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It begins with small symptoms such as muscle twitches or weakness. Eventually, amyotrophic lateral sclerosis (ALS) robs a person of all muscle control, resulting in paralysis, the inability to speak and, inevitably, death.

The cause of ALS (also known as motor neuron disease or MND) is unknown. Genes linked to the disease have been identified, including one (*C9ORF72*) that seems to be particularly important (see page S106). Lifestyle and environmental factors also seem to influence ALS (S109). But researchers should be wary about too much of a focus on either genetics or the environment; both can work together to bring on the disease (S112).

Despite high-profile cases such as baseball player Lou Gehrig and physicist Stephen Hawking, ALS was long considered an obscure disease. In 2014, however, the Ice Bucket Challenge fundraiser brought it to public attention — albeit briefly. Research supported by ice-bucket money is starting to pay off, but such fundraising is hard to repeat (S113).

Treatments for ALS are limited, but new drugs are starting to be approved and stem-cell therapy and gene therapy will soon be coming into their own (see S120). And technology is devising new ways for doctors to diagnose cases, monitor progression and get patients into clinical trials (S115). Many such trials are under way, and they are spurring cautious optimism about treatments for this devastating illness (S118). Many patients try unproven alternative therapies. Far from dismissing them, physicians and researchers can help patients check the safety and possible benefit of such therapies (S122).

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Brian Owens

Contributing editor

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