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**Algorithm 1** Nesterov's Accelerated Gradient Descent

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1: Input:  $x_0, f(x), K$   
2: Initialize:  $\lambda_1 \leftarrow 1$   
3: for  $k = 1$  to  $K$  do  
4:    $\lambda_{k+1} \leftarrow \frac{1 + \sqrt{1 + 4\lambda_k^2}}{2}$   
5:   Update step for  $x_k$   
6: end for
```

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See Algorithm 1 for the detailed steps.