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# ACTION PLAN FOR HIGH TEMPERATURE EVENTS 2023

# **EXECUTIVE SUMMARY**



Community
of Madrid



Ior that have been recorded !t is important for administrations to be vigilant to prevent high temperatures.

The company has a portfolio of actions to be taken in the areas of early warning systems, recommendations for timely medical care, and urban planning, social systems and Jos to act.

and includes this High Temperature Plan. tations that make up the Control of the effects of the effects of the The Health Ministry and in which specific plans for each of its areas of competence.

In order to prevent the effects of the effects of the ln the event that someone suffers detrimental effects to high temperatures.

Therefore, to establish a regional framework for coordinated action in response to the needs of the region. or caused by the

chapters:

Je Calor 2023

stervention: Centers

stervention: Centers

- Specific intervention plan: Educational centers
- 5. Specific Intervention Plan: Public Transportation
- Specific Intervention Plan: Environment, Housing and Agriculture
- Specific Intervention Plan: Culture, Tourism and Sports
- Specific Intervention Plan: Civil Protection and Emergencies
- Specific Intervention Plan: Prevention of occupational hazards.
- Recommendations to prevent the effects of heat on your health

# INFORMATION AND MONITORING SYSTEM

The Heat Wave Effects Monitoring and Control System provides early warning of rising temperatures and their effects on the health of the population.

The objectives are:

Inform in advance about the different levels of risk.

Detect changes in the demand for care and mortality.

To understand the effects of different levels of risk on the health of the population (mortality and morbidity).

Evaluate the adequacy of risk levels based on the effects on the health of the population and propose modifications if necessary.

To deepen the knowledge of the effects of "heat waves" on the health of the population.

The Heat Wave Effects Monitoring and Control System is ready to be activated at any time if circumstances so require and, in any case, will be active until September 15.

Decrease severe morbidity associated with heat waves.

Decrease mortality associated with heat waves.

The general objective of this system is to

There are three components associated with the excess mortality associated with unusual increases in mortality due to high temperatures: the following temperature.

Intervention criteria. Risk levels

mortality due to high temperatures:

The specific objectives are as follows:

Improve information for the general population: advice and specific preventive measures.

Temperature intensity.

Accumulation of days with high temperatures.

Time of the summer period when exposure occurs.

Increasing information aimed at health and social-health professionals.

Based on the first two, three levels of risk have been described, which are the key indicators for determining the type of intervention.

Risk classification	Definition	Intervention	Responsible institutions
e •	Maximum temperature scheduled for the current day and the four not exceeding 36.5°C.	<ul><li>No Alert.</li><li>Normal situation.</li><li>General population information.</li></ul>	• D. G. Public Health.
• =,=	Maximum temperature expected for the current day or any of the following four days higher than 36.5°C and not higher than 38.5°C, with a maximum of three consecutive days.	<ul> <li>Alert Communication 1.         Information directed to Institutions and groups of specific risk.     </li> </ul>	- D. G. Public Health.  Caregiver Social Services.  Red Asistencia Sanitary.
• "The curre	Maximum temperature nt day or any of the following four days is expected to be above 38.5°C, or four days of the following four days. consecutive days with temperature - temperature - temperature - Direct temperature - Direct	<ul> <li>Alert 2 Communication.</li> <li>Information for institutions and specific risk specific risk groups.</li> <li>Network</li> <li>Direct intervention on Direct intervention on intervention on intervention on</li> </ul>	<ul> <li>- D. G. Public Health.</li> <li>- Caregiver groups.</li> <li>Social Services.</li> <li>- Assistance</li> <li>higher higher higher higher higher higher higher higher higher</li> </ul>
	temperature - Direct temperature - Direct	intervention on intervention on	nigner higher

temperature - Direct temperature

to 36.s°C. in

intervention on
- Direct intervention on
vulnerable population
the home, institutional,
health or social
environment.

higher

in

5

# A. ERABLES

iana are the oldest people over 80 years of age, 'that:

n very old spouse or use of socio-familial support.

cognitive impairment. dependence.

' with drugs

ilta of the hospital

housing apartments without conditioning.

low comic.

Jrón as of January 1, 2021,

idrid, there are 366,375 people representing 5.4% of about one-third ayor part are women.

The high temperatures and special temperatures are greatly affected by the high temperatures, especially for children, adults, children, children, children, are greatly affected by the high temperatures and special.

age, other groups of those with the most severe IS:

'istents: chronic respiratory diseases, perthyroidism, mental d obesity.

s drugs: biturics, diuretics,

arrhythmics, etc.

The following are not included in the list.

Alcoholism.

Mendicity.

Athletes and outdoor workers as they are particularly exposed to high temperatures.

Therefore, based on the actual temperature and the alert level of the previous day, the activation and deactivation of the Public Health alert.

The alert should be generated in sufficient time to allow the implementation of the different levels of intervention and, in agreement with the institutions responsible for it (health care network, social services, municipalities and other departments), to be able to carry out the functions of information and direct intervention on vulnerable populations.

# SPECIFIC PLANS OF INTERVENTION

Based on the information provided through the Surveillance and Control System and in relation to the direct intervention on the population, the Specific Intervention Plans of the different areas of the government of the Community of Madrid are put into operation.

Among the measures included in the specific intervention plans are the following:

Information and recommendations for the General Population

- The 012 Citizen Service will offer through all its channels (telephone, WhatsApp, mail, RRSS and video-call) information and recommendations to cope with high temperatures.
- The portal www.comunidad.madrid will include information, recommendations and action guidelines to prevent the effects of excessive heat.

Video-tips made by SUMMA112
 professionals will be disseminated against the effects of heat waves and awareness and information campaigns will be carried out on the risk of heat stress and preventive measures as well as apua saving.

# Specific Intervention Plan: Sociosanitary Centers

- When Public Health activates the Heat Wave Alert, all General and Specialized Social Services (Elderly Homes, Day Care Centers, Senior Centers and Centers for the Disabled) will be notified of the situation.
- Information on each day's alert level should be posted in a location visible to all residents and facility workers.
- High-risk residents will be identified.
   For them, the appropriate prevention and hydration guidelines will be defined, as well as the protocols of monitoring of health status and care by staff.
- In all centers, personalized follow-up will be carried out depending on the type of patient and the level of alert each day. At alert level 1 or 2, the minimum number of staff contacts for health surveillance/resident/day will be established.
- Residents will be monitored, even during night shifts, for any symptoms of malaise (weakness, dizziness, confusion, impaired breathing), skin condition, urine, etc.
- As a complement to the cooling airconditioning systems inside the buildings, cooling elements will be installed in the following areas sun protection in open spaces.
- A campaign will be carried out specifically to raise awareness of the importance of

- of adequate hydration during the summer period.
- In the medium term, efforts will be made to improve the architectural and structural condition of the facilities, as well as the installation of air conditioners or fans, so that the vulnerable people served can enjoy a comfortable temperature.

Specific Intervention Plan: Health Care Centers

# **PRIMARY CARE**

- In Primary Care, activities to prevent the effects of heat waves will be reinforced, especially those aimed at the most vulnerable population groups. Informative documents with preventive advice will be distributed.
- Each Health Center will identify people at risk of being affected by the consequences of excess heat episodes and will provide information on general prevention measures. The following will also be informed people who care for and support vulnerable people.

# **HOSPITALS**

- In hospitals, in the event of activation of alert 1 or 2, the staff and training of emergency personnel will be reinforced. In addition, the need for an increase in the number of beds will be identified by SERVICES.
- Specific actions aimed at vulnerable groups will also be carried out, especially in medium and long-stay centers.
- The hospital discharge will be communicated to Primary Care for telephone follow-up of vulnerable persons.



of the inlets of the waves with the heat, s or areas of Madrid the most affected, in order to be more effective.

more exposed to increases jon diseases
\*s, diabetes, hypertension, !r... You will be able to receive messages with recommendations for any symptom. heat stroke.

intervention:

The autonomy of the company may be adapted without affecting the The timetable will be modified to allow for a better balance between work and family life. 's physical, avoiding the i and going out to the yard in the those of the day.

i imparting some classroom and shaded, tures are high and the safety of all the The use of appropriate garments.

activities s and extracurricular activities e performed in places or with excess of

stalation of elements lar (awnings and blinds) in the centers exposed to the \*The in the courtyards, when emperaturas is in mbra zones.

alarán fans, !n CEIP with Jnities Coolers e in some schools

- Action plan for high temperature episodes | 2023 Cooling by vapor effect will be carried out by watering the floors of the free spaces of the plot during the night and humidifying the surfaces exposed to direct solar radiation.
- Families will be provided with information and recommendations for possible episodes of excessive heat well in advance.
- In addition, seven high schools are undergoing comprehensive rehabilitation of buildings (thermal insulation system in facades, renovation of electrical installations and replacement of air conditioning units, improvement of insulation, etc.).
   30 million, including carpentry and new heating and air conditioning systems), with an investment of 30 million euros.
- Between 2018 and 2022, 80 actions have been carried out in schools and institutes to improve thermal insulation, with an investment of 2.6 million euros.
- In the medium and long term, we will continue with the integral rehabilitation of the buildings to include thermal insulation systems in facades and new heating and air conditioning systems.

# Specific Intervention Plan: Public Transportation

- In the event of extreme temperatures,
   Metro will reinforce frequencies to avoid
   waiting on platforms and special attention
   will be paid to the air conditioning of
   Metro trains and the air conditioning of
   the trains.
   of the rest of the system operators to
   ensure a correct temperature inside
   trains and buses (21-26° C).
- In the Metro, actions are being developed to improve the reliability and availability of the air conditioning equipment: improvement of the wiring, periodic checks on operation of air conditioning equipment, specific maintenance operations for the pre-summer season,

intervention on the most critical equipment, equipment status audits and active follow-up of travelers' complaints.

- In buses, periodic checks of the operation of air conditioning equipment on board the vehicles will be recommended, and the normal operation of the air conditioning and ventilation systems will also be checked preventively in transport interchanges.
- A plan to intensify the installation of bus shelters at bus stops is being implemented, increasing from 30 to 48 bus shelters per month.
- The first aid training for drivers and other personnel involved in the operation of the vehicle shall include the following intercity transport, information on how to act in the event that a traveler suffers heat stroke.

# Specific Intervention Plan: Environment, Housing and Agriculture

- The Community of Madrid has just launched a line of aid for the replacement of air conditioning equipment for domestic use located in regular homes, whether the house is owned or rented. The equipment must be replaced by more energy efficient cooling (type A + or higher) and may receive aid even those who had renewed their equipment from January 1 this year. The aid can be up to 500 euros per dwelling depending on the equipment to be installed.
- There is also aid from
   of European funds to improve the energy
   efficiency of homes throughout the
   Community of Madrid, also improving their
   insulation and performance against high
   temperatures, and, by

The situation of its inhabitants in the face of excessive temperatures is therefore being improved. A total of 1.27 billion euros has already been committed for this purpose, and a further 50 million euros will be made available shortly. 50 million will be made available shortly, bringing the total amount committed to 177 million euros. Not forgetting that the 6,600 Plan Vive apartments -4,500 of which are already under constructionare energy efficient, have refrigeration and many of them have a communal swimming pool.

- Aid for municipalities with less than 100,000 inhabitants to implement initiatives to "cool" cities and make them greener every day. To this end, we have earmarked 1.4 million euros so that municipalities can increase green areas, install natural or artificial shading in streets and squares, or adapt buildings to prevent excess heat with green roofs.

# Specific Intervention Plan: Culture, Tourism and Sports

 This year the summer swimming pools of the Community of Madrid will open on May 13, which is almost a month earlier than in previous years. They will be open until September 9.

In addition, the rates will be maintained and reduced prices will be implemented for certain groups more vulnerable to heat waves: people over 65 years of age and children between 3 and 13 years of age will receive a 30% reduction in the price and for people with disabilities (equal to or greater than 33%) and their companions and for children under 3 years of age, admission will be free of charge.

The Sports Medicine Center will be alert to warnings that may be given for extreme temperatures, in order to inform the public of the following to all the Madrid federations that organize sports campuses, on the measures to be taken regarding sports activities during these heat episodes.

outreach campaign for the \*s for a safe eportiva practice during the season in case of activation

# intervention:

# mergers

n forest fire preventive measures such as the use of fire and :tivities.

nayo, the
The company's efforts to
respond to the state risk,
ensuring a
oleto as of June 15 's
resources:

s daily firefighting brigades)

surveillance

ros in 8 helipads

rums

.state in support of the Aircraft Plan and BRIIFF)

# intervention: labor laws

# .ICOS

\*ctivo will attend to the
General and heat
stress measures
General management
The company will
also carry out a
The company's risky
positions will take
measures to mitigate the
consequences.

ble installation of
\*s, awnings and other
types of products to
reduce the
/mit that the
radiation I worker.

- Early delivery of summer wardrobe.
- Avoid sun exposure in the morning and evening.
   The main hours of the day, prioritizing the morning shift as much as possible.
- Where possible, heavy, energy-intensive tasks should be eliminated or reduced.
   Mechanical aids for handling loads should also be provided.
- Whenever possible, if weather conditions are adverse, teleworking will be chosen.

# **ALL EMPLOYEES**

 The Regional Institute for Occupational Safety and Health disseminates very detailed information on technical and organizational measures and action plans.

to be implemented by companies when working conditions may pose a risk due to exposure to high temperatures. It also proposes different risk assessment criteria for the application of the measures contained in the action plans.

# RECOMMENDATIONS AND INDICATIONS FOR THE GENERAL POPULATION

The Action Plan for High Temperature Episodes also incorporates, recommendations to prevent and act against the effects of heat waves, given that exposure to high temperatures has direct effects on the organism.

The most serious is the "heat stroke" as it can cause death or important sequelae if there is no immediate treatment.

Some signs and/or symptoms that can help us recognize a "heat stroke" are:

Body temperature, which can be very high, up to 40° C.

9

Hot, reddened and dry skin (no sweating).

Headaches, nausea, drowsiness and intense thirst.

Confusion, convulsions and loss of consciousness.

What to do in case of heat stroke:

Keep the person lying down.

Quickly cool your body, using wet towels, fans or any other similar method.

Call the emergency telephone number 112 or contact the nearest Health Service

Among the useful tips to prevent the harmful effects of high temperatures, the Plan includes the following:

The rooms of the house must have blinds or awnings on the windows or balconies.

It is important that you know the nearest refrigerated places where you can go in case of need, such as hypermarkets, supermarkets, cinemas...

In case of intense heat, elderly people living alone should be accompanied and receive daily help from family and neighbors or, failing that, ask for help from the social services of their City Hall.

Avoid going outdoors during the hottest hours of the day.

If you must go outside, look for shady areas and cover your head with a hat or cap. Wear light-colored, lightweight clothing.

Avoid physical exertion. If you are an athlete, schedule your sports activity in the early morning or late afternoon.

Close blinds and close awnings on facades exposed to the sun.

Never leave anyone, people or pets, in a vehicle exposed to the sun.

Use water to refresh your body: from wet cloths, shower or bathtub to baths in the pool, river or sea.

Fundamental: Drink and have people in your care (children, elderly, chronically ill, disabled, etc.) drink fluids frequently.

Eat in moderation, avoiding excesses.

In case you are taking any medication, consult your doctor or pharmacist in case it is necessary to adjust the dose.

Ask for help from a relative, a neighbor or call your health center if you feel unwell from the heat. If symptoms worsen, contact 112.

During an episode of extreme heat, take an interest in vulnerable people in the neighborhood.



# Coordinación y follow-up del Plah

For the coordination of the plan, a In†erdepartamen†al Commission was created to follow up and develop all the necessary actions in each area to deal with eventual high †empera†ures. Es†aró en funcionamiento desde el 26 de abril y hasta†a el 15 de septiembre y es†aró formado por †odos los viceconsejeros y secretarios generales técnicos.

At the technical level, continuity was given to the work of the Technical Commission. of Coordination of the Plan for Surveillance and Control of the effects of heat waves of the General Directorate of Public Health, which was set up as an observatory that, based on the meteorological forecasts received, activated and reported the corresponding alerts sufficiently in advance and monitored the health effects of episodes of high temperatures.



heavy, not breathable or waterproof chemical protection), workload or the post.

Very high risk level: extremely dangerous (index higher than 54 C).

Apply the measures indicated in the previous points and, additionally:

Reschedule all non-essential outdoor work; alternatively, allow earlier start times, split shifts, or use afternoon and evening shifts.

DAILY PLANNING FOR HOT CLIMATES: location of DAILY CHECKLIST

# Water

Is there enough fresh drinking water near the workers?

If there are faucets nearby, are they adequately maintained?

# **Shadow**

Pursuant to Article 21 of the Occupational Health and Safety Is there shade or air conditioning, stop the work if you notice that the control measures are not available for breaks and/or at work if you observe that the control measures that workers need are not sufficient or not applicable. If you observe that the control measures needed by workers are not sufficient or not applicable.

If technically feasible, provide personal cooling facilities for workers.

In case of emergency works and essential work that cannot be rescheduled:

Inform workers of the expected environmental conditions.

Review information on symptoms, availability of measures to be adopted in the workplace and emergency measures in the event of identifying damage resulting from exposure to heat.

Ensure the availability of sufficient water in the vicinity of the workstation heat-related illnesses?

# Information to Workers

Are workers informed of the need to:

- Drink water frequently? Resting in the shade (or in cooler places)?
- Quickly report heat-related symptoms?

# **Training**

Do the workers know: fresh

- establish and monitor a work schedule; establish and monitor a schedule signs and symptoms of defined for water intake. What are the signs and symptoms of
- the proper precautions to prevent heat-related injuries?
- the importance of acclimatization?
- Tornado by JACKLITSCH, B., WILLIAMS, J.W., MUSOLIN, K., COCA, A., KIM, J-H & TURNER, N.: "Occupational Exposure to Heat and Hot Environments: Revised Criteria 2016", National Institute for Occupational Safety and Health.



\* drink water frequently Physiological

Monitoring not feeling thirsty)?

sir when any symptoms?

Is the health status of workers monitored as necessary if the level of risk is high or very high?

Presence of preventive resources

n notify in case of In the event of a high and very

high/extreme heat index, is there a

person

ares to explain what who is knowledgeable about heatis ecessary to call a related illnesses, who is capable of

determining work schedules adequate rest and who can perform physiological monitoring as needed?

will provide

'S?

n†e emergency situations related ol color

iel reddened, hot or sweating 'cesiva

\*very high body

temperature

onfusion

onvulsions fainting

Call 112 dry

While waiting for help:

Place the worker in the shade, in a cool area.

Loosen clothing, remove outer garment

Give air to the worker, place ice packs in the

armpits.

Wet the worker with cold water, apply cold compresses or ice if available.

Provide fluids (preferably water) as soon as

possible.

Stay with worker until help arrives

# **APPENDIX**: How to Respond to Heat-related Emergencies

skin due to heat		<ul> <li>Have the worker sit or lie down in the shade in a cool area.</li> </ul>	
	Profuse sweating Headache	Give water or other fresh beverages in abundant quantities.	
	Nausea or	Cool the worker with ice/cold water compresses.	
	vomiting  Dizziness	Take to a clinic or emergency room for medical evaluation and treatment if signs or symptoms	
	Dizziness	worsen or do not improve within 60 minutes.	
	Lightheadedness	The worker should not return to work that day	
	Weakness Thirst		
	• I rritability		
	Rapid pulse	<ul> <li>Have the worker rest in the shade, in a cool area.</li> </ul>	
Cramps to heat	- Muscle spasms due		
	Pain (Usually in abdomen, arms or legs)	Make sure the worker drinks water or another cold drink	
		Wait a few hours before allowing the worker to return to heavy work.	
		<ul> <li>Seek medical attention if cramps do not go away.</li> </ul>	
Rash	humid	If possible, try to work in a place with more ears cooler and less moist). cool and less	
	often in the neck, part upper chest folds skin dry.)	Keep the affected area of the	

<sup>\*</sup> Remember, if you are not a health professional, use this information only as a guide to help protect workers in case of need.



# **ERGENCY AND CITIZEN SERVICE**

lad and Emergencies 112

rity and Emergencies tool at the service of the various organizations before the o Establishing a single emergency number. 012 Citizen Attention Service

The 012 Citizen Attention Service offers through all its channels (telephone, WhatsApp, mail, RRSS and video-call) information and recommendations to cope with high temperatures.



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10

# RECOMENDACIONES FUKTINLVLITIR Lesefe¢Tes DELCALORSGBRE LA SALUD



Community

of Madrid



and aggravate diseases
The following are the
main causes of respiratory
and respiratory diseases,
temperatures cause
ganism. From lower to
on some of them:

ined as the discomfort associated with the high

Frequent, with i and fading in to the sun and heat, especially you long time.

For, situation in which water loss gives rise to symptoms that i, dizziness, weakness and pain

# OR

in prolonged exposure to the "polpe de calor", which or important sequelae if mediated. Some signs may help to recognize, among others, the following:

of the body, which can ta of 40° C.

oyed and dry (without

nausea, nausea, \*d intense.

ulsions and loss of

# WHAT TO DO?

Keep the person lying down.

Quickly cool your body, using wet towels, fans or any other similar method.

Call the emergency telephone 112 or contact the nearest Health Service.

In less severe cases, such as heat exhaustion, it is necessary to stop all activity, drink fluids and cool the body.

Remember also that athletes, manual workers exposed to heat and infants are very sensitive to heat stroke.

# ATTENTION:

A person who suffers heat stroke, is in a serious condition and requires immediate assistance.

Call 112 as soon as possible

Excessive heat can have detrimental effects on people's health, especially if they are elderly, chronically ill or children. The following tips can be very useful:

# Remember:

The rooms of the house must have blinds or awnings on the windows or balconies.

It is important that you know the nearest refrigerated places where you can go in case of need, such as hypermarkets, department stores, cinemas, public centers (libraries, day centers...).

local

 In case of intense heat, the elderly alone should be accompanied sun in summer.

receive daily help from family and neighbors or, failing that, ask for help from the social services of your

yourself with the social services of your municipality.

**Protect yourself from the heat** 

As far as possible, try not to go outdoors during the hottest hours of the day.

If you must go out, look for shaded areas and cover your head with a hat or cap. Wear light-colored, lightweight clothing.

Avoid physical exertion. If you are an athlete, schedule your sports activity in the early morning or late afternoon.

Close blinds and close awnings on facades exposed to the sun. Take advantage of the cooler hours of the day to ventilate the house.

- Never leave anyone, people or pets, in living and a vehicle exposed to the

Refresh

Use apua to refresh your body: from wet wipes, shower or bathtub to baths in the pool, river or sea.

If you don't have air conditioning, you can find relief from the heat in a shopping mall, movie theater, library, museum or other cooled public place.

Stay well hydrated and take care of your diet.

Fundamental: Drink and have your caregivers (children, elderly, chronically ill, etc.) drink fluids frequently to ensure good hydration.





vegetables, etc., as well as the day, melon...) are very high in them.

# ida. Help

taking alpun ilte your physician or If it is necessary to adjust the camentos may cause ' with heat).

If you are unwell due to the heat, contact 112.

n the Plan, the
The main goal is to
extend the period
until 15
in health derived from the
s summer temperatures to

Life to the population and to health and social-health professionals Preventive measures that \* in the face of temperatures

intervention policies the institutions that serve them.

The Response Plan.

general population, \*cial to the most heatintensive sectors, such as During an episode of extreme heat, take care of vulnerable people in the neighborhood, especially the elderly or chronically ill, especially if they live alone

Help them personally or make sure social services do so.

# Protect yourself against solar radiation.

During summer and other periods of high solar radiation, we must be very cautious with sun exposure to avoid its harmful effects such as premature skin aging, sunburn, sunstroke, sunspots, cancerous lesions or cataracts.

the elderly, the chronically ill, children, etc. and to the professionals of the health care system of the Community of Madrid.

A heat risk level is established daily based on the maximum temperature forecast for five days and is disseminated through various channels to the general population and health and social-health institutions. There are three levels of risk: level 0, Normality; level 0, Normality; level 0, Normality; level 0, Normality; level 0, Normality.

1, Caution; and level 2, High Risk. Levels 1 and 2 entail the activation of the corresponding alert (type I or type II), which implies the adoption of specific intervention measures.

In addition, the morbidity and mortality observed during the period in which the Plan is being developed is monitored in order to evaluate and compare the data recorded with those expected, as well as to detect early on any unusual increase in these variables.

PLANDE \*/\*
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ANTI-HIGH
TEMPERATURE
PREVENTION
2023

