpet-less room
  - Needs for wheelchair adapted room
- Other information important to ensure the best possible conditions



In order for the organiser to be able to accommodate the wishes of registered conference participants in the best possible way, registration should be made in writing or electronically. It may, however, be cases where this is not practical, and registration is made by telephone. It is vital to confirm registrations and reported requirements and needs. If the specific needs of the participants cannot be met, the person concerned must be given clear notice of this.



The ordering of interpreters and relevant extra equipment must be made in due time. Hearing aid loops may be leased from some dealers of hearing aid products. Some assistive technology may be borrowed from the Assistive Technology Administration in each county.

Dedicated seating should be reserved for wheelchair users in the conference room. Interpreters, hearing and visually impaired participants who so wish, should be given dedicated seats at the front of the conference room, or close the speaker(s). If several participants can utilise one common sign-, text- or writing interpreter, this should be arranged when seating the participants. In some cases the interpreter must relate to one of the participants only. Interpreters need chairs without arm rests. There must be access to electricity for writing interpreters (PC), and one should agree in beforehand who is to provide, install and, if relevant finance the cost of the technical equipment (for instance a computer with monitor).

Before the launching of the event, the organiser must ensure that hearing aid loops and other technical equipment are actually working.

### **Pedagogical adaptation**

All organisers and speakers must be informed that among the public there will be some people with various disabilities. Make aware of specific conditions, depending on what has been reported in beforehand. The pedagogical adaptation may have important effects on the outcomes of the event. Presentations and lectures which take different participant groups' needs and wishes into consideration, often prove to have qualities that all may appreciate and benefit from.

- **Information in advance**

In due time before an event, information should go out to those making presentations and speakers encouraging them to submit their manuscript and possibly copies of their overhead presentations and electronic presentations. Both for participants and the organiser it is an advantage if the manuscripts for presentations are available in advance, in particular in those cases where the presentation involves the use of overhead foils etc. Be aware that copies of overhead foils and electronic presentations with a dark background are difficult to read. The material should, when necessary, be available in alternative formats: paper, Braille or in electronic format (via E-mail or on a diskette). In this way the organiser can ensure that participants with needs of information being submitted through a sign language interpreter or in Braille, get the information at the same time as other participants in the conference. In order for interpreters to become familiar with the topic, it may be an advantage if they have seen the manuscript before the presentation is made.

- Presentation

Speakers must talk clearly, not too fast and face the audience. Microphone should be used – also when there are relatively few participants – if somebody is dependent on hearing aid loop or FM equipment. Speakers should express themselves in such a way that their message is easy to understand during interpretation, without explanation or adaptation from the part of the interpreter. If a blackboard or flip-over chart is used, it is important that the speaker reads aloud what is written or alternatively what he is pointing at. Never use words like “here”, “there”, “thus” and “like this” without explaining. Pictures, diagrams and likewise that are shown should be described orally. There must be good light conditions to facilitate mouth reading. Avoid contrasting light. Videos presented should ideally be subtitled. The content should also be explained/referred orally.

- Technical equipment

All necessary technical equipment (for instance hearing aid loop, FM equipment, microphones, audio-visual equipment) must be tested in advance in order to ensure it is workable. Those participants wishing to take the floor, should have access to a microphone. It is not sufficient that the chair repeats what the individual participant said or asked about.

If a podium or rostrum is used, the organiser must ensure that wheelchair- and crutch users have access to it.

Messages during an event should be disseminated orally in addition to written notices. Not everyone may see or take note of a piece of paper on an information board.



## Implementation

Good co-operation between the organiser and the individual participant is decisive for a successful event. User participation in practice often yields good solutions for any problems. Even if much has been thought of during planning, unforeseen situations may arise that must be dealt with. Then everybody must be flexible.

A list should be made of specific things to be done or remembered just before or during the day of the event itself. This may include:

- Be certain that the surroundings of, and the premises themselves, are accessible.
- A “corps of assistants”: It may be feasible to have assistants being ready to help with different tasks. The responsibility for defined tasks should be defined.
- Concerning practical information on the programme, room facilities, toilets, distributed material etc., this should be available in writing, for instance in a conference folder and be communicated orally as well.
- Other written material that is handed out should be made accessible in alternative formats according to needs: electronically, in Braille or taped.
- Security: be prepared and plan routines for warning and evacuation for instance in case of fire. Be particularly aware of deaf and blind participants, and people with reduced mobility. If they are staying overnight, the reception must know in which rooms they are staying. It may be vital that disabled people have rooms close to the reception and with a simple emergency exit.
- Persons with food allergies and –intolerance should be safe that the kitchen is following specific guidelines. Special food which has been ordered, must be clearly marked so that the right person gets it.

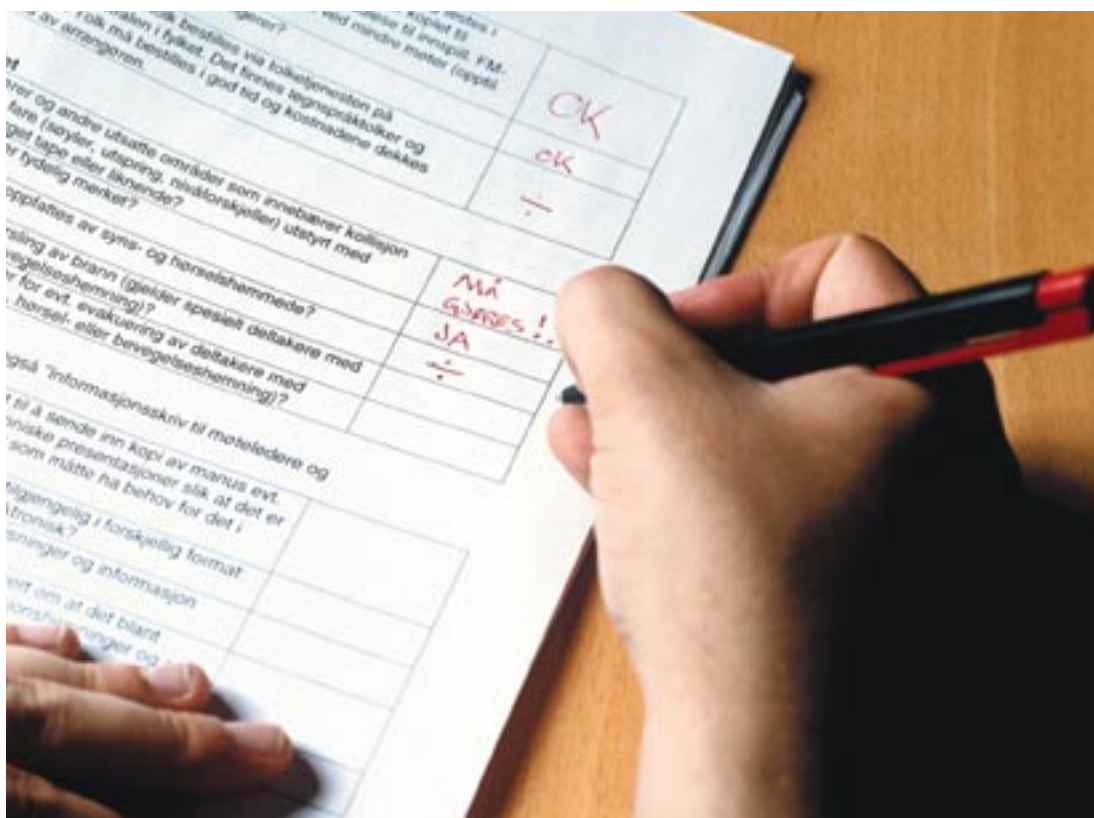


### **Follow up-activities**

Following up properly may make the next event even better. In addition to evaluate the professional content and the organisational part, the various aspects of adaptation and accessibility should be emphasised. It is important that all parties concerned express their viewpoints: the participants, the assistants and the organisers. The evaluation should be given in the most suitable format according to individual needs. New experiences should be included in the planning tools for later use. This could make the basis for specifications of requirements for later orders of and tenders for technical conference organisers. After every conference responses should be made (possibly in writing) to the organisers with a view for improving for later events.

After an event it may also be necessary to send out some additional material. Once again make sure it is available in alternative formats. All that is presented on the Internet should be based on the international guidelines for accessibility developed by the Web Accessibility Initiative (WAI) by the World Wide Web Consortium (W3C).

### 3 WORKING TOOLS



#### Checklist

The checklist is meant to be a practical tool for all organisers of small and large events who want to be inclusive. It is a memo for all parts that are important to remember. The memo can be used in its entirety, or one may choose elements according to type of event, participants and which needs are reported. Often you have to make some choices concerning what is most important, what can be achieved or what is acceptable in the given situation. Way finding and signposting is for instance important for visually impaired people and the physical accessibility is particularly important for participants with mobility impairments. The more demands you can meet in total, the closer you are to the objective of a universal solution that is acceptable for all. Some points in the checklist can be important as part of a tender/requirement to the venue (hotel), while others are more relevant for the organiser's own carrying out of the event.

It is recommended to copy/print out the list so that you have one copy for each event.



## CHECKLIST

Transport	Remarks
How are the possibilities to arrive at the venue by public transports?	
Is it possible to walk from the bus stop to the venue?	

Physical accessibility on arrival	Remarks
Are there reserved parking spaces for disabled people close to the entrance?	
Are there plants close to the entrance which may yield allergic reactions?	
Is the ground between parking place and entrance solid?	
Is the space between parking place and entrance on one level?	
Are there any steps at the entrance? If so, is there a ramp in addition?	
Are there full-length banisters in two heights at all external and internal ramps and stairways?	
Is there a level place for wheelchairs in front of the entrance door and does it have the dimensions 1,5 m x 1,5 m?	
Is the entrance door of a minimum width of 86 cm?	
Are the doors heavy, or are automatic door-openers installed?	
Are the outdoor premises made in a way that they can be easily used by visually impaired people?	
Is it possible for guide dogs to be taken out for a walk at the premises?	

## CHECKLIST

Way finding, signposting	Remarks
Are the premises constructed in a way that makes it easy to move from one point to another and possibly “learn the place by heart”?	
Are there orientation points like lights, mouldings and marked surfaces that may function as direction indicators in- and outdoors? Are the indicators right-angled?	
Are there good visual information: signposting and marking?	
Are the signposts installed in such a way to avoid that people collide with them? Signposts should be on eye level both for walking and sitting people. They must be clearly illuminated without reflection, side-lighting or contrast lighting. The information should have colours, contrasts and relieves or Braille. The size of letters on the signs should be made according to the distance from which the information is to be read. Door-signs should have letters not smaller than 5 cm in size. Symbols should be clear and simple.	
Are there contrasting colours at stairways, doors, walls and installations that explain their specific functions?	
Is the operating panel by and in the lifts marked with Braille or relief?	

## CHECKLIST

<b>Physical accessibility to and inside premises (conference room, meeting rooms, group rooms, dining hall/canteen)</b>	<b>Remarks</b>
Are the floors safe against sliding?	
Are the counters, telephones and wardrobes accessible?	
Are there thresholds? Possible thresholds should not be more than 2,5 cm high and must be sloped.	
Is it possible to move around in the building(s) without encountering steps or using stairways?	
Are there narrow passages? Door openings should be at least 76 cm net wide (internal doors).	
Are there objects which may cause collisions or constitute barriers?	
Are glass doors and other dangerous areas marked with coloured tape or likewise?	
Are columns, banisters, step nosings and different levels marked with contrasting colours and/or tactile markings?	
Is there enough space for wheelchairs to be turned?	
Are there adapted rest areas with seating?	
Is there a lift with space for electric wheelchairs between all floors, and low-level servicing panels in the lift?	
Are there toilets dimensioned for wheelchair users within reasonable distance?	
Is the platform/rostrum accessible for wheelchair users?	
Are there electricity outlets for PCs?	

## CHECKLIST

Light conditions	Remarks
Is the illumination good without contrasting light or reflexes?	
Are light conditions adequate for mouth reading and communication through sign language? Avoid contrasting lights.	
Is there a spotlight on the speaker and, if relevant, the interpreter, so that both can be clearly seen even if the light in the rest of the room is reduced?	

Sound conditions	Remarks
Is there a hearing aid loop at the counters and in the meeting halls?	
Are the acoustic conditions good? It should be possible to have a conversation without too much echo and disturbing noises.	
Does the loudspeaker system function?	
Is there much noise from the surroundings (background noise) that could be reduced? For instance, knobs under the legs of chairs prevent scraping.	

## CHECKLIST

Internal climate/air	Remarks
Has material that leaves minimal waste gas been used in walls, ceiling and floors and are they easy to clean? Avoid carpeted floors. Beware of freshly decorated or renovated premises. Because of waste gases from paint and enamels, this may lead to reactions from allergists.	
Are there plants in the surroundings that may yield allergic reactions?	
Is the quantity and quality of air in accordance with the number of participants?	
Is the regulation facility for temperature adequate? The indoors temperature should be approximately 20 degrees.	
Is the ventilation and/or routine for airing satisfactory?	
Are there non-smoking areas or zones?	
Are there animal-free areas or zones?	

Communication technology	Remarks
Is there a hearing aid loop at the reception/counter and in the meeting/conference halls? A hearing aid loop can for instance be leased from a dealer of hearing aid products, and must be installed and tested in the premises in beforehand. There should be several microphones connected to the installation: one microphone for the chair and two wireless for responses from the audience. FM installation or table microphones can be used for smaller meetings (up to 10 persons).	
Does the loud speaker installation work properly?	
If needed, a sign language interpreter must be ordered. There are sign language interpreters and writing interpreters. Interpreters should be ordered in due time and the costs will normally be covered by the organiser.	



## CHECKLIST

Security	Remarks
Are glass doors and other areas implying a danger of collision or other dangers (columns, projections, difference in levels) clearly marked, with coloured tape or similar?	
Are the emergency exits clearly marked?	
Can the fire alarm be noticed by visually impaired and hard of hearing people?	
Are there routines for fire alerts (this in particular affects participants with visual-, hearing- or mobility impairments)?	
Have plans been made for possible evacuation of participants with disabilities (visual-, hearing- or mobility impairments)?	
Pedagogical concerns (refer also to the "Information note to speakers")	Remarks
Have the speakers been asked to send in a copy of their papers, alternatively a summary, or overhead foils/electronic presentation so that they are accessible for participants and interpreters who may need it in beforehand?	
Is written information and material available in different formats: large print, Braille or electronically?	
Has provisions been made for practical information to be disseminated orally?	
Have the chair and the speakers been informed that there will be various groups of disabled people among the audience and that special needs have been reported?	
Are the chairs and speakers been made familiar with the "Information note to speakers"?	

## CHECKLIST

Service, assistance	Remarks
Can the organiser provide assistance when needed? (For instance during breaks and at meals)	
If the participants are bringing a personal assistant, are practical and financial matters for the assistant clarified (for instance exception from paying participant's fee)?	

## Information note to speakers

In most audiences there will be one or more disabled people. Awareness of, and adaptation for, some participants will normally be of benefit for all the participants: “Good for somebody, good for everybody”. Here are some advice on what can be done to ensure that more participants can benefit from lectures and presentations.

- Many participants will benefit from having a copy or a summary of the manuscripts and, if relevant, of overhead foils or electronic presentations before the event. If needed, the material should be available in alternative formats: paper, Braille or electronically (via E-mail or on diskette). In that way the organiser can ensure that participants with a need to have the information communicated through a sign language interpreter or in Braille, also may receive the information at the same time as the other participants in the conference. In order to make the interpreters more familiar with the topic, it will be an advantage if they have seen the manuscript before the presentation is made.
- Are copies and other written material easy to read?  
The background should be clear, steady and neutral, so that the text itself is clearly seen. Avoid text on pictures. If colours are used, there must be good contrasts: For instance black text on white background, green text on white background, blue text on black background or black text on yellow background.
- Some simple measures will be important for the presentation itself and be vital for several of the participants:
  - Speak clearly and not too fast. Be in particular careful when an interpreter is used.
  - Face the audience.
  - Use the microphone – also when there are relatively few people present – some of them may be dependent on the hearing aid loop or FM equipment.
  - Express yourself in such a way that your message is easy to interpret, without additional explanations or refinements from the part of the interpreter.
  - Often it may be necessary to repeat questions from the audience.
  - Pictures, diagrams and likewise that are shown, should be orally described.
  - If a blackboard or flip-over chart is used, it is important that you read aloud what you are writing or pointing at. Avoid words like “here”, “there”, “thus” and “like this” without describing what you mean.
  - Be aware that good light conditions facilitate mouth reading. Place yourself according to the illumination, and avoid standing in front of windows (contrasting lights).
  - Videos that are presented should ideally be subtitled. The content should also be explained/referred to orally.
- Will individuals who need it, be allowed to tape the presentation (alternatively make an agreement on this)?

## 4. MEASURES FOR DIFFERENT GROUPS OF USERS

There are different kinds of disabilities and chronic diseases. Some are hidden but others are more visible. Between these there are different diagnoses and degrees that have different consequences for each individual. To exemplify what can be important to remember regarding different disabilities, we have chosen to present some main categories.

- Asthmatics and allergists
- Mobility impaired people
- People with hearing impairments
- People with reading and writing impairments
- Visually impaired people









## ASTHMATICS AND ALLERGISTS

20-40 per cent of the country's population suffer from allergy/over-sensitivity in one form or another and to different degrees. The illnesses are increasing, which is often due to environmental conditions, and the indoors climate is a very important part of this. Several of the problems can be solved through good quality of air and sufficient quantities of it, regulation of temperature, good cleaning and correct choice of materials.

How to improve the accessibility for asthmatics and allergists?

- Choose venues with material on/in walls, ceilings and floors that leave minimal waste gas and are easy to clean. Avoid carpeted floors.
- Be aware of freshly renovated premises. Waste gases from paint and enamels may yield allergic reactions from allergists.
- Good cleaning routines and use of environment and health friendly cleaning methods and –remedies.
- Ensure that the quantity and quality of air is suitable for the number of participants.
- Ensure regular control and maintenance of ventilation- and heating installations.
- Good regulation of temperature: The indoor temperature should be approximately 20 degrees.
- Good routines for airing.
- Be aware of biological pollution because of high humidity and/or moisture damages in the building that may yield fungus, mould and bacteria.
- Non-smoking areas/zones.
- Animal-free areas/zones
- Trees and plants must follow the recommendations of the Association of Asthma and Allergy. Pollen and very odorous plants may yield problems both in- and outdoors.
- Be aware of pollution from surrounding roads/activities.
- Perfumes and other strong odours often create problems.
- Alternative menu for persons with food allergies/-intolerances, and safe marking of the food.





## MOBILITY IMPAIRED PEOPLE

The group of mobility impaired people includes persons with reduced or no function of legs, arms or hands, and/or uncontrolled movements. Many are wheelchair users or use assistive walking implements like crutches, canes or walking frames. The problem for mobility impaired people is often that the physical surroundings have barriers making it difficult to move. It is important that both outdoors and indoors surroundings are accessible. Many more people could be independent if the physical environment had been better adapted.

What can be done to improve accessibility for mobility impaired people?

- Reserved parking spaces for disabled people close to the entrance.
- Solid ground and limited incline between parking place and entrance.
- Entrance without steps. Difference of inside and outside levels can be levelled out with a ramp.
- Full-length banisters in two heights at all outdoors and indoors stairways and ramps.
- Horizontal turning place for wheelchairs at the entrance door.
- Avoid heavy doors. An automatic door-opener should be installed for heavy doors.
- Floors should be secure against sliding.
- Signs should be fixed at reading level for both walking and sitting people.
- Accessible counters, telephones and wardrobes.
- Avoid thresholds. Possible thresholds should not be more than 2,5 cm high and should be sloped.
- Avoid narrow passages. Door openings should have a net width of no less than 86 cm for external doors and 76 cm for internal doors.
- Adequate turning places for wheelchairs.
- Lift between all floors, and service panels in sitting height.
- Large buttons on door openers and lift service panels.
- Short distance to rest areas with seats.
- Toilet dimensioned for wheelchair users reasonable close to the common premises.







## PEOPLE WITH HEARING IMPAIRMENTS

A hearing impairment is a common term for different degrees of reduced hearing and deafness. A hearing impairment can reduce the amount of information taken in and affects communication with other people. Hard of hearing people usually can use the rest of their hearing abilities with a hearing aid. The hearing aids only compensate for some of the loss of hearing, and are not complete compensation for hearing lost. Many with severe hearing impairments and deaf people communicate through mouth reading and sign language. They will need a sign language interpreter. It is necessary to adapt the physical environment so that the communication with others is facilitated. Vision may to a certain degree compensate for hearing and people with hearing impairments are therefore dependent on visual information and good signing.

What can be done to improve accessibility for people with hearing impairments?

- Good visual information, signing and marking.
- Hearing aid loops at counters and in the meeting room. Hearing aid loops can be leased if necessary, and should be installed and tested in the meeting room in beforehand. There should be several microphones connected to the installation: one microphone for the chair and two wireless sets for responses.
- FM-installation or table microphone can be used for smaller meetings (up to 10 people).
- If needed, sign language interpreters must be ordered. There are sign language interpreters and writing interpreters. Interpreters must be ordered in due time and the costs are normally covered by the organiser.
- Reduce noise from the surroundings (background noise). For instance: Knobs under the legs of chairs reduce scraping.
- Reserved seating close to the speakers/chair with possibility for mouth reading.
- Good illumination for mouth reading and communication through sign language. Avoid contrasting light.
- Good acoustics. It should be possible to lead a conversation without too much echo and disturbing sounds.
- Warning routines in case of fire and evacuation.



## PEOPLE WITH READING AND WRITING IMPAIRMENTS

Many people face problems with reading and writing to a large or small degree. The Norwegian Dyslexia Association estimates that 5-10 % of the population have serious problems with reading and writing. The reasons may either be difficulties in decoding the sound of the letters (phonological decoding impairments), hearing impairments, visual impairments, lack of training in reading or combinations of these. The result is badly developed reading techniques and problems understanding the meaning of words. The reading becomes tiresome and concentration demanding. When people with reading and writing impairments can listen to a text read aloud for them, they often have no problems in understanding. Most people with reading and writing impairments will therefore need a compromise between sound and different kinds of visualisation in order to benefit from written information.

What can be done for improve conditions for people with reading and writing impairments?

- Possibilities for oral information.
- Overhead foils, presentations and lectures should be available in written and electronic formats.
- It should be possible to tape record presentations and lectures.
- Written material should be user-friendly: "Clean" letters should be used, with equal thickness of the lines, like Arial or Verdana and 12-14 point fonts. It is important to ensure air between letters, words and lines. Only the left margin should be straight, because a jagged right margin facilitates textual orientation. The background should be plain and neutral, so that the text comes out clearly. Avoid printing text on pictures. If you use colours, good contrasts should be ensured: for instance black text on white background or black text on yellow background.
- Written material should be available in alternative formats: sound and/ electronic version.





## VISUALLY IMPAIRED PEOPLE

Visual impairment is a common term for different grades of reduced vision and blindness. Both the detailed vision and the orientation vision can be reduced. Some visually impaired people may read large-print letters, while others depend on Braille, taped information or electronic versions. Visually impaired people often have problems with finding their way in the surroundings, and thus it is important to shape the surroundings in a simple and consistent way. Physical barriers, confusing layout of buildings and outdoor areas, combined with disturbing noises and other sensual impressions may yield uncertainty and difficulty in moving about independently. For visually impaired people good illumination, clear colours and contrasts in their surroundings are important. Blind people orient through touch and sounds, and often use a white cane or guide dogs.

What can be done to improve accessibility for visually impaired people?

- Logical planning solutions that make it easy to move from place to place and maybe learn the area by heart.
- Orientation points like lights, edges and marked surfaces can show guiding lines to follow inside and outdoors. The guiding lines should be right-angled.
- Signposts should be installed in such a way to avoid that people collide with them. Signs should be on eye level and be clearly illuminated without reflexes, sidelights or contrasting lights. Information should be coloured, contrasted or in Braille. Size of letters on signs should be made according to the distance from which the information is to be read. Door signs should have letters at least 5 cm high. Symbols should be simple and clear.
- Good illumination without contrasting lights or reflexes.
- Avoid objects in the indoor and outdoor surroundings that may imply danger of collision or barriers.
- Columns, banisters, step nosings and change of levels must be marked with contrasting colours and/or have tactile marking.
- Glass doors and other exposed glass areas should be equipped with markings, coloured tape or likewise.
- Contrasting colours on stairways, doors, walls and installations may illustrate their special functions.
- Service panels inside lifts should be marked in Braille or relief.
- Possibility for practical information and notices to be made orally.
- Written information and material should be accessible in different formats: large print, Braille, taped or electronically.
- Dogs must be allowed for people using guide dogs. Be aware that there are conflicting interests between allergists and guide dog users. Therefore provisions should be made for an adequate room to stay for the dog. It must also be possible to take it for a walk.
- Possibilities for assistance.

Directorate for Health and Sosial Affairs  
P.O Box 8054 Dep  
N-0031 Oslo  
Tel. +47 24 16 30 00  
Fax. +47 24 16 30 01  
[www.shdir.no](http://www.shdir.no)